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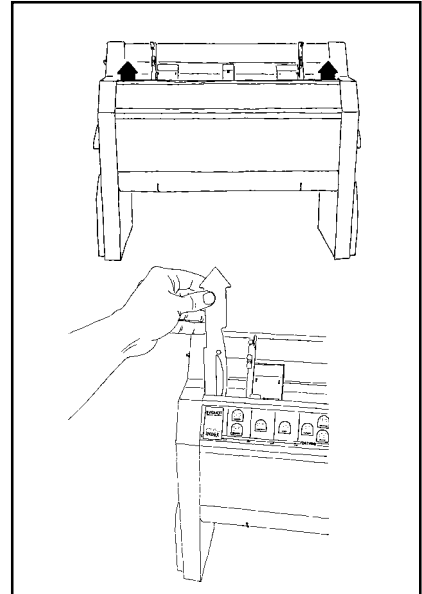
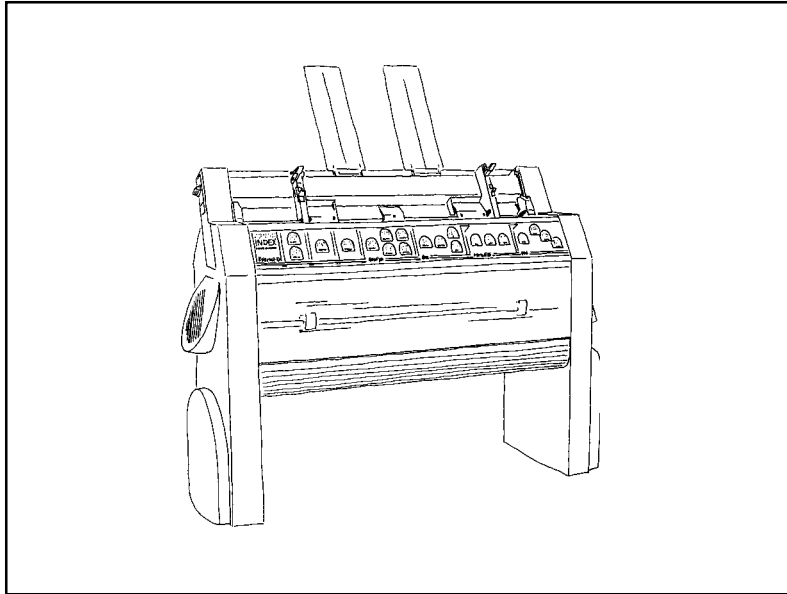
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INDEX 4X4 PRO

Interpoint Braille embosser for
saddle stitch binding format

User manual



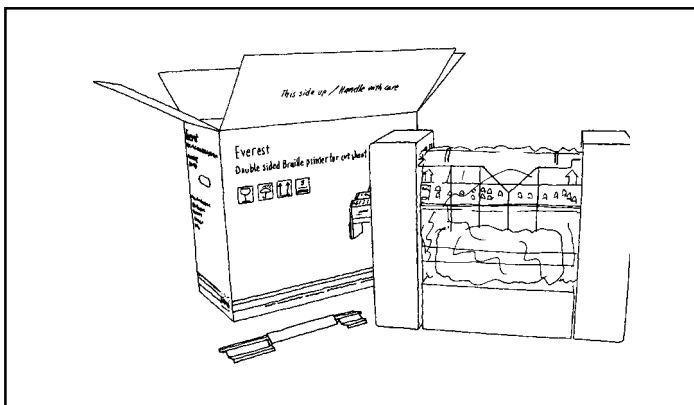
1. Unpacking

1.1 Unpacking instructions

Take the embosser up from the box. Remove the two print-head transport locking, red coloured plastics, placed inside the sheet feeder. Save the transportation material.

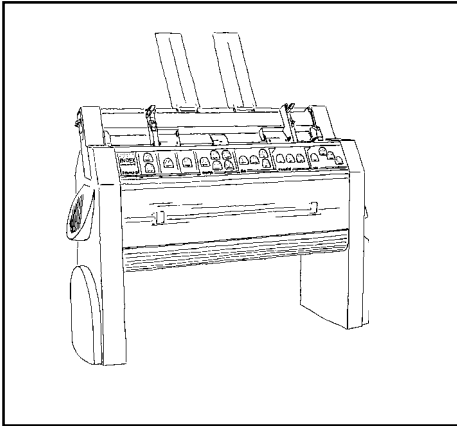
Note! When shipping, please remember that the embosser is a delicate unit. It is therefore most important to replace the printing head lockers, and use the original packing!

Before installing the embosser make sure that there is no visible damage to the embosser and that the delivery is complete. If you encounter any problems, please contact your dealer *immediately*.



**PLEASE DO
NOT DISCARD
THE ORIGINAL
PACKAGING.**

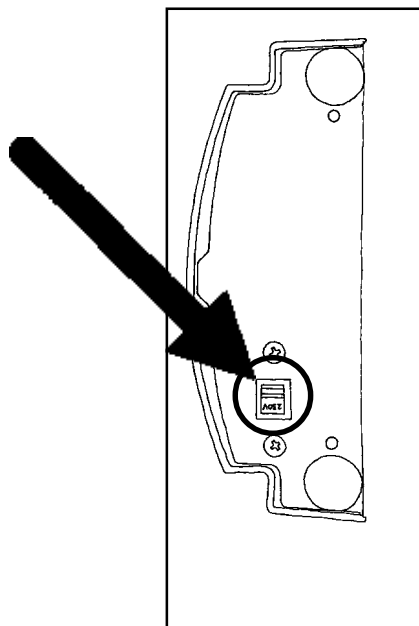
1.2 Unpacking checklist.



INDEX 4X4 PRO
SOUND ABSORBING CABINET
CABLES
PAPER SUPPORTS
USER INDEX MANUAL INK PRINT
SUPPORT CD
BRAILLE PAPER
BINDING STATION (Optional)
SAND PAPER

1.3 Safety instructions

Before power on, make sure that the voltage selection switch is set for the correct value. The switch is located under the left leg of the embosser.



2 Operating the embosser

2.1 How to start up

2.1.1 Loading paper

A) The right side margin guide is fixed to the far most right position.

B) Open the sheet feeder with the lever on the left side.

Load the paper and adjust the left side paper guide until it touch the paper and lock it properly.

Maximum paper width that can be handled by the sheet feeder is 297 mm. If a narrow paper is used, only the left margin guided should be adjusted accordingly and properly locked in that position.

NOTE! Never change the position of the right side margin guide on the 4X4 PRO!

C) When loading the sheet feeder, make sure it is not overfilled. For the best possible function it is necessary to leave 1-2 mm free space between the pick-up rollers and the paper stack before closing the sheet feeder.

D) Set the two *paper supports* at the margins of the paper.

E) Select card or sheet mode on the sheet feeder. *Card* mode is normally for paper of 120-200 gsm., and *sheet* mode for paper below this weight. Make sure that the *card/sheet* selectors is set to the same position on both side of the paper.

2.1.2 Sheet feeder details

For a detailed description of sheet feeder adjustment, different paper qualities, sheet feeder maintenance and fault in paper handling see chapter 9.

2.2 Paper settings

2.2.1 Page length setting

On delivery the default paper length is 420 mm.

To change the default paper length, double-click the FORMFEED key. The printer will echo the measured value of the paper length in mm. Smaller adjustments of the paper length value can be done from setup.

If you use a paper type different from the paper that was delivered with the printer, the printer may need to calibrate the paper sensor in order to accept the new type of paper.

For instructions, see 6.4.7 - Paper sensor calibration.

