# About This Book

## Version

Version: 20070515

## General

This book describes the Index Braille Embosser products. The information is intended for service personnel, system administrators and users.

## How to Use This Book

[Product Overview](#topic_OperationSystemetc): overview of the Index Braille products

[Unpacking the Embosser](#topic_Packing) and [Setting up the Embosser](#topic_Voltage230115): how to unpack, install and set up the embosser.

[Software Installation and Set-up](#topic_InstallingIndexBrailleSoftw): installing drivers and other related software and connecting the embosser to your computer.

[Controlling the Embosser](#topic_FrontKeyFunction_3_2_2) : control and set-up of the embosser.

[Service and Support](#topic_SupportTools): maintaining and servicing.

## Document Conventions

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To facilitate reading this document, a consistent format is used to describe each function.. This format is defined below.

|  |  |  |
| --- | --- | --- |
| **Function described** | **Format in Manual** | **Comments** |
| Pressing a key on the front panel | ***key 1*** |  |
| Pressing a two-key sequence on the front panel | ***key 1 + key 2*** | Press the second key within half a second |
| Speech Feedback | echo "echoed message" |  |
| Speech Feedback Number | echo "echoed message (xx.x)"  where xx.x is the number |  |
| Information video on the Index Braille CD | **VIDEO:** **Name.wmn** |  |
| Starting programs | **menu 1/ menu 2/ menu 3,** etc.. |  |
| Program name | **Program Name** |  |
| Selection of menu from the front panel in setup | setup/ page layout/ Braille, etc. |  |
| Selected menu item in program | "Name of the selected item" |  |
| Escape sequences | <1B><44><PL><500> | Use brackets to visually separate the numbers |

## Terminology

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| --- | --- |
| **Term** | **Explanation** |
| Embosser | Printer that produces Braille texts as raised dots in paper |
| Index Braille Code | Default installed text-to-Braille translation table |
| Own Braille Table | User-defined Braille translation tables made in computer or literary Braille |
| Braille translation files | Files used by WinBraille defining the text-to-Braille translation. The Braille translation files handle both contracted or uncontracted Braille |
| Embossing Module | Embossing Modules are used in 4Waves PRO. The Embossing Modules are identical; their function as Module 1-4 depends on their position in the system. |
| Master Module (1) |  |
| Module 2, 3, 4 | See picture above |
| Power Module | Module located below the embosser including power supply, communication, connectors and [dip switch](#topic_PowerModule4WavesPRO) for module definition. |
| Contracted Braille/  Grade 2 Braille | When words or parts of words are translated in to a short form. This is used to reduce a book's volume and increase reading speed. |

## Product Name Conventions

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The various software products and deliverables provided by Index Braille are listed below together with the short names used in this document.

|  |  |
| --- | --- |
| **Full name** | **Short name** |
| WinBraille | WinBraille |
| Index Embosser Utility | Embosser Utility |
| Index IbPrint | IbPrint |
| Index Speech Tool | Index Speech |
| Index Braille Printer Driver | Index Printer Driver |
| Index Braille CD | Index CD |
| Index Braille Embosser(s) | Index Embosser(s) |

## Related Documents

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|  |  |
| --- | --- |
| **Document Title** | **Description** |
| Index Catalogue | The Index Braille Product Guide |
| WinBraille Users Guide | The Users Guide describes how to install and use WinBraille. |

# Product Overview

## General

### Operating Systems

Index Braille embossers, WinBraille 4.xx, Embosser Utility, and IbPrint support the following Windows operating systems.

|  |  |  |  |
| --- | --- | --- | --- |
| **Operating system** | **Office 2000** | **Office XP** | **Office 2003** |
| **Windows 2000** | X | X | X |
| **Windows XP, PRO** | X | X | X |
| **Windows XP, Home** | X | X | X |

WinBraille 3.xx Braille editor supports

 Windows 95

 Windows 98

iBraille and the Index Braille Printer Drivers for Macintosh support Mac OS X 10.4.4 or higher.

### User Rights

Windows:

Login with "Administrator" rights when installing WinBraille, Embosser Utility and IbPrint.

Macintosh:

Administrator rights are required when installing iBraille or the printer driver on Mac OS X 10.4.

## Embossers

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This section provides general information for all the embossers and an overview for each embosser describing its use and advantages.

### Features

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**Free - WinBraille editor**

WinBraille is one of the most powerful Braille products on the market, providing comprehensive support for all Windows users. WinBraille is compatible with all Index Braille embossers. It translates text into contracted and uncontracted Braille and supports a large number of languages. You may perform multilingual translations in one document. See [WinBraille](#topic_WinBraille4)

**Speech Guided**

Index Braille embossers are controlled by an ink- and Braille-labeled front panel. Combined with the speech feedback, it is easy to install and operate by blind and sighted users alike.

**Graphics**

The Index Braille Embossers version 3 can emboss graphical images with 0.5-mm resolution. The requirements are WinBraille 4.0 or higher and embosser firmware 11.1 or higher.

**Modern Communication**

The Version 3 embossers include standard communication ports that can be connected to any modern computer.

 USB, Plug & Play

 Network (TCP/IP)

 Serial port (for service)

 Parallel port, IEEE 1284

**Networking**

Index Braille version 3 embossers can be installed in a Network. Index Braille embossers use the IP network port 91.00. They support:

 Network interface (TCP/IP)

 DHCP (Dynamic Host Configuration Protocol)

 SNMP (Simple Network Management Protocol)

 Host name support

**MS DOS Functionality**

Use parallel port, it is the only port supported by MS DOS.

**Graphics using Braille editors other than WinBraille**

Graphic resolution 1.6, 2.0 and 2.5 mm.

See, [esc sequences for graphics](#topic_ESCsequenses)

**Service and Security**

Index Braille Embossers come with a two-year 200,000-page warranty (4Waves PRO 5,000,000 pages), whichever comes first, following the international trade agreement "Orgalime S2000". To ensure efficient service, Index Braille has established a module exchange system, with modules available for prompt delivery from stock. The embossing head, electronics board and sheet feeder for all models are the modules included in the exchange system. See also [www.indexbraille.com](http://www.indexbraille.com) for further information.

### Basic-D/S

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| **Traditional Tractor Fed Embosser - and it is Portable**  Basic Braille embossers are the market leaders in many countries. This is easy to understand, and is mostly because of their reliability, high speed, ease of use, light weight, good design and the many functions you would not normally expect for the price. Basic is portable so you can bring Basic to the meetings in your organization. The high speed, low weight and the compact format make it the best portable Braille embosser. Basic is also one of the most reliable traditional tractor-fed Braille embossers and will easily cope with continuous Braille production.  **Basic-S**  The Basic-S is a classic single-sided embosser. The Basic-S is probably the most cost-effective Braille production unit in the world.  **Basic-D**  The Basic-D produces interpoint Braille at twice the speed of the Basic-S. | |
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### Everest

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| **The Master of Cut-Sheet Paper**  The Everest is a fast double-sided (interpoint) and single-sided Braille embosser with stable handling of cut-sheet paper at an economical price. It is easy to use and produces very high-quality Braille. This makes the Everest by far the most used embosser of its kind in all countries where the users prefer to print Braille onto cut-sheet paper.  **Ready for Use**  Cut-sheet paper has other advantages since Everest output is ready to use immediately. Compare this with a traditional Braille embosser where the continuous fan-fold embossed paper has to be separated and the tractor slips have to be removed.  **Sheet Feeder**  The sheet feeder can easily be adjusted for different paper sizes. Moving the margin guides to the correct position and locking them sets the width. Automatic sensing of a reference page sets the page length. Everest can safely handle most types of paper quality from copy paper to card stock paper. The Everest sheet feeder is very stable with a fault frequency below 5/1000 sheets when correctly installed and with a suitable paper. The sheet feeder can be loaded with seventy sheets of normal card stock type and it can easily be adjusted to the paper size in use. Locally produced paper of suitable card quality is usually available in most countries and works very well with the Everest. This helps to reduce paper costs compared to importing specially produced tractor-fed Braille paper for traditional embossers. | |
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### 4X4 PRO

