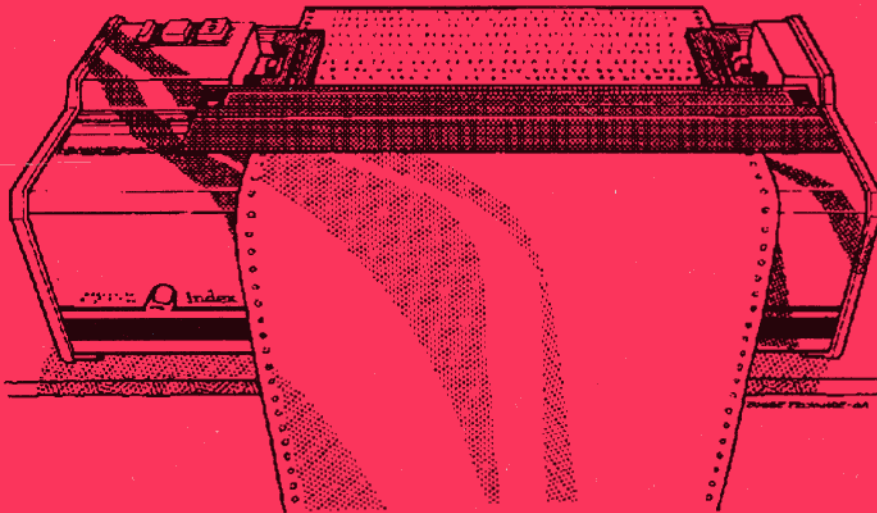


**Manual Version 2.0**

**INDEX CLASSIC**  
**"The" Braille Printer**



 **INDEX**  
*International*  
**THE BRAILLE PRINTER COMPANY**

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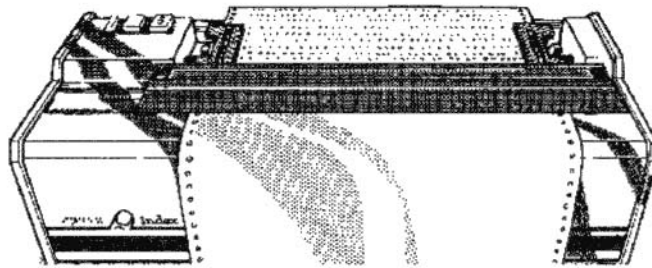
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# 1. INTRODUCTION

INDEX CLASSIC is a technically advanced printer that can produce braille in computer or literary (grade 1) translation. The INDEX CLASSIC has sixteen different Braille languages codes built-in.



It prints at an interline speed\* of 25 characters per second. Full page output may be less, depending on format and transmission speed. The INDEX is very easy to use, however, we suggest that you read through the introductory chapter prior to powering-on your INDEX. Reading these instruction can enable you to become familiar with the printer and its features quickly and will minimize potential problems. Keep the manual nearby for easy reference. In the event of requireing additional advice or technical support please do not hesitate to contact your local INDEX representative.

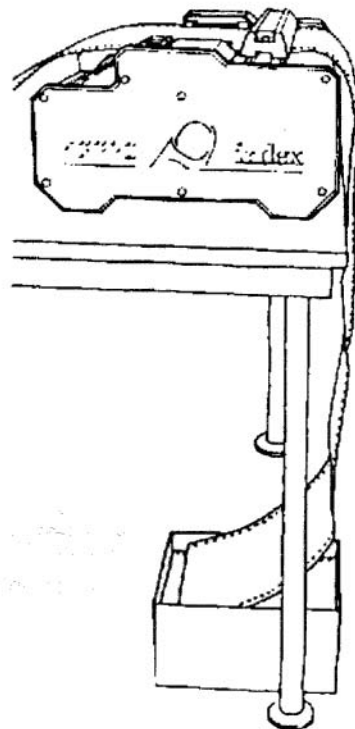
\*Interline speed represents a ratio of the speed used to produce a single line of braille.

## 2. GETTING STARTED

### 2.1 Unpacking

The box containing the printer should include the following parts. Please contact your agent if anything is missing.

INDEX CLASSIC Braille printer  
INDEX CLASSIC User Manual  
SET-UP Disk Software support disk  
Power cable

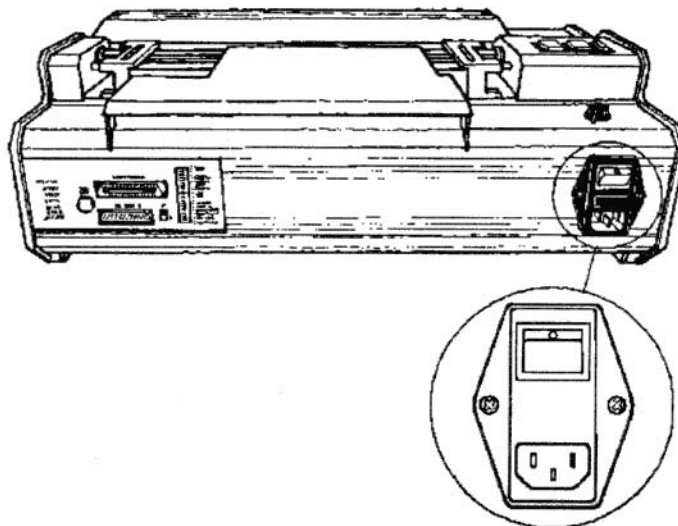


This is also available for your  
printer:

Interface cable for connection to the  
Computer

## 2.2 Power cable

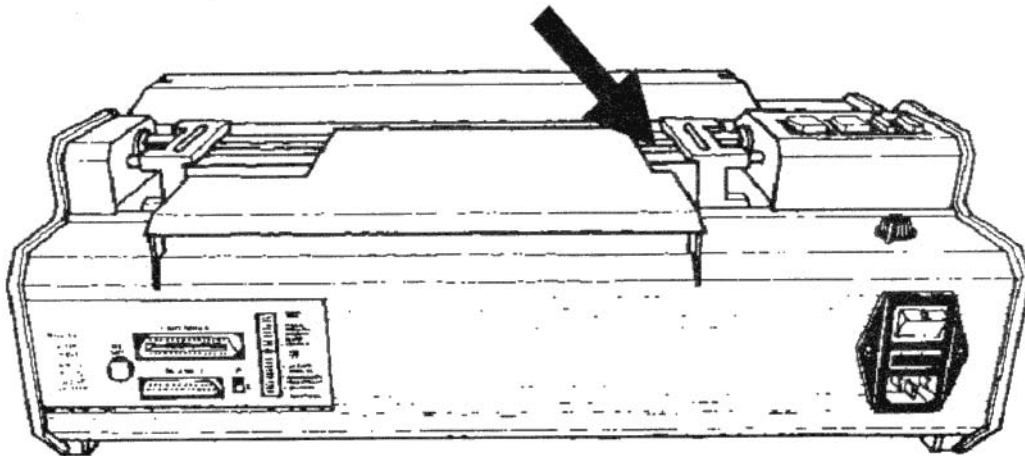
1. Make sure that the printer is switched off.
2. Connect the power cable to the socket located on the back of the printer on the left hand side.
3. Connect the pin plug to a grounded power outlet.



**NOTE!** The power cable must always be connected to a grounded outlet.

## 2.3 Before Power ON

Remember to remove the "Shipping screw", located between the left tractor-feed and the top-switch panel just behind the printing beam. (An Allen-wrench is included with the printer.)

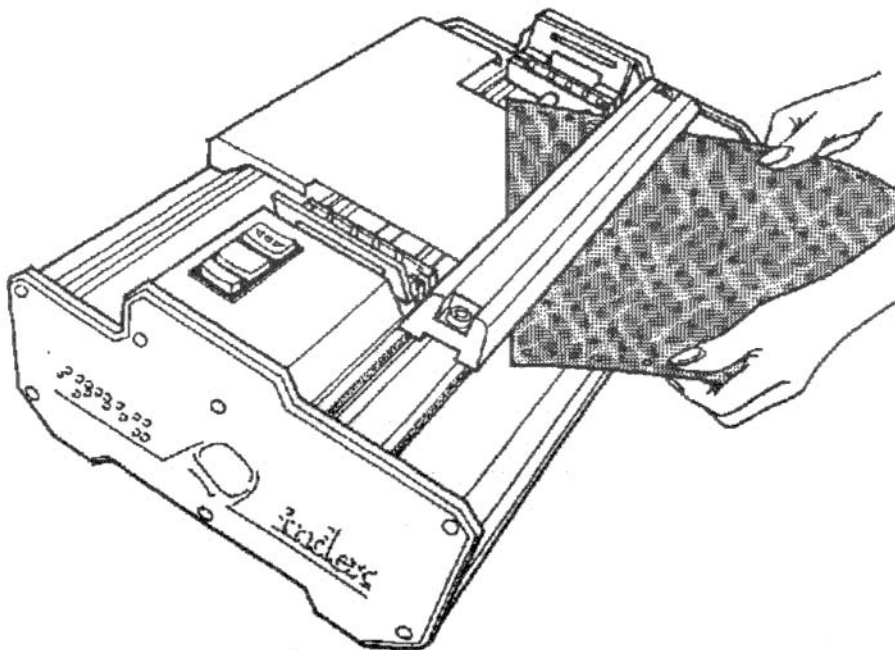


**NOTE!** This screw must be refitted whenever the printer is shipped. Move the printing head to the left side by giving a RESET, before refitting the screw.



## 2.4 Paper Insertion

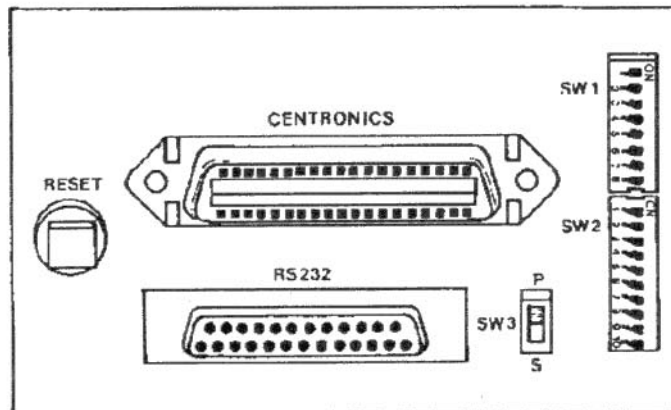
1. Lift up the top of both the paper tractor feeds.
2. Insert the paper under the printing beam, from the front.
3. Fit the paper onto the tractor ensuring that the edge is straight and level, then close both tractor feed tops.