2.2.2. Pre-folding line position

Turn the printer ON. Press the "1" or "10" key once and then the SETUP key. A paper will be fed into the printer, where a pre-folding line are printed. Check the position of the line by folding the paper and make sure that the edges matches each other.

If the pre-folding line is not at the correct position, e.g. the first printed page is wider then the second, then the value is to high. Decrease the value by using the 1 and 10 keys in the copy features. The upper key "1" increases 1 (+1) and the lower key "10" decreases 1 (-1) for each keystroke. When you reached the matching value, press SETUP to store it in the printer memory. (If the first printed page is more narrow then the second, then the value is to low and must be increased.) When you press the 1 and 10 keys now, the spoken value will be in number of motor steps. Decrease it e.g. 5 steps and then press the Setup key to make a new test printout. Check the position of the line by folding the paper and make sure that the edges matches each other.

When the pre-folding line is correct, the printer is ready for use.

2.2.3 Page width setting

Page width is set up from control panel SETUP/PAGELAYOUT/PAGE WIDTH, change paper width using the keys “1” and “10”. Each key press will add one or ten to the current value of paper width until maximum page width is reached, then it starts from minimum page width again.

Also see chapter 5 for further information about changes in the setup.

2.3 Paper support position

The paper supports are used to keep the paper straight in the paper magazine in order to avoid multiple feeds.

On the top of the sheet feeder, there is a slot for the paper supports. Place the paper supports into position and press them down into the slot so they are properly fixed and positioned at to the margins of paper.

2.4 Document guide position

On the lower edge of the front panel cover are two plastic *document guides*. The correct position for these is to be lined up with the margin guides following the side edges of the sheet, in order to lift the paper to the correct position in the document stack, however it may vary on different paper qualities.

2.5 Computer connection

Connect Index 4X4 PRO to the computer with the Serial or Centronics interface. When turning on the 4X4 PRO, both ports are ready to receive information.

2.5.1 Serial communication cable

4X4 PRO is equipped with a 9 pin female (D-sub) on the serial interface, and a standard Centronics connector for the Centronics interface.

Serial Pin configuration:

2=RXD IN, 3=TXD OUT, 4=DTR OUT, 5=GND, 6=DSR IN, 7=RTS OUT, 8=CTS IN.

Transmitting parameters (factory setting) are:

BAUDRATE=9600, DATA BITS=8, PARITY=N, STOP BITS=1, HANDSHAKE=DTR HARDWARE HANDSHAKE.

2.5.2 Communication parameters

The communication parameters on the serial-port and Centronics port on your PC are normally set with the following command in the AUTOEXEC.BAT file.

MODE COM1:9600,N,8,1,P
MODE LPT1:.,P

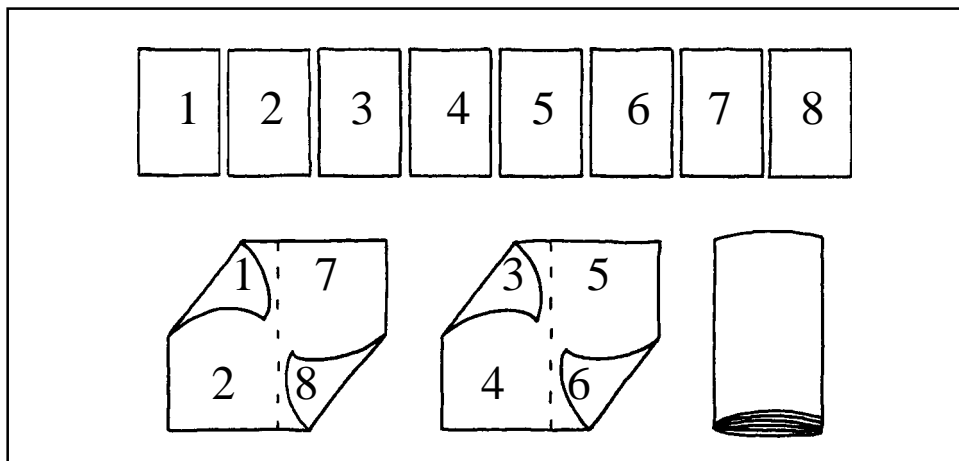
3. Embossing in "Saddle Stitch" format

When embossing in "saddle stitch" format (newspaper format) the process is significantly different from using a normal Braille embosser. For the user there is a few questions that have to be considered and understood in order to use the system in the correct way. It is important to notice that the 4X4 PRO is designed for embossing in "saddle stitch" format only. It is not possible to print Braille in normal page format.

3.1 4X4 PRO embossing sequence

- a) The 4X4 PRO receives the complete text file, up to 200 pages of Braille.
- b) The received text is formatted into Braille pages.
- c) The pages is organised in correct order for embossing. For example the first paper on an eight pages document, the pages 1,2,7 & 8 will be embossed. The process a, b & c will result in a delay of up to approximately 30 seconds before the 4X4 PRO starts to emboss the document.

Organisation of the pages in an 8 pages saddle stitch binding printout.



- d) Embossing of the pages format are always sideways.
- e) Embossing of the document can be done including a pre-folding line. The embossed document is placed in the document tray in correct order for direct folding and stapling.

3.2 Pre-folding line strength

The pre-folding line is printed in order to simplify the binding and folding process of the printed magazine. The line can be adjusted in strength, as well as it can be de-selected.

To change the strength of the pre-folding, go to setup/option/item "print folding".

Value 0 disables the pre-folding line.

Value 1-5 gives the strength of the pre-folding line

Note! Set the value according to the paper quality. To much power may effect the life-cycle of the folding in the magazine.

3.4 Paper size

The INDEX 4X4 PRO Braille Embossing system, including paper in/out handling, is optimised for a paper length of between 420 (A3) and 431.1 mm (11.0 x 17.0 Inch). For this paper size the paper out handling will work in the best way. It is important to notice that the effective printing speed will be reduced if a paper with a width less than 297 mm is used, or if the number of lines is reduced.

It is possible to adjust the 4X4 PRO embossing mechanism for a wide range of paper sizes. If a paper size, significantly different from A3, is used it can effect the stability of the document handling.

	Paper size Min. mm	Maximum Max. mm	Minimum Recommended A3	Recommended Recommended 11 x 17 Inch
Length	297	500	420	431.8
Width	210	297	297	279.4

Possible character per line for various paper lengths.

Paper Length in mm	Standard Paper Format	Minimum char/line	Default char/line	Maximum char/line
279	US Letter 279 x 216	18	20	21
297	A4 Portrait	20	22	20
420	A3 Portrait	30	31	33
432	Tabloid 11"x17"	31	32	34
500	Max.	36	37	39

3.5 Characters per line

This table shows the maximum possible number of characters per line when using standard size papers.

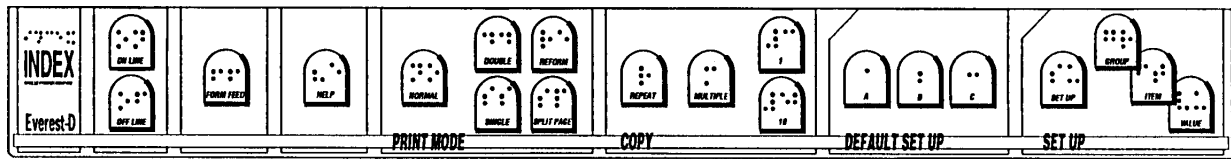
Width in mm	Standard Paper Format	Lines/page 6-dot cell	Lines/page 8-dot cell
297	A3 Portrait	29	23
279	11"x17"	28	21
216	US Letter	22	16
210	A4 Portrait	20	16

3.6 Paper out handling

The paper out handling is optimised for a paper length of 420-440 mm, however longer paper may be used.