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| **The embosser for book and magazine production**  The 4X4 PRO has the unique capacity to emboss Braille in magazine format which makes it one of the most used embossers for the production of Braille books. Embossed documents are ready for immediate use after folding and stapling. Emboss from your computer as usual and the 4X4 PRO automatically takes care of the newspaper page formatting. Locally produced paper of suitable card quality is available in most countries and works very well with the 4X4 PRO. This helps to reduce paper costs compared to importing specially produced tractor-fed Braille paper for traditional embossers. High printing speed, low paper cost and competitive pricing make the 4X4 PRO a very cost-effective production embosser.  **Reliable Production Embosser**  The 4X4 PRO is a reliable efficient system for mass production of Braille books. the 4X4 Pro has been used extensively for many years by Braille production centers around the world. It is by far the best selling embosser in the world in this segment. | | |
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### 4Waves PRO

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| **The Durable Production Embosser**  4Waves PRO is a modern volume production embosser with network support, high-resolution graphics and online-status feedback, the first of its kind. The concept with four identical embossing modules and one service module make the 4Waves PRO a truly durable production unit.  **Full Production During Service**  The 4Waves PRO simultaneously uses four identical embossing modules. One extra service module is included in the system. If an embossing module needs maintenance, replace it with the service module and continue embossing. The exchange is made within a few minutes and does not require any tools. Furthermore, the 4Waves PRO can continue to print as long as at least one of the delivered embossing modules continues to work. |

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## Acoustic Cabinets and Hoods

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Embossing is by the very nature of the task, fairly noisy. Index Braille provides acoustic cabinets that makes it possible to place the embossers in an ordinary office environment.

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| --- | --- | --- | --- | --- |
| **Features/ Products** | **Acoustic Hood Basic** | **Acoustic Cabinet Basic** | **Acoustic Hood Everest** | **Acoustic Cabinet 4X4 PRO** |
| **INDEX PART NO** | 1859 | 1270 | 1250 | 1262 |
| Noise Reduction | 18.5 dB(A) | 21 dB(A) | 19 dB(A) | 18 dB(A) |
| PAPER |  |  |  |  |
| Cut Sheet Paper |  |  | X | X |
| Tractor Fed Paper | X | X |  |  |
| Paper length, max | 12 inch | 12 inch | 297 mm | 590 mm |
| SIZE and WEIGHT |  |  |  |  |
| Net Size, cm | 60x75x18 | 61x47x117 | 67x40x68 | 69x51x152 |
| Net Weight, kg | 14.4 | 42 | 19.3 | 43 |
| Shipping Size, cm | 67x83x23 | 1=114x65x10 2=63x52x17 | 74x75x13 | 1=74x57x14 2=140x72x10 |
| Shipping Weight, kg | 18.5 | 1=32, 2=19 (Total 51) | 22.4 | 1=26 2=32 (Total 58) |

### Acoustic Hood Basic

The new Acoustic Hood Basic reduces the noise level by 85%. This together with its convenient format makes it  a cost effective improvement for your office.

The Acoustic Hood Basic is delivered ready for use. The paper output bin can hold up to 80 pages.

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### Acoustic Cabinet Basic

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| Discover the advantages of the Basic Acoustic Cabinet! Produce volumes of Braille in the office with low noise levels, efficient cooling, stable paper feeding and collection.  Shipping costs are relatively low because the Basic Acoustic Cabinet is delivered in two flat boxes with the final assembly being made after delivery. Step-by-step assembly instructions are included. | | |
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### Acoustic Hood Everest

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| The Everest Acoustic Hood is small and reduces the noise level to an acceptable level in an office environment. Cooling is integrated with the embosser's fan, which excludes any additional electric installation for the hood. Shipping costs are relatively low because the Everest Acoustic Hood is delivered in one flat box with the final assembly being made after delivery. It is easy to assemble because of its simple construction and the included step-by-step assembly instructions. | | |
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### Acoustic Cabinet 4X4 PRO

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| An Acoustic Cabinet is an integral part of the 4X4 PRO. The cabinet reduces the noise level to an acceptable level in an office environment. It also serves to ensure stable paper handling of the longer paper used in the 4X4 PRO. | |
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## Miscellaneous

### Braille Stapler

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| The Index Braille Stapler is perfect for Braille magazines produced on the 4X4 PRO with a paper length of up to 476 mm (19"). Standard staplers are neither heavy nor long enough to handle the requirements of Braille binding.  About 10,000 staples are included with the shipment. You can buy extra staples from Index Braille but they may also be available from your local office supplier. |
|  |

## Index Braille Software

**Free download**

All Index Braille software may be downloaded and upgraded from www.indexbraille.com or from Index CD free of charge

**Firmware**

The firmware is loaded into the embosser to control functions, communication, speech feedback, etc.

**Index Printer Drivers**

Index Printer Drivers is the software required to attach the embossers to the host computer. There is one version for Windows and one for Mac OS X 10.4. To install see [Setting up Communication and Software](#topic_InstallingIndexBrailleSoftw) for Windows and [Installing Printer Drivers on Mac OS X 10.4](#topic_Installing_Printer_Drivers_Mac) for Mac. Index printer drivers will set up paper layout, duplex, Z-folding, number of copies and rule file for translation from original text file to Braille automatically.

**WinBraille - the Braille editor**

WinBraille Braille editor is used to edit, translate, format and emboss texts and graphics to an Index embosser. See [WinBraille](#topic_WinBraille4) for details.

**IbPrint**

IbPrint is a useful drag and drop program to send text, graphic, installation files, etc. to an Index embosser.

IbPrint does not support tactile graphics on 4X4 PRO.

**Embosser Utility**

Use the Embosser Utility on Windows operating system to:

 Upgrade Firmware

 Upgrade Local speech

 Calibrate Vertical Alignment

 Install your Own Braille tables

 Set up your embosser as a network printer on Windows

 Install custom defined setup

**Index Speech - a distributors tool**

If you are a distributor you may use the Index Speech Tool to make a new speech feedback language. Use the windows multimedia program to record and edit the sound files. These files will be converted to embosser flash files and available on the Index website when tested .

### WinBraille

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WinBraille is one of the most powerful Braille software products on the market providing comprehensive support for all Windows users.

**Installation and setup**

As part of the installation, you may choose

 Standard formatting and language setup for the most commonly used languages

 Menu language

 Modes of operation: standard - easy to use, professional - all features included

**Only for Index Braille Embossers**

WinBraille is compatible with all Index Braille embossers. The available Index Braille embossers will automatically be installed by WinBraille. Some functions, such as tactile images, are supported only by the newer embosser versions.

**Braille Translation**

WinBraille translates text into contracted and uncontracted Braille. It supports a large number of languages, currently 32 and we continue to add languages and improve the product. You may perform multilingual translations in one document.

**Graphics**

Use WinBraille to insert and translate graphical images to Tactile images with 0.5-mm resolution or build tactile images directly with WinBraille's powerful Image Editor. WinBraille's graphic features give new options to the production of Braille books and Magazines. The image editor includes

 translate images to Tactile Graphics

 translate images to Tactile Outlines

 adjust contrast, color, etc.

 adjust picture size

 import image files (.BMP, .TIF, .WMF, .PNG, .JPG, .JPEG, .GIF and .SIG)

 insert Braille in tactile images

 insert tactile letters in tactile images

**Book/newspaper production**

WinBraille contains functions for the automatic production of Braille books and newspapers: dual page numbering (ink/Braille), headers, translation into several languages in the same document, tables, bullets, header/footer handling and advanced formatting.

**Exception List**

Define your own list of words which you do not want to be translated. These could for example be acronyms and names of places and people.

# Unpacking the Embosser

# 

**The following is included in a Shipment**

 Embosser

 Power cable

 Communication cable (USB)

 Installation manual - in Braille and in ink

 Index CD including: WinBraille, Printer drivers, Embosser Utility, IbPrint, Braille translation files, manuals, etc.