## 3.0 INTERFACE PANEL

### 3.1 Connectors

The Interface Panel for the printer is located on the right hand side of the back panel and has on it the serial and centronics interface connectors, the RESET button, two blocks of dip-switches in a vertical row, and the serial/parallel selector slide switch.



The RESET BUTTON is located on the far righthand side of the interface panel.

Connectors The serial/parallel slide switch, located between the dip switches and the serial connector, is used to interchange between serial and centronics interfaces.

To effect this change it is necessary to press the RESET button on the same panel after setting the serial/parallel switch. The two blocks of dip-switches are used to set the communication parameters on the serial interface and to select the braille code and mode on the printer. The values of the two blocks of dip-switches are utilized whenever the printer is powered up or the RESET button is pressed.

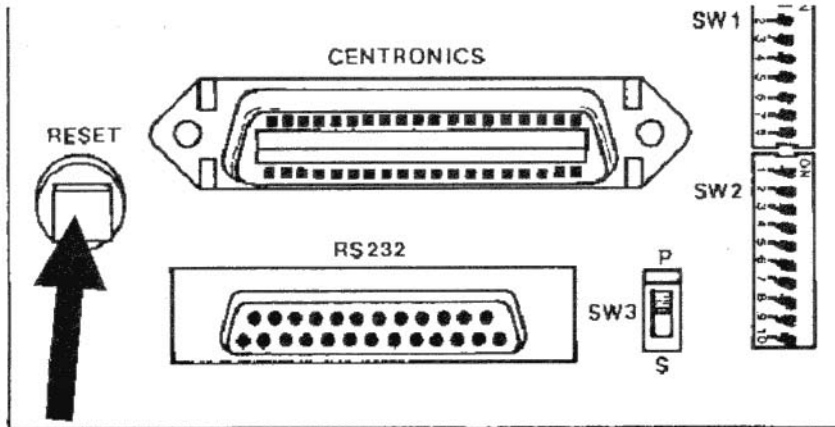
The factory setting of the serial interface is as follows:

Communication values:

**| 9600 baud, 8 bits, No parity, 1 stop bit, DTR handshake**

### 3.2 Reset

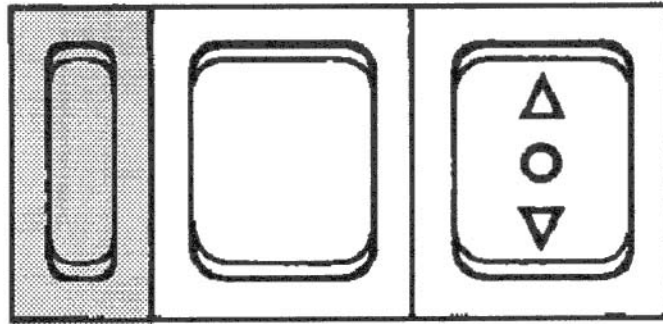
The RESET button is situated on the right hand side of the interface panel. This button may be used to clear the printer buffer.



**NOTE!** After a RESET is it necessary to set the Top Of Form for the paper.

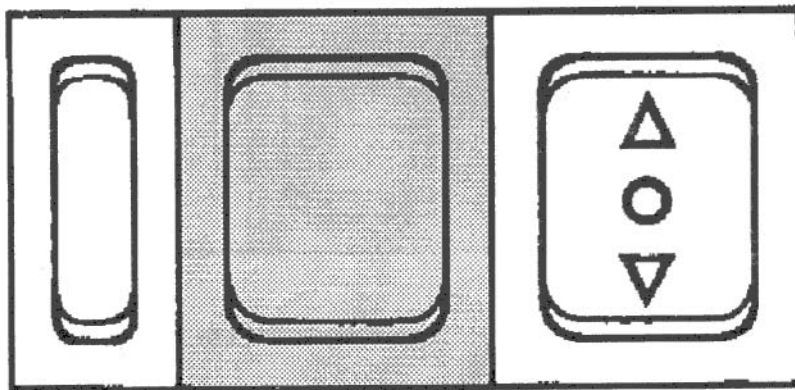
## 4. TOP-SWITCH PANEL

### 4.1 ON/OFF-line (the narrow switch)



To obtain a print-out on INDEX this switch must be in the ON-line position (towards the front edge). To operate SET PAGE-FORM FEED and PAPER FEED the switch must be in the OFF LINE position (towards the back edge).

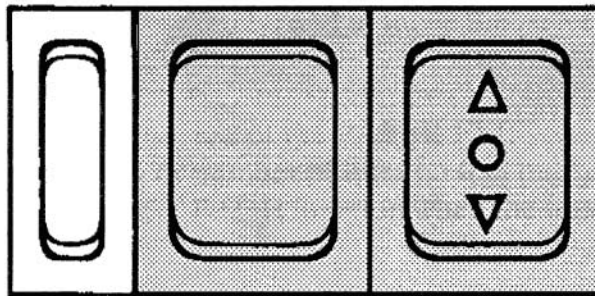
**4.2 Set Page/Form Feed  
(the left of the two wide switches)**



The SET PAGE (front edge) control determines the reference position of the page length function.