The paper out handling function can be adjusted by the position of the green document guides on the lower part of the printer. The normal position of the document guides is five millimetres into the paper margin.

4. Control panel



The control panel and user logic on the 4X4 PRO are designed to make the use and installation of the printer as easy and efficient as possible. All the keys are marked both in Braille and ink print, and organised in clearly marked modules. The user is guided by digitised speech.

The panel is originally designed for the Index Everest Braille embosser, which has a few different features why some of the keys are disabled when they are used for the Index 4X4 PRO.

Note! WinBraille will overtake all commands from the front panel. The commands on the front panel are applicable only when the embosser is connected to a DOS operated computer or together with a Braille editor working in Windows, controlling the embosser with a text based driver, e.g. Duxbury.

The keys are organised in five groups;

1. STANDARD COMMANDS; On Line, Off Line, Form Feed, Help.
2. PRINT MODE; Normal, Reform, Split Page, Double, Single.
3. COPY; Repeat, Multiple, 1, 10.
4. DEFAULT SETUP;
 - A = Default setup A.
 - B = Default setup B.
 - C = Default setup C.
5. SETUP; Setup, Group, Item, Value.

4.1 Start printing

Connect the embosser to your computer, load the paper, and turn it on. 4X4 PRO is ready for use with the default factory settings.

4.2 Default setup

To change the active default setup, press the DEFAULT SETUP KEY A, B or C.

4.3 Setup

If you need to change the setup parameters use the front panel.

To start the setup sequence press SETUP. In setup mode you can change and save all parameters in the groups: BRAILLE CODE, SERIAL COMMUNICATION, PAPER LAYOUT and OPTION.

4.4 Standard commands

4.4.1 On/off line

Connect/disconnect line to computer. Pressing Off line whilst printing pauses printout.

4.4.2 Form Feed

Form Feed feeds one sheet through the embosser. Double click FF to measure the paper length.

4.4.3 Help

The HELP key, in Print Mode, is used to obtain a printout of active embosser settings. The printout includes the software version, Braille code, active setup parameters for Braille Code, Paper Layout, Serial Communication and Options.

4.5 Print mode

Print Mode includes keys for changing between the different print modes. You can choose between *Normal* or *Reformatted*.

4.5.1 Normal

In Normal mode the 4X4 PRO will print the Braille as it is formatted in the text file. The text has to be formatted with the correct characters per line according to the setup of the embosser.

4.5.2 Reformatted

In reformatted print mode the 4X4 PRO formats the text to erase any excess spaces in the text file, e.g. multiple spaces, FF (Form Feed) and CR/LF (New line). This function is very useful when printing a text file made for ink print in Braille or normal literary (grade 1) Braille.

Re-formatting function works in the following way:

Auto line-feed and word wrap is automatically set ON.

1 or more space is substituted with 1 space.

1 CR/LF is erased.

2 CR/LF substituted with 1 CR/LF

3 CR/LF substituted with 1 CR/LF followed by two spaces.

More than 3 CR/LF's are substituted with 2 CR/LF's.

1 FF is erased.

More than 1 FF substituted with 1 FF.

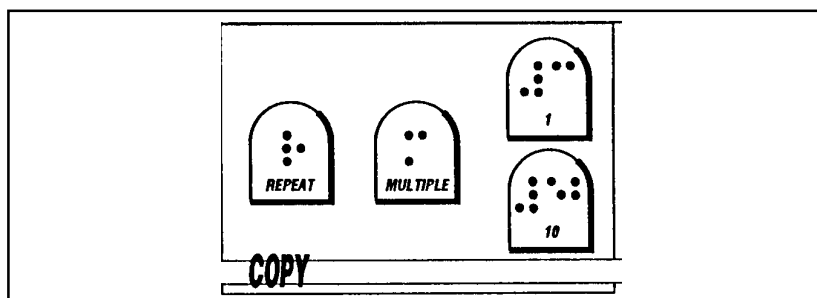
4.5.3 Disabled keys

The panel was originally designed for the Index Everest Braille embosser, which is why some of the keys are disabled when they are used for the 4X4 PRO.

The following keys are disabled when printing in 4X4 mode: *Double sided*, *Single sided*, *Split page*.

4X4 PRO always prints in double-sided mode, normal or reformatted.

4.6 Copy



With the copy function you can produce large quantities of Braille without tying up your computer during the printout. The embosser buffer is 200 pages of Braille.

Copy function includes the following keys REPEAT, MULTIPLE, 1 and 10.

With REPEAT and MULTIPLE you can choose between the different copy functions and with “1” and “10” you can select the number of copies, and/or what part of a document to print.

4.6.1 Multiple

MULTIPLE is used to select the number of copies.

Example: Make 54 copies.

MULTIPLE + 5 x 10 + 4 x 1 + MULTIPLE and send the file to 4X4 PRO.

4.6.2 Repeat

REPEAT is used to start a printout of the last printed document. Press the REPEAT key *twice* to print one copy of the latest printed document.

Press REPEAT *once* completed by the number 1+10 to select starting page, then REPEAT 1 + 10 to select ending page. Press REPEAT once again, and 4X4 will print one copy of the selected part of the document.

5. Setup commands

Note! WinBraille will overtake all settings in the setup.

The settings in the setup are applicable only when the embosser is connected to a DOS operated computer or together with a Braille editor working in Windows, controlling the embosser as a text based driver, e.g. Duxbury.

5.1 Default setup A/B/C

4X4 PRO has three different setup parameter settings, stored as DEFAULT SETUP A, B and C.

To select DEFAULT SETUP press A, B or C. All changes that are made in the setup are stored in the active default setup.

5.2 Setup

The group of setup keys includes four keys SETUP, GROUP, ITEM and VALUE.

5.2.1 Change Setup

To activate SETUP, press SETUP, 4X4 PRO will echo "Change setup A". The changes will be stored in the active Setup.

The keys GROUP, ITEM and VALUE are organised in a tree structure, where GROUP is the selection of four major groups. ITEM is the different items to change in each group and VALUE is the value for each item. (See description at chapter 5.4)

5.2.2 Setup keys

5.2.2.1 Group

GROUP includes four different groups of parameters, BRAILLE CODE, SERIAL COMMUNICATION, PAGE LAYOUT and OPTION. When pressing GROUP several times, you will toggle between these four groups, in a similar way as in ITEM and VALUE.

5.2.2.2 Item

ITEM is the selection available within one GROUP. For example in the GROUP: PAGELAYOUT you can select between the following ITEM: characters per line, print mode, top and bottom margins and page number.

5.2.2.3 Value

VALUE is the actual value that you can select in any item. For example Left Margin 0, 1, 2 or 3 characters.

5.2.2.3.1 Page layout information

Pressing VALUE with the embosser in stand-by mode, echoes the active number of "lines per page" and "characters per line".

5.3 Change Setup

This is an example of a command sequence that changes the item VOLUME in group OPTION to highest level.

1. Press SETUP.
2. Press GROUP until the embosser echoes "Option".
3. Press ITEM until the embosser echoes "Volume".
4. Press VALUE until the embosser echoes "five".
5. Press SETUP to save.

5.3.1 Braille code

In this group the following items can be changed; Language, Computer or Literary (Grade 1) Braille, 6 or 8 dot Braille in computer Braille, and with or without capital prefix in Literary (Grade 1) Braille. When a user defined Braille table is used, it can be changed to all combinations between literary and computer Braille with no system limitations.

5.3.2 Serial communication

In this group all serial communication parameters can be changed.

Baud rate	300/600/1200/2400/4800/9600.
Serial data	7/8.
Parity	Odd/Even/None.
Stop Bit	1/2.
Handshake	Hardware/Software.