 Embossing head lock

 Packing material

 4Waves PRO also includes: Embosser service module, Network cable, grounding cable, pallet, lifting strips.

Unpack the embosser gently and save the packing material in case you need to transport the embosser or it needs to be returned for service.

## Basic Embosser

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## Everest Embosser

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## 4X4 PRO Embosser

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## 4Waves PRO Embosser

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| Materials included in shipping of the 4Waves PRO. | 4Waves PRO Shipping package. |
| Removing the 4Wave PRO Pallet. |  |

# Setting Up the Embosser

## Voltage 230 & 115 Basic

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Please, select the voltage before you connect the power cable.

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| --- | --- |
| **Caution** | If the power cable is connected before you have selected the voltage, the fuse can be damaged. |
|  | |

## Voltage 230 & 115 Everest/4X4

## 

Please, select the voltage before you connect the power cable.

|  |  |
| --- | --- |
| **Caution** | If the power cable is connected before you have selected the voltage, the fuse can be damaged. |
|  | |

## Voltage 230 & 115 4Waves

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The 4Waves PRO is produced for either 115 or 230 volts. For details, see the embosser label.

Please make sure that the 4Waves PRO is properly grounded, if needed use the included grounding cable.

## Unlocking the Embosser Head

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Remove the transport lock from the embossing head and store it.

### Basic-D/S

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### Everest/ 4X4 PRO

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### 4Waves PRO

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## Power on Embosser

The echo "Embosser name" + "firmware version" + "loaded setup" confirms a correct embosser start-up sequence.

During power on, the 4Waves PRO will automatically confirm the installation of each module with the echo "check module", "one wave", "two wave", "three wave", "four wave", "ready".

# Paper Handling

## Default Paper Settings

## 

All margins are at zero (0).

|  |  |  |  |
| --- | --- | --- | --- |
| **Model** | **Page Size** | **Lines per page** | **Characters per line** |
| Basic-D/S | Length 12" x width 11" | 28 | 42 |
| Everest | A4, 297x 210 mm | 29 | 35 |
| 4X4 PRO  Saddle stitch format | A3, 420 x 297 mm | 29 | 35 |
| 4Waves PRO | Length 12" x width 11" | 28 | 42 |

Text-to-Braille translation is Index Braille Default Settings:

All margins are at zero (0).

## Setting up paper size

See Controlling the embosser/ [Setup Command Values](#topic_SetupMenu).

## Basic

## 

|  |
| --- |
| **Loading Paper in Basic**   Open the red aluminum cover.   Release the lock on the right-hand tractor and adjust it according to the paper width.   Adjust the left tractor to the right to emboss the first Braille character closer to the edge of the paper.   Load paper and close the tractors.   Pull the tractors outwards to put the paper under a slight tension and lock the tractors.   Press ***form feed + form feed*** to detect the paper edge and move the paper to printing position.  **VIDEO**: **load paper Basic.wmn** |
|  |

## Everest and 4X4 PRO

## 

**Initial Sheet Feeder Setup**

 Insert the transparent paper guide in the aluminum cover.

 Adjust the angle of the bottom cover for best paper output handling with the current paper length and type of acoustic protection.

 Adjust the two green document guides to line up with the paper edge.

|  |  |
| --- | --- |
| **Sheet Feeder Adjustments for New Paper**   Open the sheet feeder and place a paper stack in the sheet feeder towards the right margin guide.   Adjust the left margin guide smoothly towards the edge of the paper stack and close it with the locking arm.   Adjust the card/sheet selectors. For typical Braille paper, move the card/sheet selectors to the lower position.  **VIDEO**: **load paper Everest.wmn** | |
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## 4Waves PRO

### Paper Length and Width

Please remove the paper before changing paper length in the 4Waves PRO. This is necessary also when switching between setup A, B or C if they have different paper lengths preinstalled.

4Waves PRO does not support a change of paper size through WinBraille or via esc sequences.

### Load Paper

#### Load Paper in all Modules

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Open the Paper In Door and place the paper box with the first-page fold facing as shown in the picture.

1. If there is any paper in the 4Waves PRO remove it before loading the new paper.

2. Press ***form feed + form feed*** and the paper loading starts by moving the embossing head to the loading position.

3. Echo "load paper in module #4" - load the paper, close the tractors and press ***on line***.

4. Echo "close paper roller module #4" - close the roller and press ***on line***.

5. Echo "load paper in module #3", repeat the sequence for modules 3, 2 and 1.

6. Echo "4Waves ready" confirms that the paper is completely loaded.

|  |  |
| --- | --- |
|  |  |
| Step 1 | Step 2 |
| Step 3 | Step 4 |

|  |  |  |
| --- | --- | --- |
| Step 5 | Step 6 | Step 7 |

#### Change Paper Width

1. Adjust the position of the front tractors in all four embossing modules to the new paper width.

2. Adjust the paper width in ***setup/ paper/ paper width/*** (new size) or in WinBraille.

#### Paper Jam During "Load Paper"

**Broken First Page**

Press ***form feed*** to feed the paper forward one page, press ***form freed*** once again to keep the paper folding direction. Remove the two pages and continue with the paper-loading sequence.

**Major Paper Jam**

To restart the paper loading from the beginning:

1. Start by pressing ***form feed*** + ***form feed***.

2. Echo "open all paper rollers" - open the four rollers.

3. Close the lid and press ***on line***. The paper moves backwards.

4. Restart the paper loading process on echo "load paper in module 4".

### Paper Out

#### Tear Off Paper Position

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Tear off the paper in the perforation in line with the Tear Off label at the power module, see picture.

#### Remove paper

Backwards

1. Tear off the paper at the output.

2. Press ***form feed + off line***.

3. Echo "open all paper rollers".

4. Open all the rollers, close the lid and press ***on line***

Forwards

1. Tear off the paper at the input.

2. Close the lid and press ***form feed + on line***.

#### Paper Out Chains

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The chains guide the paper to a stable fold when feeding into the Paper Out Bin. Adjust the chain length and position to the size and quality of paper in use.

#### Out of Paper - Embossing of the Remaining Part

The 4Waves PRO will automatically detect a paper outage, and know which pages were completed.

When the 4Waves PRO detects a paper outage, it will automatically start the paper loading process with echo "load paper in module #4". Complete the paper loading process. Next, it will echo "door is open". Close the lid to continue embossing the remaining part of the document.

#### Paper Folding Direction

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For stable paper out handling and correct page sequence, fold the paper in the Paper Out Bin following picture #7. After a few pages are embossed, open the Paper Out Door and make sure the paper is folded correctly. Continue embossing by closing the Paper Out Door.

See picture: Paper Loading in all Modules, picture 7.

#### Paper Service - Paper out Bin Full

4Waves PRO will stop the embossing when the bin is filled with Braille paper. The number of pages the bin will hold depends on the paper quality. The default number of pages is 500 and the number can be adjusted in ***setup/ paper/ number***.

When the maximum limit of pages in the bin is exceeded, the 4Wave PRO will stop embossing with echo "paper service print copies #1 of #2", where #1 is the number of copies already embossed and #2 is the total number of copies to be embossed. Empty the bin and emboss the remaining copies by pressing ***on line***.

#### Clean Paper Jam

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The embosser echoes "Paper Jam" and stops.

1. Tear off the paper before where it enters the embosser.

2. Remove any jammed paper between the modules by hand.

3. Move the bad paper in the embosser to the bin by pressing ***form feed***.

4. Press ***on line*** to start the Load Paper sequence, follow the paper-loading instructions. The the remaining copies of the document will be embossed automatically.