The FORM FEED (back edge) controls the advancement of the paper to the top of the next page.

#### 4.2.1 To Set - Top of Form (TOF)

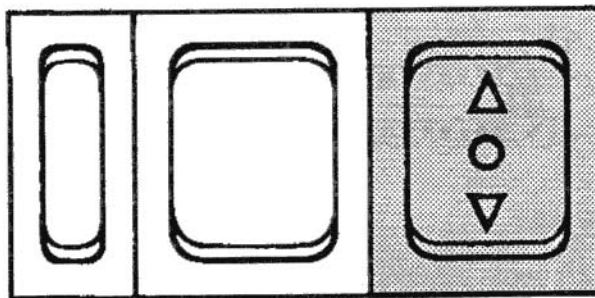


1. Put INDEX in OFF-line mode.
2. Advance the paper with PAPER FEED (wide switch on the right) so that the page perforation fold lies exactly along the top front edge of the printer case.
3. Press SET PAGE. You have now set the reference point for the page length function.
4. Press FORM FEED (FF). The paper will now advance to the top of page ready for printing to commence.
5. Set INDEX in ON-line mode. The printer is now ready to receive the textfile.

### 4.3 Paper Feed (wide switch on right)

The PAPER FEED switch is used to move the paper either forwards or backwards.

It should be noted that use of the PAPER FEED switch may affect the line spacing or number of lines on that page, however it will not affect the SET PAGE function when the following page commences.

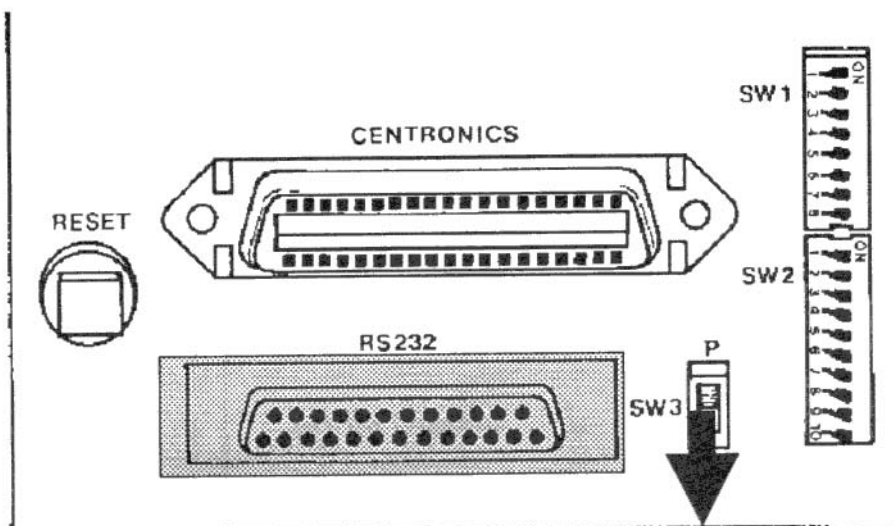


To operate PAPER FEED the on/off line switch must be in the OFF LINE position (towards the back edge).



## 5. INTERFACE TECHNICAL INFORMATION

### 5.1 Serial Communication - RS232C



The slide switch situated between the serial connector and the dip-switches on the interface panel of the printer must be in the down position, marked "S" for Serial. Whenever this switch is moved the RESET button must be pressed. The connector cable should not exceed 15 meter (50 feet) in length as this can effect the data transmission.

### 5.1.1 Dip-Switch Settings

The dip-switches that control the communication values on the printer are situated on the interface panel on the back of the printer. (The vertical row of switches). The upper switches numbered 1-8 from the top, should be set as indicated in the table below. Following any changes in the dip-switch settings the RESET button must be pressed.

OFF	ON		(1)	(2)	(3)
		Baudrate sw 1-3			
		19200	on	on	on
		9600	off	on	on
		4800	on	off	on
		2400	off	off	on
		1200	on	on	off
		600	off	on	off
		300	off	off	on
		(4) 7/8 Databits	on = 8 data bits		
			off = 7 data bits		
		(5) Parity	on = parity check		
			off = no parity		
		(6) Parity	on = even parity		
			off = odd parity		
		(7) Stopbits	on = 2-stopbits		
			off = 1-stopbit		
		(8)Handshake	on = DTR		
			off = XON/XOFF		

### 5.1.2 Pin Configuration

INDEX CLASSIC is designed like a DTR (Data Terminal Equipment), according to the RS232-C standard. With a 25 female D-sub connector.

When using DTR handshake you can link pin 4 and 5 on INDEX and normally also on the computerside.

With XON/XOFF communication it is possible to use a three wire cable pin 2,3,7 and on INDEX side link 4-5 and 6-20.