5.3.3 Page layout

Page layout contains the following options:

Characters per line	23-38
Top Margin	0-3 lines height
Bottom Margin	0-3 characters width
Print mode	Normal/Reformatted.
Page number	On/Off.
Page width	100-297 mm
Page length	110-500 mm
Number of page	1,2 or 4

5.3.3.1 Characters per line

When 4X4 measures the paper, it automatically calculates and sets the number of characters per line margin. With *Characters per line* you can change the value of the number of characters per line. When changing the value, it will effect only the width of the binding margin.

5.3.3.2 Print mode

With the option *print mode*, you can select between *normal* and *reformatted* printout.

5.3.3.3 Page number

With the option *page number*, you can select page numbering - On/Off.

The page number will be printed in the upper right corner of the page.

5.3.3.4 Page width

Page width between 100 and 297 mm can be chosen. The page width defines the number of line per page.

5.3.3.5 Page length setting

Command: Double-click the Form Feed Key.

A paper will be fed trough the printer, following a message giving the length of the paper in millimetres, then a second paper is fed trough where the pre-folding line (mid position of the paper) is created.

Check that the position of the line is correct by folding the paper. The edges of the paper should match each other.

If there is a mismatch of the paper edges, follow the instructions with chapter 6.9

5.3.3.6 Number of page

Index 4X4 can also be used as an ordinary Everest printer, printing normal double-sided or single-sided Braille, 1 or 2 pages per paper.

With item *number of page* you can select

1 gives *single sided printout* in landscape mode.

2 gives *double sided printout* in landscape mode.

4 gives *saddle stitch binding* printout.

Note! If 1 or 2 is selected, you can switch between single and double sided printout from the control panel.

5.3.3.7 Page layout Guideline

In determining the layout of an Interpoint printout, there are a few things to consider.:

Centre folding/pre-folding line

When measuring paper, the embosser automatically calculates the position of the centre fold, however in some cases it may need to be manually adjusted. Use the "1" and "10" keys together with the setup key to adjust the position of the pre-folding line.

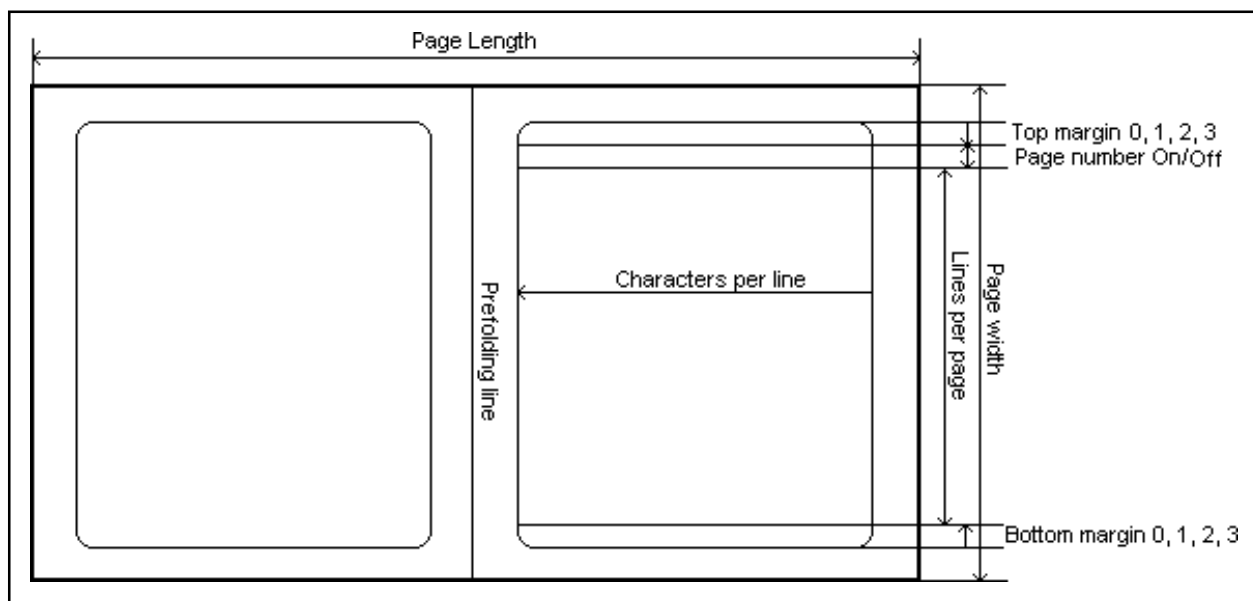
Refer to chapter 6.9 for detailed description.

Line length

When 4X4 measures the paper, it automatically calculates and sets the number of characters per line. With item *characters per line* you can change the value of the number of characters per line. When changing the value, it will effect only the width of the binding margin.

Page width

Page width defines how many lines per page will be printed. The page width must be correctly set, otherwise parts of the text will be printed outside the paper and will therefore be lost.



5.3.4 Options

The following options are available:

Word wrap	On/Off.
Auto Line-feed	On/Off.
Form feed	On/Off.
Volume	1/2/3/4/5.
Impact level	1/2/3/4/5.
Delay time	1/2/3/4/5.
Setup	Open/Not open.
Print folding	Off/1/2/3/4/5

5.3.4.1 Word wrap

Select between split words, or wrap to the next line if a word exceeds the end of the line.

5.3.4.2 Auto line-feed

Select automatic line-feed, together with a carriage return, according to your computer software.

5.3.4.3 Form Feed

Select ON to get an empty page between each Braille copy of a document.

5.3.4.4 Volume

Select the volume of the speech feedback.

5.3.4.5 Impact level

Select the impact level of the hammers for different paper qualities.

5.3.4.6 Delay time

Select the delay time which the embosser waits for more information after a file.

Note! Using a computer with a slow disc-drive requires a longer delay time in the embosser.