# Software Installation

## Windows

### Installing Index Braille Software

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| Program files and manuals are available at <www.indexbraille.com> or from the Index CD. All software may be upgraded free of charge from the Internet. | | |
| **SOFTWARE** | **FUNCTION, MODULES** | **REQUIREMENTS** |
| WinBraille 4.XX  See [WinBraille](#topic_WinBraille4) |  WinBraille Braille editor   Index Printer Drivers   Word Excel and Adobe Acrobat macro  *See WinBraille User´s Guide for details.* | The installer must have administrator privileges on the computer, as well as the embosser model, firmware version, communication port, network, etc. |
| Printer Driver Only  with WinBraille |  Index Printer Drivers  *Run the WinBraille installation wizard and select "driver installation only"* | The installer must have administrator privileges on the computer, as well as the embosser model, firmware version, communication port, network, etc. |
| Printer Driver Only  with Embosser Utility |  Index Printer Drivers  *Run the Embosser Utility installation wizard and select "driver installation only"* | The installer must have administrator privileges on the computer, as well as the embosser model, firmware version, communication port, network, etc. |
| Embosser Utility  [\*\*\*\*] |  Embosser Utility   IbPrint  *IbPrint is automatically installed when installing Embosser Utility. The IbPrint icon is placed on the desktop* | The installer must have administrator privileges on the computer, as well as the embosser model, firmware version, communication port, network, etc. |

### Ports and Cables

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**Computer Connections**

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| --- | --- | --- | --- | --- |
| **INTERFACE** | **CABLE** | **STANDARD** | **SETTING** | **INDEX PART NO** |
| **Centronics** | 36 P, 3 meter | IEEE1284 | SPP, EPP, ECP | 1267 |
| **USB** | USB A-B, 3 meter | USB | Plug & Play | 1387 |
| **Network** | UTP Cable CAT 5 RJ45 | TCP/IP | Set IP address with:  Embosser utility/ IP settings |  |
| **Serial**  (for service only) | 9 P Female - Female, 3 meter |  | 38400, 8, N, 1, Hardware | 1447 |

**Parallel Port**

36 Pins, (IEEE1284-standard), supporting, SPP, EPP, ECP and plug & play.

### Serial Port Pin Configuration

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### Installing Printer Drivers on Windows

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**Install the Printer Driver as part of the WinBraille installation**

Use the Add Printer Wizard to install the required printer drivers. Download them from [www.indexbraille.com](http://www.myhomepage.com/index.html) or the Index CD. There is an option to install only the printer drivers.

Installation steps:

 Local connection parallel - just select the correct port.

 When you install to a USB port, be sure to install the Printer Driver before you connect the Index Braille embosser to the computer.

 Network Installation, see [Network Installation](#topic_NetworkInstallation).

 Installing Client Printer Driver, select "Network Printer" and browse for any installed Index Braille Printer Drivers on the server.

**Starting Add Printer Wizard**

 ***Start/Programs/Index Braille/WinBraille/Index Add Printer Wizard***

 ***Start/Programs/ Index Braille/ Embosser utility/ Index Add Printer Wizard***

### Network Installation

#### Basic, Everest, 4X4 PRO

#### 

The Index Embossers has full network support and follows international standards. Setting up it in a network requires the knowledge and system rights as network administrator. Please do not try to install it on a network without this knowledge.

**Setting up the Computer Network Port**

 Select ***start/ settings/ printers***

 Select ***File/ Server properties***, select the ***Ports*** tab and press ***Add Port***

 Select ***TCP/IP Port*** and ***New Port*** to start the Add TCPIP Printer Wizard

 Follow the Wizard and insert the IP address of your embosser in "Printer Name or IP Address", leave "port name" blank. The system will fill it in with IP\_"embosser IP address"

 Finish the wizard

**Verifying the Network Installation**

Check Embosser Network Connection: ***Start/ run/ cmd***(opens a command window) and type **ping (IP address)**, example **ping 192.168.3.13**, the embosser will answer when it is correctly installed.

**Setting up the Embosser Network settings**

Network installation sequence:

1. Start the Embosser Utility, see [Starting Embosser Utility](#topic_StartingEmbosserUtility).

2. Select **Tools** menu, **IP Settings**

3. Select embosser

4. Configure the address:

 With DHCP Server support:   
Select "Obtain an IP address automatically" and press **Update**.

 Set a fix IP address (no DHCP Support)  
Ask system administrator for the "IP-Address", "SubNet mask"and "Default Gateway". Fill in this information in the reserved fields (leave TFTP-Server blank) and press **Update**.

 Obtain an IP address automatically with Hostname  
Fill in the Host name in the field and press **Update.**

Verify the IP address by pressing **help + value**. The embosser will echo the IP address and the SubNet mask.

#### 4Waves PRO

#### 

The 4Waves PRO has full network support and follows international standards. Setting up 4Waves PRO in a network requires the knowledge and system rights as network administrator. Please install it on the USB port instead and share it in the network if your organization has limited network knowledge.

NOTE: Do NOT use Embosser Utility to set the IP settings for 4Waves PRO since it will damage the router settings.

Information for Network Administrator

Start by deciding method of how to assign the network IP address:

 Assigning a dynamic IP address retrieved from your DHCP server using MAC address reservation

 Assigning a static IP address. See [Index Braille support download pages](http://www.indexbraille.com/web/WebDocuments.aspx?PageID=182&ModuleID=385).

**Instructions for DHCP IP address setting**

DHCP support is always activated on the 4Waves PRO router.

1. Note the 4Waves PRO MAC address labeled on the router.

2. Login as network administrator.

3. Map an IP address in your DHCP server to the 4Waves PRO router MAC address.

4. Attach the 4Waves PRO to the network and it will capture the mapped IP address.

**4Waves PRO installation**

1. Verifying the network installation

***start/ run/ cmd***opens a command window, type **ping (IP address).** Example ping 192.168.3.13. The correctly installed embosser will reply with a system message.

2. Setting up the embosser as a network printer

 ***Start/ settings/ printers***.

 Select ***file/ server properties***, select ***Ports Tab*** and press ***Add Port***.

 Select ***TCP/IP Port*** and ***New Port*** to start the Add TCP/IP Printer Wizard.

 Follow the Wizard and insert the IP address of your embosser in "Printer Name or IP Address", leave "port name" blank. The system will fill it in with IP\_"embosser IP address".

 Finish the wizard.

3. Installing the Index Braille Printer Driver using the Index Braille Add Printer Wizard

 ***Start/ Programs/ Index Braille/ WinBraille/ Index Add Printer Wizard***.

 Select the IP port, reserved in the DHCP server.

 Select embosser model.

 Finish the wizard.

**Internal Router Factory Setup**

The internal router is set up for the specific use in 4Waves PRO. Please do NOT change any settings. The 4Waves PRO internal network has IP address 10.0.0.1.

### Driver Installation with Other Softwares

### 

|  |
| --- |
| Install just the Index Braille Printer Driver for your embosser model with the Index Braille Add Printer Wizard program. You can also install the WinBraille Printer Driver.  **Driver for Duxbury 10.4**  Select Windows Device and the installed Index Braille Printer Driver. |
|  |

## Mac OS X 10.4

### Installing Printer Drivers

See the iBraille User's Guide for details how to install the Index Braille Printer Drivers for Macintosh.