Pin 1	GND =	N/A	Protected Ground
Pin 2	TXD =	FROM	Transmitte Data
Pin 3	RXD =	TO	Reseave Data
Pin 4	RST =	FROM	Request to send
Pin 5	CTS =	TO	Clear to send
Pin 6	DSR =	TO	Data set ready
Pin 7	SG =	N/A	Signal ground
Pin 20	DTR =	FROM	Data terminal ready

### 5.1.3 IBM PC - INDEX CLASSIC Connection

When connecting the printer to the serial port on an IBM PC, XT or AT or IBM compatible computers, the serial port (COM1: or COM2:) must be set for the right communication parameters. The best way to do this is with the following DOS commands, which will normally be in the AUTOEXEC.BAT file:

```
| MODE COM1:9600,n,8,1,p
```

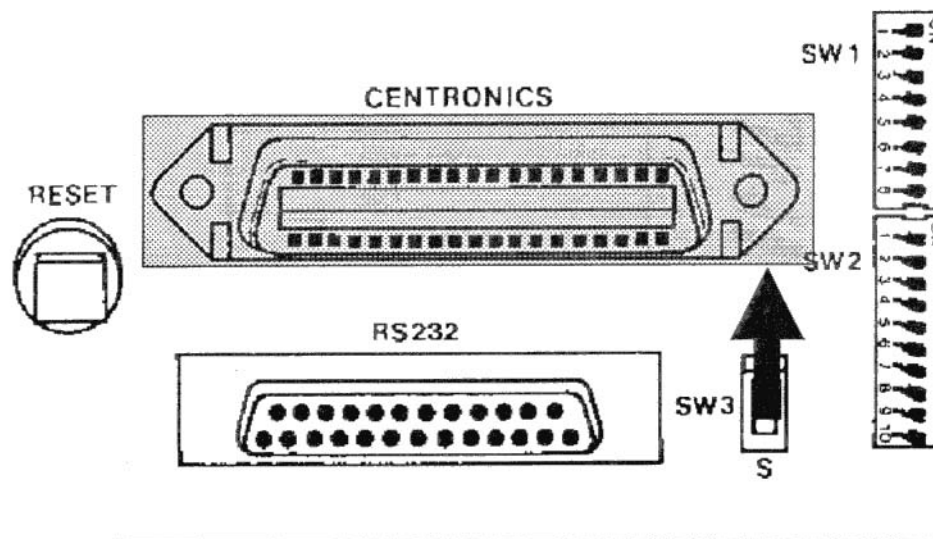
This will set the communication value on COM1: to 9600 baud, no parity, 8 data bits, 1 stop bit and p to enable the transmission of data from the computer to the printer.

### 5.1.4 Cable INDEX CLASSIC IBM-PC

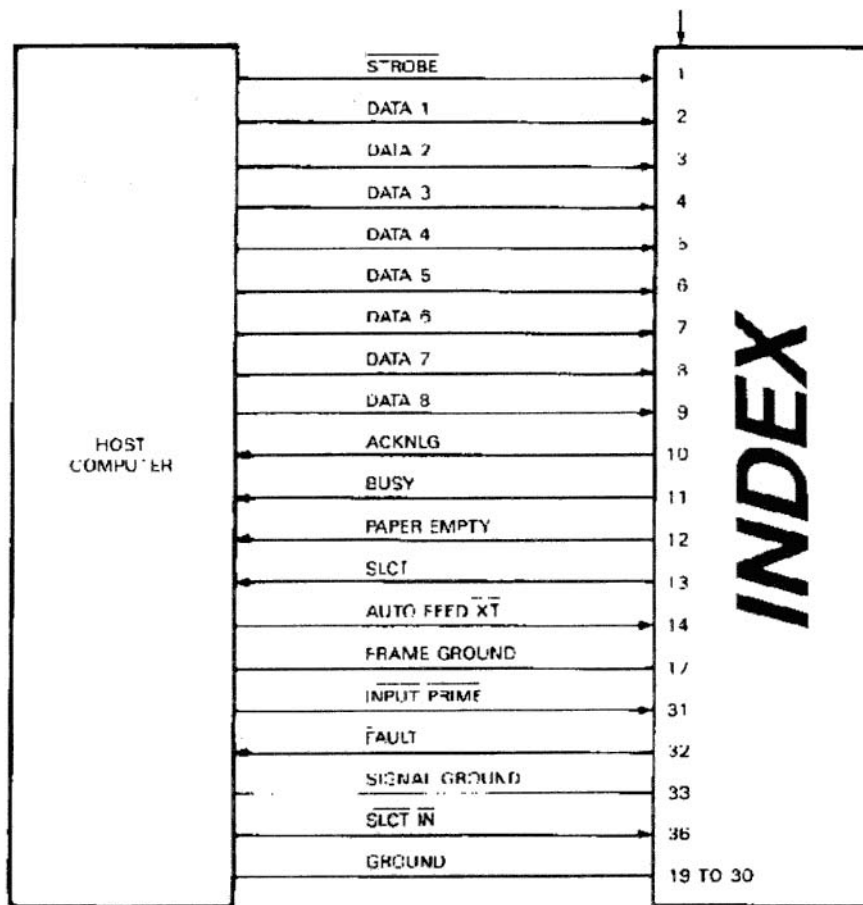
On Index side 25 D-sub male connector and on PC side 25 D-sub female. (Pin connections INDEX -PC) 1-1, 2-3, 3-2,20-6,7-7,6-20. 4-5 linked together on both sides. We recommend to use DTR handshake in use together with PC computers.

## 5.2 Centronics Communication

The slide switch situated between the serial connector and the dip-switches must be in the up position which is indicated by the letter "P" (Parallel). Whenever this slide switch is moved the RESET button must be pressed to complete the change. The cable adapted for the parallel output is standardized in accordance with the Centronics standard. The length of the cable should not exceed 5 meters (15 feet) in length. Use only cable of good quality with shielded conductors.