5.3.4.7 Set up

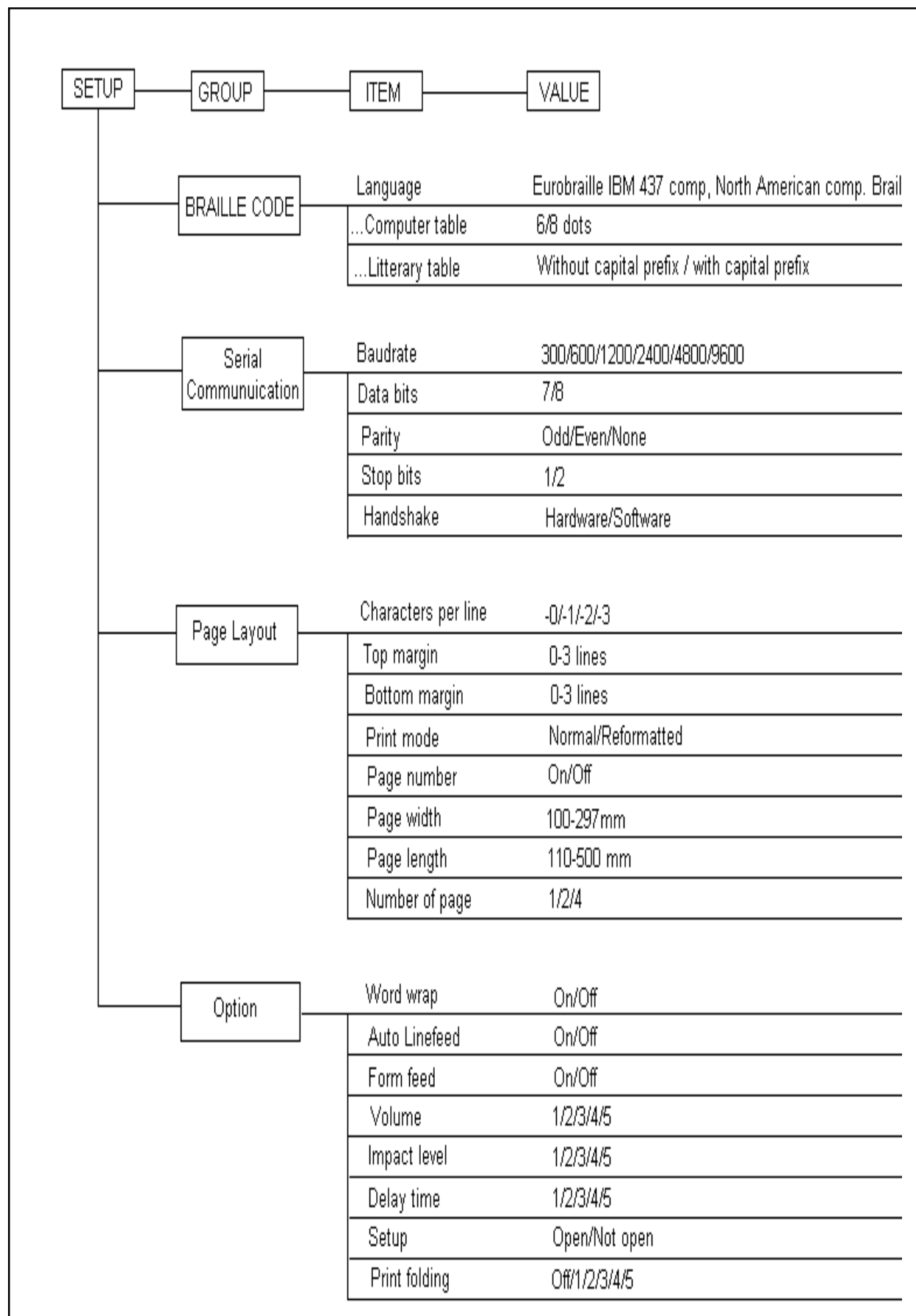
Select access to setup. *Not open* gives access only by the command “power on + Setup key”. *Open* allows access by pressing the Setup key when embosser is on stand by. Changing of access to Set up (Open/Not open) will effect all three setups, A/B/C.

5.3.4.8 Print folding

With print folding you can select the strength of the pre-folding line (according to the paper quality) or to de-select the pre-folding line.

Note! It is important not to select a too hard impact of the pre-folding line, as it may decrease the life-cycle of the stapled magazine.

5.4 Flow schematic for Setup



6 Support CD

6.1 CD contents

With the embosser you have also got a CD with all the required software's for your embosser. The CD is designed as a web, exploring the CD. This Web Browser has a special feature - it can run other software applications by clicking on a link.

On the CD you can find: Embosser Software's, Manuals in different formats, Product information, Link to Index Web site.

If your computer can not accept the included browser, please refer to the readme.txt file on the CD for further instructions.

6.2 Start the CD

The contents of this CD is designed as a web site, containing html pages and executable programs applicable for use with Index Embossers.

Insert your CD in the CD-ROM player. If your computer allows "autorun" the CD will starts immediately. Else go to Start/Run and browse to your CD-ROM driver, e.g. D:\START.BAT and click OK.

The browser embedded with the CD will start to display the first page of the CD. From here you can find links to the entire contents of the CD.

This browser has a special feature - it can execute commands directly from a html page, why we strongly recommend not to use any other browsers.

6.3 WinBraille system

The CD includes the WinBraille system, compatible to Windows 95/98/NT.

WinBraille will be used as the software platform for Index Embossers. Beside the editing and translation features it also provides functions for upgrading the embosser software's and give access to Index web site. There you can take advantage of our support features as well as download rule files for the WinBraille system.

WinBraille is a Braille editor with a full blown Windows driver. That means that you can install WinBraille with your embosser as default printer and print directly from any Windows application, e.g. your web browser and print any web page from the internet.

WinBraille controls the embosser completely. There is no need for any settings in the set up nor the front panel of the embosser.

WinBraille also includes a *Rule file editor* for Braille tables. Use this editor to create or edit your literary Braille tables or Braille contraction tables for grade 2 Braille.

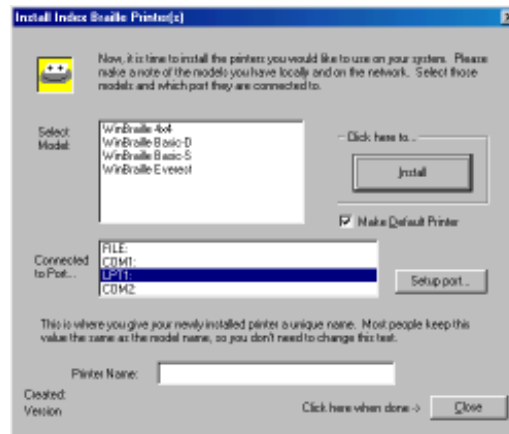
For detailed information about the WinBraille system, please refer to the help file in the WinBraille system.

6.3.1 Install WinBraille

From the main page of the CD, browse to the WinBraille page and click on the link to install the WinBraille software and follow the instructions.

6.3.2 Install printer driver for WinBraille

When the installation of WinBraille is ready, the installation wizard will continue to install the printer driver for the program.



The following dialog box will appear on the screen:

1. Select embosser type
2. Select port
3. Select if the WinBraille embosser should be set as default printer.
4. Click on the Install button.

When the printer driver installation is ready, click on the Close button.



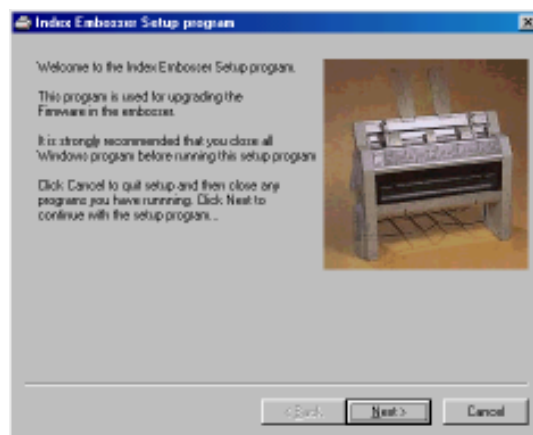
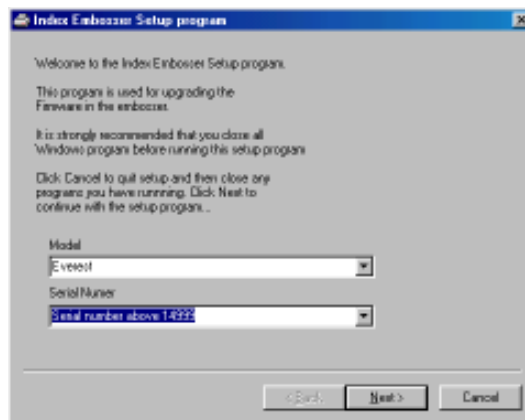
6.4 Embosser software installation

After the installation of the WinBraille software is completed, the installation program will suggest that you also upgrade your embosser to the latest software, provided on this CD. Continue with the installation wizard by following the instructions on the screen.

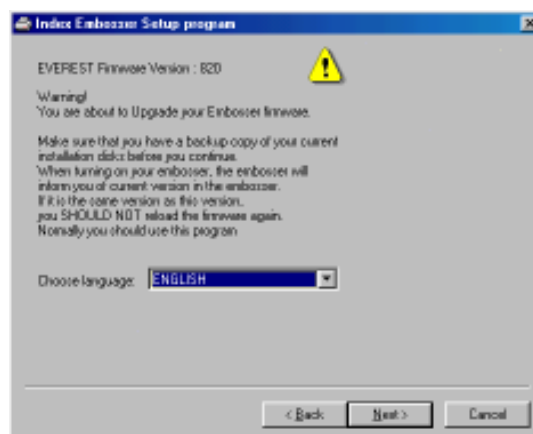
Note! The Windows compatible version 1.20 is required for the WinBraille.