### Ports and Cables

### 

**Computer Connections**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **INTERFACE** | **CABLE** | **STANDARD** | **SETTING** | **INDEX PART NO** |
| **USB** | USB A-B, 3 meter | USB | Automatic | 1387 |
| **Network** | UTP Cable CAT 5 RJ45 | TCP/IP | Choose System Preferences-> Network. Select DHCP or Manually enter an IP address |  |

**Parallel Port**

36 Pins, (IEEE1284-standard), supporting, SPP, EPP, ECP and plug & play

# Controlling the Embosser

## Embossing Printer Information

## 

|  |
| --- |
| Emboss a tactile letter information page by pressing ***help + help*** (not possible on 4X4 PRO).  Emboss a Braille information page by pressing ***help + normal.***  For additional information see [Emboss Printer Information](#topic_EmbosserInformationLetter). |
|  |

## Function Summary

### Information

### 

|  |  |
| --- | --- |
| **FUNCTION KEY** | **FEEDBACK** |
| ***off line + help*** | Echo: printout status, number of copies completed and position of the current printout |
| ***help*** | Echo: embosser model, firmware version and active setup |
| ***help + help*** | Embosses: [information in letter](#topic_EmbosserInformationLetter) graphics (not 4X4 PRO) |
| ***help + normal*** | Embosses: embosser information in Braille |
| ***help + value*** | Echo: IP Address, Subnet mask (not 4Waves PRO) |
| ***form feed + value*** | Echo: paper size, length, width, Braille page layout, etc. |
| ***help + setup*** | Embosses: [installed Own Braille](#topic_Brailletableinformation) tables in Braille and letter graphics |
| ***help + on line*** | Embosses: [Hammer test page](#topic_Brailletestpage) displays dot quality of the individual hammers |
| ***item*** | Embosses: [Braille page format](#topic_Brailleformatpage) |
| ***value*** | Echo: lines per page, characters per line |
| ***value + value*** | Echo: complete Braille page information, paper size, length, width, Braille page layout, etc. |

### Common Commands

### 

|  |  |
| --- | --- |
| **COMMANDS** | **FUNCTION** |
| ***on line*** | Starts embossing.  Cancels selected value in setup, numerical function, adjustments, etc. |
| ***off line*** | Interrupts embossing.  See Stop Embossing in a Print Job   The embosser will receive the text during ***off line*** and store it in the embosser memory.   To continue embossing the remaining part of the document after the interruption (paper jam, etc.), 4Waves PRO only:  See [Re-start Embossing at Stop Position](#topic_Re-start_Embossing_at_Stop_Pos). |
| ***form feed*** | New page |
| ***form feed + form feed*** | Basic: Paper moves to starting position.  Everest / 4X4 PRO: Measures and adjusts paper length.  4Waves PRO: Starts loading paper. |
| ***form feed + on line*** | Basic: Moves the paper to tear off position in the Acoustic Cabinet Basic .  4Waves PRO: Moves the paper forwards one page plus one page per embosser module. |
| ***form feed + off line*** | Basic: Reverse the paper out of the embosser.  4Waves PRO: Reverse the paper to the first embosser module. Be sure to close the lid! |
| ***help + reformatted*** | Open locked-setup panel, locked-setup panel echoes "setup locked". |
| ***normal*** | Turns off reformatting. |
| ***double sided*** | Double-sided embossing. |
| ***single sided*** | Single-sided embossing. |
| ***reformatted*** | Reformats the text to the installed Braille page format. |
| ***z-folding*** | Basic and 4Waves PRO: Toggles between Z-folding and normal folding. 4X4 PRO: The Z-folding key gives magazine format. |
| ***A*** | Selects installed values in setup A. |
| ***B*** | Selects installed values in setup B. |
| ***C*** | Selects installed values in setup C. |
| ***Setup*** | Begin changing the setup values, valid keys see [setup commands](#topic_FrontKeyFunction_4_2_3). |

### Setup Commands

### 

|  |  |
| --- | --- |
|  | **SETUP COMMANDS** |
| ***setup*** | Save changes to the setup values. |
| ***group*** | Select group (paper/ page layout/ Braille/ communication/ option). |
| ***item*** | Select item within the selected group. |
| ***value*** | Select value, increase step by step. |
| ***1*** | Increase/ decrease the Numerical Value by one. |
| ***10*** | Increase/ decrease the Numerical Value by ten. |
| ***multiple*** | Toggle between increasing/ decreasing the Numerical Value. |
| ***on line*** | Cancel changes to the setup values. |
| ***normal*** | Restore to factory settings. Confirmed with echo "Setup 000 loaded". |
| ***c*** | Sets the values to [Index default setup](#topic_IndexDefaultSetup). |

See details in [Setup Command Values](#topic_SetupMenu)

### Numerical Values

### 

|  |  |
| --- | --- |
| Use the numerical value to insert numbers in copy, repeat, page size, setup, etc. It starts with the echo "Start at #". Save the selected value by pressing ***setup***.  See [copy function keys](#topic_CopyFrontPanel). | |
| **Front panel key** | **Function** |
| ***1 / value*** | Increase/ decrease the value by one. |
| ***10*** | Increase/ decrease the value by ten. |
| ***setup*** | Save the selected value. |
| ***multiple*** | Toggle between increase (+) and decrease (-). |
| ***on line*** | Cancel the numerical value function. |
| ***repeat*** | Set the lowest value. |

### Embosser Calibration

### 

|  |  |
| --- | --- |
|  | **EMBOSSER CALIBRATION** |
| ***help + group*** | Start calibration of paper sensor (Everest / 4X4 PRO) see [paper calibration](#topic_PaperCalibration). |
| ***help + item*** | Start calibration of actual paper length (Everest / 4X4 PRO) see [paper calibration](#topic_PaperCalibration). |
| ***help + 10*** | Start setup of the distance between paper sensor and paper edge in paper calibration see [first-line position](#topic_First_Braille_Line_Position). |
| ***help + 1*** | Start setup of the distance between paper edge and first Braille line see [first-line position](#topic_First_Braille_Line_Position). |
| ***help + multiple*** | Start [vertical alignment](#topic_VerticalAlignment) of the Braille cell. |
| ***help + double*** | Places the embossing head in transport position to enable inserting of the embossing head locks. |

### Extended Key Commands

### 

|  |  |
| --- | --- |
|  | **EXTENDED KEY COMMANDS** |
| ***help + b*** | Start extended key command |
| ***group*** | Next group (1-5) |
| ***item*** | Next item |
| ***value*** | Value item |
| ***Group 1, Item 1,*** | 4Waves PRO: Check the status of embossing modules. The master (1) checks the internal network communication with modules 2, 3 and 4. |
| ***Group 1, Item 2,*** | 4Waves PRO: Starts the status check of the hammers in module 1, 2, 3 and 4. The status feedback is embossed with letter graphics. |
|  |  |
| ***Group 2, Item 1,*** | Print embossing-head information in letter graphics: impact level. batch no, etc. |
|  |  |
| ***Group 3, Item 1,*** | Own Braille tables information: flash-block information in letter graphics |
| ***Group 3, Item 2,*** | Letter information: flash-block information in letter graphics |
| ***Group 3, Item 3,*** | Factory default setting A, B, C information: flash-block information in letter graphics |
| ***Group 3, Item 4,*** | Speech version information: flash-block information in letter graphics |
| ***Group 3, Item 5,*** | Firmware version information: flash-block information in letter graphics |
|  |  |
| ***Group 4, Item 1,*** | Adjust the embossing speed.  Defines maximum stepper motor frequency 800-1600 Hz. The vertical alignment of the Braille cell may be effected by a speed change.   Text embossing speed  Echo "value normal start at #1600" where normal is text embossing speed and #1600 is current value. Use the ***numerical function*** to change the value and save it with ***setup***. Echo "saving #xxx". Where #xxx is the new text embossing speed.   Graphics embossing speed  Echo "saving #xxx start at #1300" where #xxx is the new embossing speed value and #1300 is current graphics embossing speed. Use the ***numerical function*** to change the value and save it with ***setup***. Echo "saving #xxx". Where #xxx is the new graphic embossing speed. |
| ***Group 4, Item 2,*** | Basic: Enable or disable paper jam sensor. Located on back plate rollers. |
| ***Group 4, Item 3,*** | Reset IP setting to default. Clears the static IP address and enables DHCP. |
| ***Group 4, Item 4,*** | Set the Network Host name as **Embosser Model**\_##  Where:  **Embosser model** is Everest, Basic, 4X4\_PRO or 4Waves.  **##** = Number of this embosser model in your network, example 01, 02, 03, etc.  Use Embosser Utility (menu: Tools/ IP Settings.) as a more flexible way to set up the Embosser Network Host name. |

### Copy Function

### 

**Copy Commands Keys**

|  |  |
| --- | --- |
| **COPY** | See [Copy Function](#topic_CopyFrontPanel) |
| ***repeat*** | Emboss a part of last document, from page # to page # (Not 4Waves PRO) |
| ***repeat + repeat*** | Emboss one additional copy of the entire document |
| ***multiple*** | Select number of copies |
|  | **General instructions**  See [Common Commands](#topic_FrontKeyFunction_4_2)  See [Setup Commands](#topic_FrontKeyFunction_4_2_3)  See [Numerical Values](#topic_AdjustingNumericalvalues) |

**Load File for Copying**

Last embossed Braille file is stored in the embosser memory. Make copies by using the copy function.