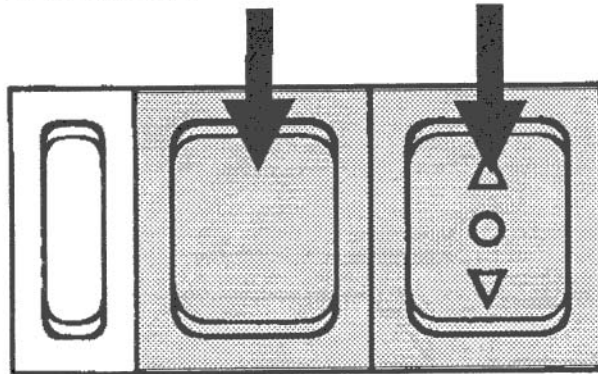


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## 6. CONTROLS

### 6.1 System Reset

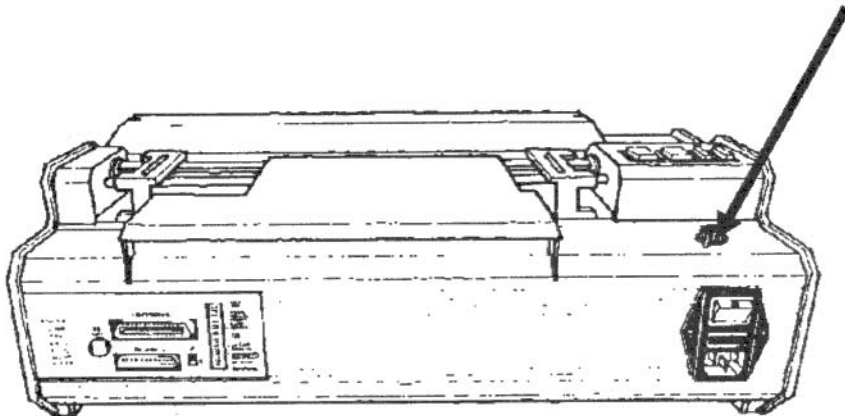


To reset the printer to the selected dip-switch settings perform the following sequence. A SYSTEM RESET will erase ALL parameter values, except both operator defined tables.

1. Switch off the power to the printer.
2. Hold down both the FORM FEED and PAPER FEED top-switches away from you (back edge of top-switch), and switch on the power.
3. The parameter values of the INDEX are now set-up according to dip-switch selection.

## 6.2 Impact Level

The Impact Level control is situated directly behind the Top Switch Control Panel on top of the printer. This control may be used to adjust the print quality when using a variety of paper thicknesses. Many different paper qualities can be used with INDEX CLASSIC; high quality braille paper will normally result in better quality braille copy. However, normal print paper can be used for draft copies.

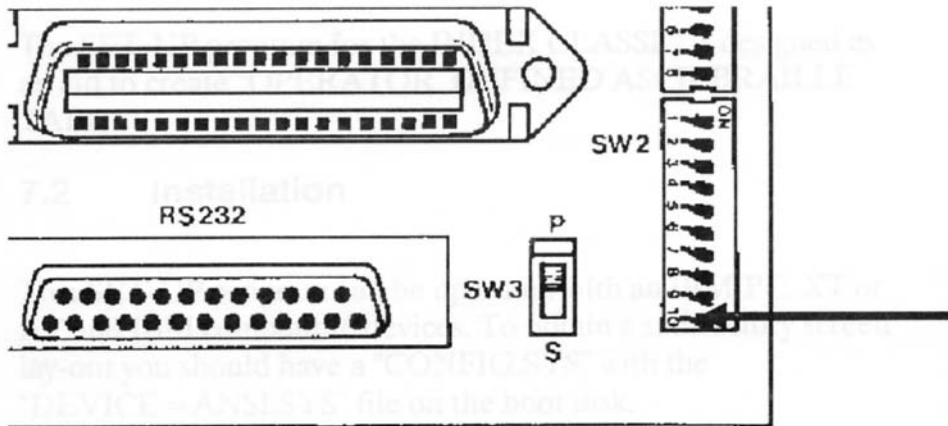


The recommended method of adjusting the impact level is to commence printing the "Self Test - Printout" with the levels set at minimum, then gradually increase the impact level (during printout) until the optimum quality is obtained. The impact level should not be set higher than necessary as this may in fact reduce the quality of print and increase the operating sound levels.



### 6.3 Paper Indicator

The INDEX CLASSIC has a paper sensor which emits an audible signal when it is out of paper. This feature may be overridden by changing the setting of "position 10" of the lowest position of the lower dip-switch block.



ON = right position - Overcome the papersensor  
OFF = left position - Papersensor in use

## 7. SET-UP INDEX



### 7.1 Set-up Program - INDEX CLASSIC

The SET-UP program for the INDEX CLASSIC is designed as an aid to create "OPERATOR DEFINED ASCII-BRAILLE TABEL".

### 7.2 Installation

This SET-UP program can be operated with an IBM-PC, XT or AT and IBM compatible devices. To obtain a satisfactory screen lay-out you should have a "CONFIG.SYS" with the "DEVICE = ANSI.SYS" file on the boot disk.