6.4.1 Firmware upgrade

A new dialog box will now appear. Read the instructions and click on NEXT to continue.

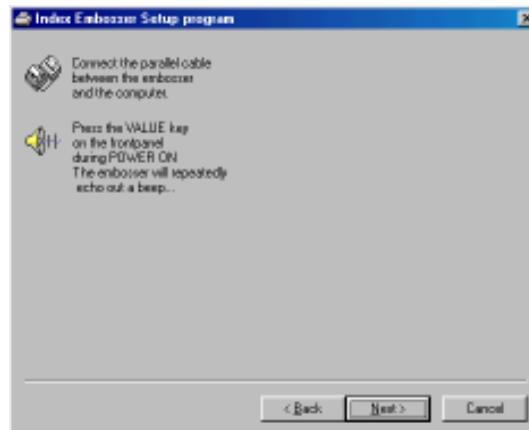


6.4.2 Select language



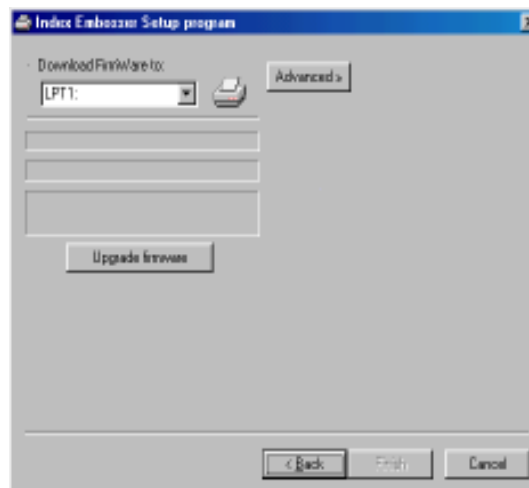
Select your desired language in the menu and click on NEXT to continue.

6.4.3 Set embosser in upgrade mode



When the next dialog box appears, power up the embosser whilst pressing the VALUE key. The embosser will now start up and giving a repeated beeping sound. Click next in the dialog box.

6.4.4 Firmware transfer



When the final download dialog box is displayed, make sure that the correct port is selected, then press the UPGRADEFIRMWARE button.

When the installation is ready, the program will shut down and the embosser will echo "Index Everest Ready".

The embosser is now ready for use with the WinBraille system.

6.4.5 Software Installation from CD

There are several versions of the 4X4PRO software available on this CD. The Windows compatible version 1.20 is required to use the WinBraille system.

Compatible support software's are available on the CD in the 1.06 DOS version.

If you like to install a software without installing WinBraille continue from the main page of the CD, browse to the *Embosser software's page* and click on the link for *Index Embosser software's* and select version 1.20 for Windows or version 1.06 DOS. Finally, click on the *installation link* and the process will start immediately.

Note! The DOS version should be **installed** to the computer whilst running in Windows mode but the program must run in pure DOS mode. Shut down the Windows and restart in DOS mode.

6.4.6 Support Software for Index 4X4

There is no support software implemented on the 4X4 PRO installation disk.

If you need to make adjustments in the settings of the embosser, e.g. hammer impact etc., install the DOS version 1.06 that is available on the support CD.

A manual for that version is also available on the support CD.

6.4.7 Paper sensor calibration

If the printer fails to set the correct paper length in mm, the paper sensor sensibility need to be calibrated.

Press Item + Power on. The printer will feed one sheet of paper and echo the estimated value of the page length in mm, then it ask you to "give page length". Give the correct length of the paper and set it by using the 1 and 10 keys in the copy features. The upper key "1" increases 1 (+1) and the lower key "10" decreases 1 (-1) for each keystroke. When you reached the matching value, press SETUP to store it in the printer memory.

A new paper will now be fed into the printer, where a number of dots will be printed at the end of the paper. The printer will echo the value of the maximum number of printed dots. Count the number of dots and set it in the same way as you just did with the paper length. Press SETUP to save.

Continue to set the pre-folding line.

Turn the printer ON. Press the "1" or "10" key once and then the SETUP key. A paper will be fed into the printer, where a pre-folding line are printed. Check the position of the line by folding the paper and make sure that the edges matches each other.

If the pre-folding line is not at the correct position, e.g. the first printed page is wider then the second, then the value is to high. Decrease the value by using the 1 and 10 keys in the copy features. The upper key "1" increases 1 (+1) and the lower key "10" decreases 1 (-1) for each keystroke. When you reached the matching value, press SETUP to store it in the printer memory. (If the first printed page is more narrow then the second, then the value is to low and must be increased.) When you press the 1 and 10 keys now, the spoken value will be in number of motor steps. Decrease it e.g. 5 steps and then press the Setup key to make a new test printout. Check the position of the line by folding the paper and make sure that the edges matches each other.

When the pre-folding line is correct, the printer is ready for use.

6.5 WinBraille

6.5.1 Start WinBraille

Go to the WinBraille folder on the Start menu and click on WinBraille.

The first time the program is started, a *tutorial wizard* will start to guide you through the profiles settings and teach you how to use the software.

The tutorial wizard is also accessible in the help menu.

6.5.1 Register WinBraille

By the end of the tutorial wizard a registration form will be displayed. Make sure that you fill the form and mail it to Index.

By registering as a WinBraille user, you will be notified on future program changes and upgrades.

The registration form is also accessible in the help menu.

6.5.2 Upgrade WinBraille

Upgrades can be automatically upgraded from Index Web site. On the help menu go to *Internet* and click on *get upgrades* and follow the instructions.

You can also visit our web site **www.indexbraille.com** if you like to download a new version.

7. Control sequences

Note! When using WinBraille, it will overtake all commands and the commands listed on this page is not applicable

ESC sequences marked with "-" (minus) are removed from the text file by 4X4 PRO
 ESC sequences marked with "+" (plus) controls 4X4 PRO as listed below.

7.1 Defined codes

Decimal	ctl. char	Function
- 8	^H	Backspace
- 9	^I	Horizontal Tab. Skip
+ 10	^J	Line-feed
- 11	^K	Vertical Tab-skip
+ 12	^L	Form Feed
+ 13	^M	Carriage return
- 14	^N	Double with (for 1 line only)
- 15	^O	17 CPI (condensed)
- 17	^Q	Print suppress OFF
- 18	^R	10 CPI (pica)
- 20	^T	Double with OFF (Before end of line)
+ 24	^X	Clear Buffer
+ 27	ESC	ESC - before codes
+ 32	Space	Space
+ ESC 5	53	Automatic Line feed
ESC 51		Auto Line Feed ON
ESC 51		Auto Line Feed OFF
+ ESC \	92	Select all Characters Chart
ESC \n1(n2x256)		Transparent mode where n1 and n2 (Hex) are the number of characters in the transparent string. In the string there is no translation "bit 1" corresponds to "dot", "bit 2" to "dot 2" etc.
+ Esc^	94	Prints 1 character from all character chart.

7.2 ESC Sequences - Index commands

ESC ^C Select 6-dot Braille cell
 ESC ^D Select 8-dot Braille cell

7.3 Page numbering by ESC sequences

If printing several documents, that should be connected to each other as one document, it is possible to select continuous page numbering.