Load a Braille file into the embosser without first embossing it.

1. Press ***off line.***

2. Send the file to the embosser. After receiving it, the embosser echoes "off line", "off line"...

3. Press ***on line*** to start the embossing one copy.

4. Use the copy function to make additional copies of the entire document or parts of it.

#### Copy Function Examples

#### 

**Example 1: Emboss 1 Copy**

Emboss one copy by pressing ***repeat + repeat***

**Example 2: Emboss 25 Copies**

a) Activate multiple copy function by pressing ***multiple***

b) Count to 25 with the ***1*** and ***10*** keys.

c) Select number of copies by pressing ***setup.***

d) Press ***repeat + repeat*** to start the embossing

**Example 3: Emboss 11 Copies of Page 3 to 4**

Copying part of the document is not possibly with 4Waves PRO.

a) Activate multiple function by pressing ***multiple***

b) Count to 11 with the ***1*** and ***10*** keys. Select with ***multiple***, confirm with ***setup***

c) Press ***repeat*** to select from page

d) Count to 3 with ***1*** select with ***multiple,*** confirm with ***setup***

e) Count to 4 with ***1*** select with ***multiple***, confirm with ***setup.***

f) The embossing of the selected document starts automatically.

**VIDEO:** **copy function using front panel.wmn**

### Setup Command Values

#### Menu Structure

#### 

|  |  |  |
| --- | --- | --- |
| **GROUP** | **ITEM** | **VALUE** |
| paper | paper length, mm or inch | numerical |
|  | paper width, mm or inch | numerical |
|  | print folding  (only 4X4 PRO) | 0, 1, 2, 3 number of dots in the print folding line |
|  | number of paper out  (only 4Waves PRO) | numerical |

|  |  |  |
| --- | --- | --- |
| **GROUP** | **ITEM** | **VALUE** |
| page layout | outer margin, characters | 0 – 10 |
|  | inner margin, characters | 0 – 10 |
|  | top margin, lines | 0 – 10 |
|  | bottom margin, lines | 0 – 10 |
|  | page number | none,  top - inner, center, outer  bottom - inner, center, outer |
|  | page mode | double sided, single sided,  saddle stitch four pages,  z-folding (Basic/ 4Waves PRO) |

|  |  |  |
| --- | --- | --- |
| **GROUP** | **ITEM** | **VALUE** |
| Braille | Braille table | Index Braille Default Braille table and possibly own tables |
|  | reformatted | normal, reformatted |
|  | line spacing | 2.5 ... 10.0 mm (4X4 PRO 5.0) |
|  | Braille dot distance, mm | 2.2, 2.5, 3.2 (4X4 PRO 2.5) |
|  | graphic dot distance, mm | 1.6, 2.0, 2.5 (4X4 PRO 2.0) |
|  | impact level | normal, high |
|  | multiple impacts | 1, 2, 3, 4, 5 strokes |

|  |  |  |
| --- | --- | --- |
| **GROUP** | **ITEM** | **VALUE** |
| communication | end of file delay | 5, 10, 15, 20, 25 seconds |
|  | baud rate, serial port (service only) | 300…..38400 |
|  | data bits, serial port (service only) | 8, 7 |
|  | parity, serial port (service only) | none, even, odd |
|  | stop bits, serial port (service only) | 1, 2 |
|  | handshake, serial port (service only) | hardware, software |
|  | serial mode, serial port (service only) | print, service |
|  | parallel port | on, off (off on delivery) |

|  |  |  |
| --- | --- | --- |
| **GROUP** | **ITEM** | **VALUE** |
| option | volume | 1, 2, 3, 4, 5, |
|  | setup | open, locked |

#### Paper Everest/4X4 PRO

#### 

**Paper Length Setting**

1. Press ***setup***/ ***group*** (paper)/ ***item*** (page length)/ select the numerical value in millimeters. (***10*** = 1.0 mm, ***1*** = 0.1 mm)

2. Save it with ***setup.***

**Paper Width**

1. Press ***setup***/ ***group*** (paper)/ ***item*** (page width)/ select the numerical value (***10*** = 1.0 mm, ***1*** = 0.1 mm)

2. Save with ***setup***

**Automatic Paper Length Setting**

Press ***form feed + form feed***

See [paper calibration information](#topic_PaperCalibration).

**Activate Print Folding Line, 4X4 PRO**

Embosses a line in the center of the paper which simplifies folding.

1. Press ***setup/ group*** (paper)/ ***item*** (print folding)/ ***value*** (on)

2. Save it with ***setup***

**Adjust Print Folding Line 4X4 PRO**

Perform a [paper calibration](#topic_PaperCalibration) if the folding line is not in the middle of the paper.

##### Paper Basic

##### 

**Paper Length Setting**

1. Remove the paper before setting up the paper length

2. Press ***setup***/ ***group*** (paper)/ ***item*** (page length)/ select the numerical value in inches (***10*** = 1 inch, ***1*** = part of inch)

3. Save with ***setup***

**Paper Width**

1. Press ***setup***/ ***group*** (paper)/ ***item*** (page width)/ select the numerical value (***10*** = 1 inch, ***1*** = part of inch)

2. Save with ***setup***

#### Paper 4Waves PRO

#### 

**Paper Length Setting**

1. Remove the paper before setting up the paper length

2. Press ***setup***/ ***group*** (paper)/ ***item*** (page length)/ select the numerical value in inches (***10*** = 1 inch, ***1*** = part of inch).

3. Save with ***setup***.

**Paper Width**

1. Press ***setup***/ ***group*** (paper)/ ***item*** (page width)/ select the numerical value (***10*** = 1 inch, ***1*** = part of inch).

2. Save with ***setup***.

**Select Number of Pages in Paper Out Bin**

When the selected number of Braille pages are embossed, the printer stops and echoes "paper service print copy #1 of #2",where #1 is the number of embossed copies and #2 is the number of requested copies. Empty the paper out bin and press ***on line*** to continue embossing.

1. Press ***setup/ group*** (paper)/ ***item*** (number of paper out)/ select the numerical value.

2. Save with ***setup***.

#### Page Layout

#### 

**Verify the Page Layout**

The [Braille format page](#topic_Brailleformatpage) embosses a sample showing characters per line and lines per page and margins.

***value*** - echo actual Braille page format, characters per line, lines per page, margins, etc.

***item*** - embosses the Braille format page

**Page Number**

For automatic page numbering in the header or footer:

1. Press ***setup***/ ***group*** (page layout)/ ***item*** (page number)/ ***value*** (position in header/ footer).

2. Save with ***setup***.

**Page Mode**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Single sided** | **Double sided** | **Saddlestitch Binding** | **Z-folding double sided** | **Z-folding single sided** |
| Basic-S | X |  |  |  | X |
| Basic-D | X | X |  | X | X |
| Everest | X | X |  |  |  |
| 4X4 PRO | X | X | X |  |  |
| 4Waves PRO | X | X |  | X | X |

#### Braille

#### 

**Using Internal Braille Code**

The internal Braille code translates text (DOS-type) to literary or computer Braille. Commercial Braille Editors will typically use the Index Default Braille Table. In other documents is may be named MIT-Braille or American Braille.

[Link to Index Default Braille Table](#topic_EditOwnBrailletable2).