The INDEX should be connected to the computer in the approved manner and must be in the ON LINE mode. If the printer is to be operated on serial interface the parameters should be selected on COM1: or COM2:. The recommended method to set-up the serial interface is with a MODE file in the AUTOEXEC.BAT file. This will select the parameters for the serial interface when you boot the system.

Providing no changes have been made on the printer, the MODE file should be as follows:

**| MODE COM1:9600,N,8,1,P (Connected to COM1:)**

Any changes to the CONFIG.SYS or AUTOEXEC.BAT files can be made using a regular wordprocessing program. Always make a copy of the original computer set-up file prior to make changes. When the changes have been made the file must be stored as an ASCII file not as a document, this process being dependent on the program being used to create the file.

### **7.3 Start Set-Up Program**

The SET-UP program is selected by entering INDEX followed by a carriage return (CR) at the A prompt. You can also copy the SET-UP program to your hard disk. The program version will be displayed followed by the current default settings. The main menu can be selected by entering CR.

The default values which are displayed, will be the last ones last selected on the SET-UP program and will normally be those on the printer.

## **7.4 Main Menu**

- 1: Select printer port**
- 2: Edit braille code**

Items from the menu may be selected by entering the desired module number or by use of the cursor arrows followed by CR. To escape to a higher level or exit the program use the ESC key.

### **7.4.1 1: Select Printer Port**

To select the port to which the INDEX is connected, choose LPT1:, LPT2:, COM1: or COM2:.

### **7.4.2 2: Edit Braille Code**

This module may be utilized to change or ammend the relationship between the ASCII code and the braille character on any of the source tables available with the SET-UP program. Such changes can be stored on the disk and on the printer as "OPERATOR TABLE A or B" (two separate tables).The source table will determine whether this will be computer or literary (grade 1) braille. There are a number of menues available within this module as follows:

### **7.4.2.1 Select Source Table**

This is a listing of the ASCII braille codes available within the program, with selection being made by use of the cursor arrows followed by CR. The "OPERATOR A or B" tables are those last saved on the disk.

### **7.4.2.2 Change Dot Configuration**

The first page of the selected table will be displayed on the screen. To select a particular character from this screen use the cursor arrows up or down. To move to another page use PAGE UP/DOWN. To move directly to a particular character or symbol, press the appropriate key (only after PgUp). The program cursor will then be placed on the character selected. The braille dot configuration displayed can be changed by pressing CURSOR ARROW RIGHT once, then the numeric values of the new dot combination followed by CR, after that you have the opportunity to save the new combination by pressing CR or ignore it by pressing ESC. There is no limit to the number of characters you may change within any one language table.

### 7.4.2.3 Prefix and Double-Character

It is possible to have one ASCII character displayed by two braille characters. To select this function press the CURSOR ARROW LEFT key once (after PGUP), the following menu will be displayed.

- 1: Edit double-braille
- 2: Edit number prefix
- 3: Edit capital prefix
- 4: Edit capital prefix (multiple letter selection)
- 5: List prefix

If item "1" is selected you may edit up to sixteen symbols within the table which can be represented by two braille characters. It is important to remember that braille characters edited by utilizing the DOUBLE-BRAILLE will appear AFTER the symbol in the normal table. When editing this module you either enter "C" to Change or "R" to Reset. If "C" to change is selected, you enter the symbol to be displayed by two characters followed by the new dot combination.

This sequence must be repeated for each symbol to be changed up to a maximum of sixteen. If Items "2, 3 or 4" are selected you should then enter "C" followed by the new braille dot combination. If item 5 is selected a list of all current prefixes will be displayed.

### 7.4.2.4 Save Operator Table A/B

When all the changes have been made enter ESC to return to the main menu. You will be prompted to select a table on which to store the changes, as follows

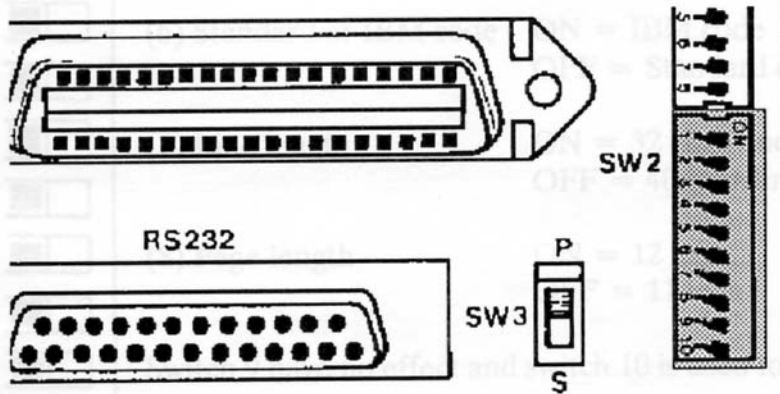
Save as:

- 1: Operator table A
- 2: Operator table B
- 3: Quit

When you make your selection, to store a changed table in this fashion it will DELETE THE CURRENT TABLE on both the disk and on INDEX. When you make your selection the following message will be displayed "WAIT SAVING OPERATOR TABLE". Switch to the operator defined table via the dip-switch bank two completed with a RESET

LANGUAGE	1	2	3
Swedish	off	off	off
North American	on	off	off
English	on	on	off
German	off	off	off
French	off	off	off
Italian	on	off	off
Operator	on	on	off

## 8. SET-UP FROM DIP-SWITCHES



The lower block of dip-switches (1-8 of 10 switches) may be used to the following options.