To choose continuing number from the of the previous document, send the following ESC-sequence in the beginning of the file, like a driver:

ESC^Q,0,ESC

To choose a certain page number from the first page of the next document, send the following ESC-sequence in the beginning of the file, like a driver:

ESC^Q,xxx,ESC

7.4 Transparent mode

Command=ESC*n1n2*“text”

n1 and *n2* (hex) gives together the total number of characters printed in transparent mode and is given in the base of 256.

n1 is the number of singular and *n2* the multiple number of 256.

When printing *transparent mode*, first set the printer for 8 dot computer Braille.

Examples:

Print 1 character; text “A”. Command ESC*10A*

[ESC][\][SOH][NULL]A

Print 257 characters; text “A”. ESC*11AAAAA....(257xA)*

[ESC][\][SOH][SOH]A....(text string)

Print 260 characters; text “A”. ESC*41AAAAA....(260xA)*

[ESC][\][EOT][SOH]A....(text string)

7.5 Power on commands

7.5.1 Self test

Command: on line + power on.

This command starts a self test pattern of all hammers.

Then choose a printout at normal impact level by pressing ON LINE again, or at low impact level by pressing OFF LINE to compare the variations between different hammers.

7.5.2 Factory setting

Command: group + power.

The embosser will reload all parameter settings except operator defined Braille codes.

The factory setting will activate setup A.

To make a system reset, press GROUP + POWER ON.

After the system reset, the embosser will echo “SETUP 000, Index 4X4 PRO ready”.

7.5.3 Transport mode

Command: Form Feed + power.

To find the correct position for the printing head in order to get the transport lockers on their places, press the Form Feed key while you power up the embosser. The printing head will find the correct centre position, and then echo: “Index 4X4 PRO ready”. Turn the embosser off again, and insert the lockers by pressing them downwards at the edge of each side in the sheet feeder.

Note! It is very important to install the printing head transportation lockers before you pack the embosser in the original box. Ignoring this can cause major damage to the embosser.

7.6 Fault messages

7.6.1 Failure No reference-pulse

Turn the embosser OFF/ON. If you still get the same message, contact your service distributor.

7.6.2 Failure Paper length fault

This fault appears when the paper is too short compared to the measured paper length or if the paper is dark coloured.

1. Press ONLINE to eject the paper and print a new copy of the current page.

7.6.3 Failure Paper jam

This fault appears when the paper is too long comparing to the measured paper length.

1. Press ONLINE eject the paper and to print a new copy of the current page.
2. If there is serious paper jam due to i.e. multiple feed etc., press FORM FEED key to eject the paper out of the system. The embosser will now use a reduced speed with high torque to eject the paper slowly out of the embosser. If there should be a problem getting the paper out of the embosser, use the FF key to toggle FF OFF/ON. When the paper is ejected, press ONLINE to cancel the FF operation.

7.6.4 Failure 140 - invalid setup command

Not a valid command when selecting A, B or C from computer.

7.6.5 Failure invalid setup value

If there is an invalid numeric value in the setup file, the embosser will echo i.e. "Fail item Baudrate, Value 10".

7.6.6 Failure 160 - EEPROM failure

Major fault in EEPROM. Contact your service distributor!

7.6.7 Failure 170 - Text buffer exceeded

Error message if pressing REPEAT key, and file is larger than the available buffer. Repeat command is not accessible.

8. Serial communication cables

8.1 Serial cable 4X4 PRO - IBM computers

There is a standard cable between the 4X4 PRO and the PC. On the 4X4 PRO side a 9 pin male D-sub and on the PC side a 25 or 9 pin female D-sub. Cable with the following wires.

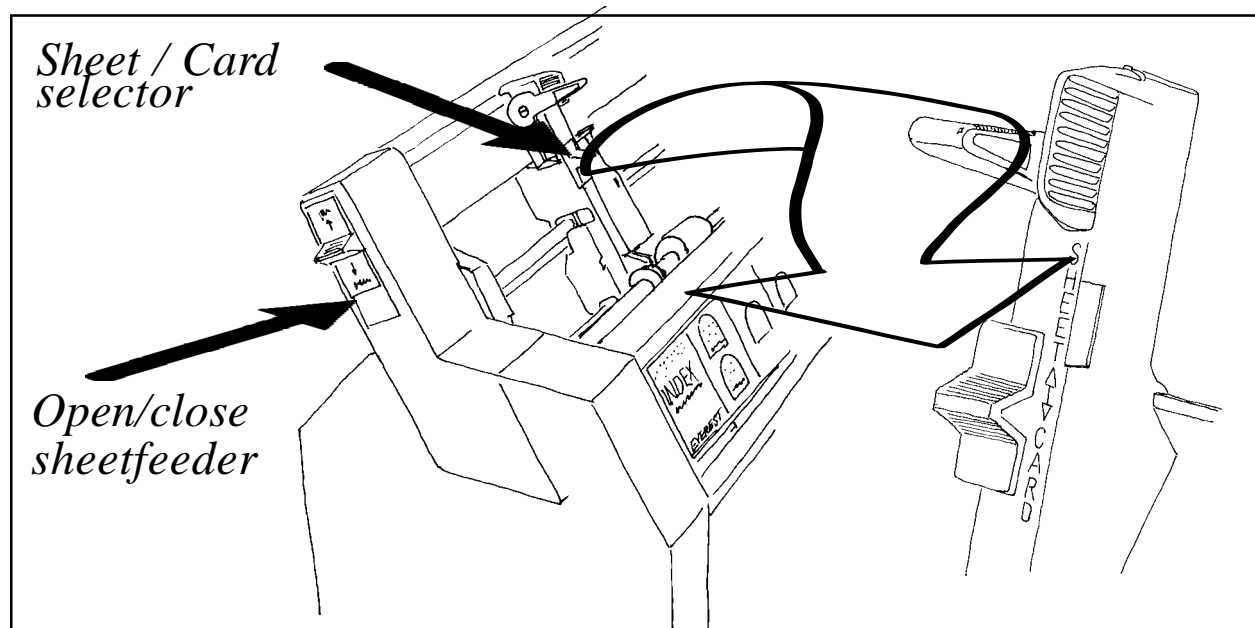
4X4 PRO - 25p D-sub.

2-2, 3-3, 4-6, 5-7, 6-20, 7-5, 8-4

4X4 PRO - 9p D-sub.

2-3, 3-2, 4-6, 5-5, 6-4, 7-8, 8-7

9 The sheet feeder



9.1 General function

The sheet feeder is designed to use paper in the weight range of 70-200 gsm. (grams per square metre) Perfect function requires a paper suitable for the embosser, and a correctly installed sheet feeder. The experience we have from thousands of embossers on the market, indicates that 80% of all good quality paper works perfectly with the 4X4 PRO.

9.2 Paper quality

There are a number of different paper qualities on the market which are labelled “Braille Paper”. Normally they are in the range of 80-180 gsm (20-100 Pound).

To determine if the paper quality is suitable for the 4X4 PRO, check the following details:

- a) The paper is properly cut. There should be a smooth and even surface when you feel with your finger along the cutting edge of the paper.
- b) **Never use separated fan fold paper.** The edges of this paper are very bad and can result in double-feeding, or not feeding at all.
- c) The paper must be a clean, with no holes or perforations on the sheet. Holes and perforation are normally made with a punch, and as a result sheets can “stick” together.
- d) Check that the surface of the paper has a texture similar to normal copy paper. The roughness of the surface affects the difference between gliding and standing friction and is necessary for proper function. The paper should not have a shiny or glossy surface. (Similar to playing cards.)
- e) Ensure that the paper is flat and undamaged.
- f) Do not use dark coloured paper. It can interfere with the optical paper sensor.