**Own Braille Tables**

Press ***setup***/ ***group*** (Braille)/ ***item*** (Braille table)/ select Index Braille Table or installed Own Braille Tables, save with ***setup.***

Emboss current loaded own Braille tables with the extended key command ***Group 3, Item 1***. A maximum of four Own Braille tables may be installed using the Embosser Utility. For additional information contact Index Braille support.

|  |  |  |  |
| --- | --- | --- | --- |
| **Print mode**  Press ***setup/ group*** (Braille)/ ***item*** (reformatted)/ select normal or reformatted, save with ***setup*** | | | |
|  | **Typical use** | **Function** | |
| **Normal** | DOS text formatted to the Braille page layout | The page format of the original is maintained | |
| **Reformatted** | Reformat the DOS text to the Braille page layout on your embosser | **Reformatting Rules** | |
| Multiple spaces | replaced with one space |
| One cr/lf | replaced with one space |
| Two cr/lf | replaced with one cr/lf |
| Three cr/lf | replaced with two cr/lf and two spaces, indented line |
| Four or more cr/lf | two cr/lf |
| One Form Feed | replaced with one space |
| Two or more FF | replaced with one FF |

**Line Spacing**

Press ***setup/*** ***group*** (Braille)/ ***item*** (line spacing)/ select line spacing, save with ***setup***.

Line spacing is the distance in millimeters from dots 3 and 6 on one line to dots 1 and 4 on the next line. It may be adjusted from 2.5 to 10.0 mm. The default value is 5.0.

**Braille Dot Distance**

Press ***setup/ group*** (Braille)/ ***item*** (Braille dot distance)/ select Braille dot distance, save with ***setup***.

The distance between the dots in the Braille cell:

 Normal Braille 2.5 mm

 Japanese Braille 2.2 mm (not available in the 4Waves PRO)

 Jumbo Braille 3.2 mm

**Graphic Dot Distance**

Press ***setup/*** ***group*** (Braille)/ ***item*** (graphic dot distance)/ select distance, save with ***setup***.

The closest distance between two dots in the graphic:

 WinBraille Graphic 0.5 mm, only by the use of WinBraille Image Editor

 Graphic 1.6 mm

 Graphic 2.0 mm

 Graphic 2.5 mm

**Impact Level**

Press ***setup***/ ***group*** (Braille)/ ***item*** (impact level)/ select normal or high, save with ***setup***.

**Multiple Impact**

Press ***setup***/ ***group*** (Braille)/ ***item*** (multiple impact)/ select 1 to 5 impacts, save with ***setup***.

Multiple impacts are typically used when embossing on plastic- or aluminum foils.

#### Communication

#### 

**Parallel Port Settings**

Press ***setup***/ ***group*** (communication)/ ***item*** (parallel port)/ select on or off. On delivery the Parallel port is off.

Press ***setup***/ ***group*** (communication)/ ***item*** (end of file delay)/ select 5-25 seconds. After the selected End of File delay time the embossing will start even without the end of file sign (0x1A).

##### Serial Port Setting

Press ***setup***/ ***group*** (communication)/ ***item*** / select serial communication values, save with ***setup.***

Cables see: [Ports and Cables](#topic_Ports)

#### Option

#### 

**Speech volume**

Press ***setup***/ ***group*** (option)/ ***item*** (volume)/ select speech volume 1-5, save with ***setup.***

**Lock/Unlock Setup on Front Panel**

Lock front panel: Press ***setup***/ ***group*** (option)/ ***item*** (setup)/ select locked, save with ***setup.***

Unlock front panel: Press the double key command ***help + reformatted.***

#### Index Braille Default Settings

#### 

Select Index Braille default setup by pressing the double command ***setup + c.***

##### Default Basic

Basic-S is always set for single sided embossing.

##### Default Everest

##### Default 4X4 PRO

##### Default 4Waves PRO

### Headphone Speech Feedback

A standard stereo headphone socket is available under the 4Waves PRO front panel. The use of headphones increases the speech volume and quality.

## Embossed Feedback

### Hammer Test Page

### 

|  |  |
| --- | --- |
| Press ***help + on line***  The Hammer test page displays dot quality of hammers numbers 1-13.  **VIDEO:** **hammer test page Everest.wmn** | |
|  |  |

### Braille Format Page

### 

|  |  |
| --- | --- |
| Press ***item*** toemboss a frame showing current setting of lines per page and characters per line. It marks the four margin settings: top, bottom, inner and outer. | |
|  |  |
|  |  |

### Calibration Page

### 

|  |
| --- |
| The Calibration Page information is embossed during [Paper Calibration](#topic_PaperCalibration).  **VIDEO:** **calibrate paper sensor Everest/4X4 PRO.wmv** |
|  |

### Own Braille Table

### 

|  |
| --- |
| Press ***help + setup*** to emboss a list of installed Own Braille tables. |
|  |

### Embosser Information

### 

|  |
| --- |
| Press ***help + help*** to emboss the embosser information in relief letters (not 4X4 PRO)  Press ***help + normal*** to emboss the Braille embosser information page |
|  |

### Embossing Head Information

### 

[Extended key command](#topic_FrontKeyFunction_3_3_2)

Includes the following information:

Hammer batch no ####

Hammer on time in milliseconds

Impact level normal

Impact level high

Selected impact level (normal or high)

Back-side adjustment, increase/ decrease ##%

Vertical alignment value 1 = Factory default

Vertical alignment value 1 = Factory default

Vertical alignment value 1 = Adjust with Help Multiple #.## millimeter

## LED Feedback

### Status LED Interface Board Basic

### 

|  |  |  |
| --- | --- | --- |
| **LED Position**  **Starting from top LED** | **Basic-D/S**  **LED Function** | **Everest/4X4 PRO**  **LED Function** |
| 1 | Paper out rollers | LAN |
| 2 | 5 V | LAN |
| 3 | Not used | Not used |
| 4 | Not used | On/off line |
| 5 | Paper tractor | Not used |
| 6 | On/off line | Not used |
| 7 | Not used | Reflective paper sensor |
| 8 | LAN | 5 V |
| 9 | LAN | Not used |
|  | | |

### Status LED Interface Board Everest 4X4

### 

|  |  |  |
| --- | --- | --- |
| **LED Position**  **Starting from top LED** | **Basic-D/S**  **LED Function** | **Everest/4X4 PRO**  **LED Function** |
| 1 | Paper out rollers | LAN |
| 2 | 5 V | LAN |
| 3 | Not used | Not used |
| 4 | Not used | On/off line |
| 5 | Paper tractor | Not used |
| 6 | On/off line | Not used |
| 7 | Not used | Reflective paper sensor |
| 8 | LAN | 5 V |
| 9 | LAN | Not used |
|  | | |

### Status LED 4Waves PRO

### 

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Busy | Door | Paper | LAN Activity | LAN Link | Power |
| ON = The embosser module is busy. | ON = Top Lid or any of the doors is open. | ON = Paper Out | Blinking = traffic on internal network | ON = internal network connected | ON = 5 V Power OK on this module |
|  | | | | | |

## Web Interface

Use a web browser to get embosser information or to update the firmware.

Type the LAN IP address of of your embosser in the browser to reach the embosser's internal web site. By following the web site menus, you will find all information about your embosser and have the opportunity to upgrade the firmware, local speech interface, etc.

"Sign On" **user name** and **password** are available from your distributor and from [support@indexbraille.com](mailto:support@indexbraille.com)

**Get the Embosser's IP address**

|  |  |
| --- | --- |
| help + value | Echo: IP Address, Subnet mask (not 4Waves PRO) |
| help + help | Embosses: [information in letter](#topic_EmbosserInformationLetter) graphics (not 4X4 PRO) |

The web interface is in firmware 12.01.1 released April 2007.