<u>LANGUAGE</u>	<u>no1</u>	<u>no2</u>	<u>no3</u>
Swedish	off	off	off
North American	on	off	off
English	off	on	off
German	on	on	off
French	off	off	on
Italien	on	off	on
Operator	on	on	on



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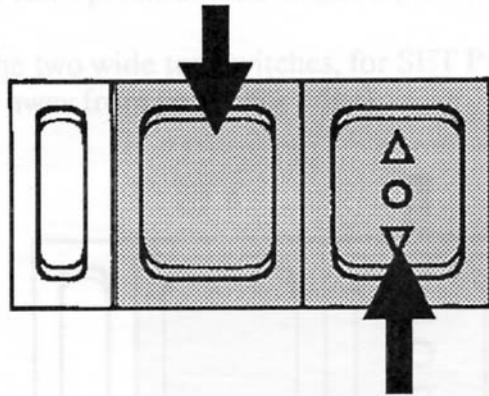
- (4) Literary or computer    ON = Computer br.  
   OFF = Literary br.  
   (Grade 1 translation)
- (5) Capital prefix            ON = Capital prefix  
   OFF = No capital prefix
- (6) Standard or IBM code    ON = IBM code  
   OFF = Standard code
- (7) Line length                ON = 32 char/line  
   OFF = 40 char/line
- (8) Page length                ON = 12 inch  
   OFF = 11 inch

Switch 9 have no effect and switch 10 is used to overcome the paper sensor.

Changes after new dipswitch settings will effect after a RESET.

## 9. SELF TESTS

### 9.1 Self Test - ASCII and Printer Set-Up



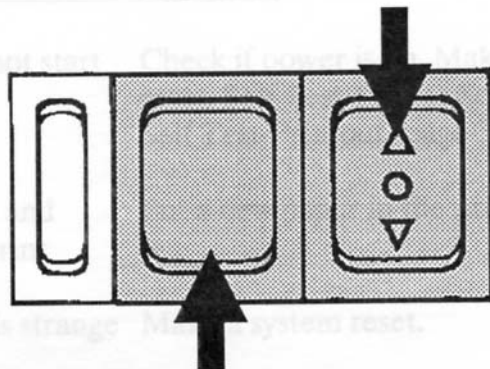
The "Self test ASCII & PRINTER SETUP" will print the current printer setting and ASCII to Braille translation, to run this feature complete the following sequence.

1. Hold down the top switches FORM FEED (back edge) and PAPERFEED (front edge) and POWER ON the printer.
2. After the self test process is completed (two pages), the printer will go back to normal print.

## 9.2 Self Test - Printout

The self test printout will produce a graphic display followed by continuous lines of full braille cells. After five full pages of full braille cells (to adjust dot quality) the printer will continue to produce pages of braille text until the RESET button is pressed. To start the self test - printout follow this sequence.

1. Hold down the two wide top-switches, for SET PAGE and PAPER FEED away from you (back edge).



2. At the same time - POWER ON. When the printing sequence commences release the top-switches.
3. To stop the self test press the RESET button.

## 10. FAULT DETECTING

**NOTE!** Before you start remove the shipping screw.

**SYSTEM RESET:** 1.Switch off the power. 2.Hold down both FORM FEED and PAPER FEED (back edge) 3.Switch on the power. (see also page 26)

<u>FAULT</u>	<u>REMEDY</u>
The printer does not start	Check if power is on. Make a system reset. Self Test-Printer Set-Up (page 30). Self Test-Printout (page 31).
The printer beeps and does not start to print	Put a new paper in the printer.
The printer sounds strange	Make a system reset.
The printer does not write	Make a system reset (Page 19). Check if the printer is online. Check if you have the right outport of the computer. Check if you have the right port on INDEX. Right MODE command on com1: (16)

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Prints unintelligible characters

Check if the dip-switch settings are correct + system reset.

Check if you have the right MODE for serial communication (page 16)  
No operators table is stored in Index.

Print-out does not start at the top of every page

Make a Set Page (page 11).  
Check that the paper length is correct

The dots are faint

Adjust the Impact level (page 20).  
Bad paper quality

## 11. DEFAULT PARAMETER VALUES

Wordwrap ON  
Auto Line Feed OFF  
Margin = 3  
Characters Cell width = 2.625 mm  
Character spacing = 3.5 mm  
Line length = 40 characters  
Line feed = 5 mm  
Page length = 29 lines/12 inch paper

## 12. TECHNICAL DESCRIPTION

Interline Print speed 25 CPS (characters/sec)

Noise level 65-68 dB(A)

Printer buffer 30 kB

Serial communication RS-232C

Centronics communication

Braille languages; Swedish, French, English, North American,  
German, Italian, and Operator defined.

Definible Code mode; Six Dot Computer Braille; Literary  
Braille (grade one) with Number Prefix and Optional Capital  
Prefix

Print mode; Normal 6 dot system

**Distributor:**

**Production:**

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**Tel +46-920-51995**

**Fax + 46-920-57249**

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