9.3 Random double-feed

With good quality paper and correct installation of the sheet feeder, a random double feed rate on maximum 1/1000 must be accepted. If the fault frequency is higher we recommend that you check the paper and installation against the following priorities. The following is a summary from our experiences of a large number of Index embossers on the market.

a. To ensure a good paper quality look at the following details:

- * Properly cut paper
- * There should be no binding holes or perforations on the paper
- * The paper should have a rough surface (similar to copy paper)
- * Paper should be flat and without damage
- * Check that the *card/sheet* selectors are in the correct position. Test by changing between sheet and card, using the same paper. We recommend use of the *sheet* position if it picks up the paper properly.

b) To ensure good installation of the sheet-feeder, look at the following details:

- * The margin guides should slightly touch the paper and be properly locked
- * Are the *card/sheet* selectors in the correct position?
- * The paper supports must be correctly installed.

c) To ensure good paper out control, look at the following:

- * The *document guides* (green plastic) should be in the correct position, especially if light paper is used. The normally correct position is about 5 mm from the side edge of the paper, however it may be necessary to adjust the position slightly towards the centre with some paper qualities. Some Braille paper not need the document guides. Then just slide them out from the paper area.

d) Avoid low humidity locations.

If the 4X4 PRO is used in a room with a low humidity level, static electricity can cause the paper to stick together. In this case we recommend an increase in the humidity and opening a new sealed package of paper. Low humidity can also occur in a low temperature area or in an air conditioned room.

E) Maintenance of the sheet feeder.

* We recommend a clean and rub up of the surface of the pick up rollers after 2,000-10,000 pages.

Clean the pick-up rollers with soft soap solution, or even more efficient is to carefully ruff up the surface with a piece of fine sand paper. Hold the clutch against the pick up rollers when pressing Form Feed key.

9.3.1 No paper feed.

The “no paper feed” situation can occur when the *sheet* position is used for heavy or very stiff paper.

We recommend switching to CARD position and testing again. No feed can also be a result of a combination of reasons such as; dusty pick-up rollers, damaged or holed paper and improper paper installation of the sheet-feeder.

9.4 Power on commands

9.4.1 Self test

Command: On line + power On.

This command starts a self will print a pattern of all hammers. Then choose a printout at normal impact level by pressing ON LINE again, or at low impact level by pressing OFF LINE to compare the variations between different hammers.

9.4.2 Factory setting

Command: Group + power On.

The printer will reload all parameter settings except operation defined Braille code OWN ONE and OWNTWO. The factory setting will activate setup A.

To make a system reset, press GROUP + POWER ON.

After the system reset, the printer will echo "SETUP 000, 4X4 ready".

9.4.3 Transport mode

Command: Form Feed + power On.

To find the correct position for the printing head in order to get the transport lockers on their places, press the Form Feed key while you power up the printer. The printing head will find the correct centre position, and then echo: "Index Everest ready". Turn the printer off again and insert the lockers by pressing them downwards at the edge of each side in the sheet feeder.

Note! It is very important to install the printing head transportation locking before you pack the printer in the original box. Ignoring this can cause major damage to the printer.

9.4.4 Upgrade mode

Command: Value + power On.

Press this command to initialise the embosser to receive new software.

10. ASCII-table

Dec Value	Hex Value	0	16	32	48	64	80	96	112	128	144	160	176	192	208	224	240
0	0	NULL	DLE 16	SP 32	0 48	@ 64	P 80	p 96	Ç 112	É 128	á 144	█ 160	█ 176	L 192	ll 208	α 224	≡ 240
1	1	SOH	DC1	!	1	A	Q	a	q	ü	æ	í	█	⊥	⊟	β	±
2	2	STX	DC2	"	2	B	R	b	r	é	Æ	ó	█	⊤	π	Γ	≥
3	3	ETX	DC3	#	3	C	S	c	s	â	ô	ú	|	⊥	ll	π	≤
4	4	EOT	DC4	\$	4	D	T	d	t	ä	ö	ñ	⊥	—	⊥	Σ	∫
5	5	ENQ	NAK	%	5	E	U	e	u	à	ò	Ñ	⊥	⊥	F	σ	J
6	6	ACK	SYN	&	6	F	V	f	v	å	û	ª	⊥	⊥	π	μ	÷
7	7	BEL	ETB	'	7	G	W	g	w	ç	ù	º	π	⊥	⊥	τ	≈
8	8	BS	CAN	(	8	H	X	h	x	ê	ÿ	¿	⊥	⊥	⊥	Φ	°
9	9	HT	EM	)	9	I	Y	i	y	ë	Ö	⊥	⊥	⊥	⊥	θ	•
10	A	LF	SUB	*	:	J	Z	j	z	è	Ü	⊥	ll	ll	⊥	Ω	·
11	B	VT	ESC	+	;	K	[	k	{	ï	ç	½	⊥	⊥	█	δ	√
12	C	FF	FS	,	<	L	\	|	!	£	¼	⊥	⊥	⊥	█	∞	η
13	D	CR	GS	-	=	M	]	m	}	ì	¥	¡	ll	=	█	φ	²
14	E	SO	RS	.	>	N	^	n	~	Ä	Pt	«	⊥	⊥	█	ε	█
15	F	SI	US	/	?	O	_	o	△	Å	∫	»	⊥	⊥	█	∩	

Control-codes

NUL=Null

SOH = Start Of Heading

STX = Start Of Text

ETX = End Of Text

EOT = End Of Transmission

ENQ = Enquiry

ACK = Acknowledge

BEL = Bell

BS = Backspace

HT = Horizontal Tabulation

LF = Line Feed

VT = Vertical Tabulation

FF = Form Feed

CR = Carriage Return

SO = Shift Out

SI = Shift In

DLE = Data Link Escape

DC1 = Device Control 1 (XON)

DC2 = Device Control 2

DC3 = Device control 3 (XOFF)

DC4 = Device control 4

NAK = Negative Acknowledgement

SYN = Synchronous Idle

ETB = End Of Transmission Block

CAN = Cancel Line

EM = End Of Medium

SUB = Substitute (even used as

EOF = End Of File)

ESC = Escape

FS = File Separator

GS = Group Separator

RS = Record Separator

US = Unit Separator

SP = Space

11 Index Braille Stapler

The Index Braille stapler is an optional equipment, specially designed for use with documents in saddle stitch binding format.

11.1 Unpack the binding station

In the stapler box you will find the following modules

Stapler
Stapler base
Alignment bar
Staples

11.2 Assemble the stapler base

1. Place the stapler base on a table, with the positioning bar at the under side towards the edge of the table.
2. Place the stapler in the wide groove.
3. Place the paper alignment bar in the small groove across the base and attach the two screws in the holes.

11.3 Load the stapler

1. Press the button on the back part of the staple magazine. The magazine will open and appear in the front of the stapler.
2. Load the desired staples into the staple magazine and close it by pushing it back into the stapler.

11.3.1 Staple sizes

Included with the stapler you will find a set of staples in two different sizes, 6 and 8 mm.

Depending of the thickness of your Braille paper, the selection of staple size may vary, however the standard recommendation is that 6 mm staples can be used for documents up to 30 pages and the 8 mm staples can be used for 60 page document.

Sizes up to 15 mm are available at INDEX BRAILLE or may be found on your local market.

11.4 Use the stapler

1. Place your printed 4X4 document towards the alignment bar in the stapler stand.
2. Locate the stapler so that it face directly over the pre-folding line of the document.
3. Tighten the screws on alignment bar so that the stapler is fixed.
4. Press down the stapler arm firmly, then release it arm again.
5. Move the Braille magazine along the alignment arm to the next staple position and staple again.

Your Braille magazine is ready.

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