**Index Embosser Web pages**

 System information

 Embosser information

 Network settings

 Embosser Head properties

 Parameters for paper feed

 LED information

 Current settings

 Upgrade menu is available after "Sign On"

 Telnet

 Service

## Controlling the embosser with ESC Sequences

## 

|  |  |  |
| --- | --- | --- |
| **Edit Files with ESC Sequences**  The easiest way to create a file with esc sequences is to download a HEX editor from the Internet. Each esc sequence starts with HEX 1B as described in the first table. Sometimes, as in the case for the Temporary setting of document properties, the esc sequence is complemented with additional information.  4X4 PRO only supports tactile graphics from WinBraille 4.xx. See the tables that follow and the example below the tables. | | |
| **Description** | **Decimal** | **Hexadecimal** |
| Activate six-dot graphics | 27 1 | 1B 01 |
| Deactivate six-dot graphics | 27 2 | 1B 02 |
| Activate general graphics | 27 3 | 1B 03 |
| Deactivate general graphics | 27 4 | 1B 04 |
| Activate four-dot graphics | 27 6 | 1B 06 |
| Deactivate four-dot graphics | 27 7 | 1B 07 |
| Activate six-dot graphics | 27 49 | 1B 31 |
| Temporary Setting of Document Properties  See the following table. | 27 68 | 1B 44 |
| Activate WinBraille printing | 27 87 | 1B 57 |
| Transparent mode (y \* 256 + x) number of characters | 27 92 x y | 1B 5C x y |
| Deactivate six-dot graphics | 27 93 | 1B 5D |
| Transparent mode – one character | 27 94 | 1B 5E |
| Activate / Deactivate Letter graphics | 27 252 | 1B FC |

|  |  |  |  |
| --- | --- | --- | --- |
| **Temporary Setting of Document Properties** | | | |
| **Function** |  | **Valid values** | **Comments** |
| Page Length | PL | See Page Length Value below | Calculate page layout |
| Page Width | PW | See Page Length Value below | Calculate page layout |
| Inner Margin | IM | 0-10 characters |  |
| Outer margin | OM | 0-10 characters |  |
| Top margin | TM | 0-10 characters |  |
| Bottom margin | BM | 0-10 characters |  |
| Multiple copies | MC | 2-10,000 copies |  |
| Page mode, (duplexing) | DP | 1 = single sided  2 = double sided  3 = Z-folding double sided  4 = Saddle stitch 4X4 PRO  5 = Z-folding single sided |  |
| Line Spacing | LS | 0 = 2.5 mm  1 = 3.75 mm  2 = 4.5 mm  3 = 4.75 mm  4 = 5.0 mm  5 = 5.25 mm  6 = 5.5 mm  7 = 7.5 mm  8 = 10.0 mm |  |
| Graphic Dot Distance | GD | 0 = 2.0 mm resolution  1 = 2.5 mm resolution  2 = 1.6 mm resolution | Not supported by 4X4 PRO |
| Braille Dot Distance | TD | 0 = 2.5 mm normal Braille cell inter point  1 = 2.0 mm Japanese Braille, interline  2 = 3.2 mm Jumbo Braille inter point | Embossing speed is maximum for 2.5 mm Braille cell mode. |
| Page Number | PN | 0 = None  1 = Top  2 = Top-left  3 = Top right  4 = Bottom  5 = Bottom-left  6 = Bottom-right | Requires a corresponding top or bottom margin. |
| Braille Table | BT | 0 = Index default Braille table  1 = Own Braille table no 1  2 = Own Braille table no 2  3 = Own Braille table no 3  4 = Own Braille table no 4 |  |

**Everest and 4X4 PRO Page Length - PL**

The Page Length Parameter is defined in millimeters in Everest and 4X4 PRO, the minimum value is 100 and maximum value is 585.

**Basic Page Length - PL for Basic**

Page Length in Basic is defined in whole and fractional inches.

|  |  |
| --- | --- |
| **Paper Length PL** | **Syntax = XXY**  **XX=1-17**  **Y = 0, 1, 2, 3, 4, 5, 6** |
| 11 inch | 110 |
| 11 1/4 inch | 111 |
| 11 1/3 inch | 112 |
| 11 1/2 inch | 113 |
| 11 2/3 inch | 114 |
| 11 3/4 inch | 115 |
| 12 inch | 116 |
| etc. | 120 |

**Example 1: Setting a temporary page length for Everest**

Set the page length for an Everest to 500 mm:

<1B><44><PL><500>

**Example 2: Setting a temporary page length for Basic**

Set the page length for a Basic to 11.5 inches:

<1B><44><PL><113>

# Embossing

On Windows you can emboss documents to the Index Braille Embossers through the following software functions:

 Embossing from any application directly to the Embosser

 WinBraille, see [Embossing using WinBraille](#topic_EmbossingusingWinBraille), (Windows operating systems only)

 IbPrint, see Embossing using IbPrint, (Windows operating systems only)

 Third party software, see [Embossing using third party software](#topic_DriverInstallationwithOther2)

## Embossing on Windows

### Embossing using WinBraille

### 

**MS-Word, Excel and Acrobat PDF**

The recommended way to emboss in these programs is: ***file/ WinBraille/ Emboss.*** Follow the instructions.

**Other Windows software**

Emboss to WinBraille by selecting ***file/ print/ WinBraille.***

### Embossing using IbPrint

### 

IbPrint is a drag-and-drop program for transferring text files, setup files, vertical alignment files, etc. to Index Braille embossers. The file will be transferred without any translation to Braille. IbPrint supports text and esc sequences.

Grab one or several files to print and drop them on the IbPrint icon on the desktop and follow the instructions. Select embosser and Number of copies.

**Advanced functions:**

 banner page on/off

 duplexing selection

 print order with multiple files

## Continue Printing after Failure

## 

Continue to emboss the remaining part of a print job after a failure. The embosser remembers the position where it stopped due to out of paper, embosser fault message, etc.

1. Power off and remove any paper in the embosser.

2. Power on and load paper.

3. Press ***off line***.

4. Send the same file again and the embosser echoes "mode 150".

5. Press ***on line*** to start the embossing where it stopped.

# Service and Support

## Support Tools

## 

The system administrator can update and calibrate Index Braille Embossers by using

 Front Key Panel, see [Controlling the Embosser](#topic_FrontKeyFunction_3_2_2)

 The [Embosser Utility](#topic_Introduction) program for Windows

 The [Software Service Interface](#topic_SoftwareServiceInterface) for advanced maintenance

The Embosser Utility program is a part of the WinBraille installation.

### Embosser Utility

#### Main Functions

#### 

Embosser Utility is a Windows program for support and upgrade of Index Braille embossers. It has the following main functions:

|  |  |  |
| --- | --- | --- |
| **FUNCTION** | **EMBOSSER UTILITY** | **User Category, Comments, etc.** |
| Upgrade embosser flash memory  1. Embosser firmware  2. Embosser speech interface  3. Factory setting  4. Local default (local speech, default Setting abc, own tables)  5. Calibration files | **File/ Open...**/ From Internet or from local disc (Index CD) | System administrator |
| Set embosser network settings (Windows)  1. IP address  2. SubNet mask  3. Default gateway  4. DHCP | **Tools/ IP settings...** | System administrator |
| Distributor Default Settings  1. Local speech  2. Default settings A, B, C  3. Own tables 1-4 | **Tools/Factory settings...** | Performed by Index Braille based on distributor information. Contact [support@indexbraille.com](mailto:support@indexbraille.com) for further instructions. |
| Install letter font | **Tools/Letter font...** | Performed by Index Braille based on distributor information. Contact [support@indexbraille.com](mailto:support@indexbraille.com) for further instructions. |
| Edit Own Braille tables | **Tools/Braille table...** | Performed by Index Braille based on distributor information. Contact [support@indexbraille.com](mailto:support@indexbraille.com) for further instructions. |

#### Starting Embosser Utility

#### 

Menu: **Start/All Programs/Index Braille/IndexEmbosserUtility**.

#### Upgrading Embosser Firmware

#### 

**file/ Open.../** from Internet or local disk

|  |  |  |
| --- | --- | --- |
| **Software Module** | **File Format** | **Included Software Components** |
| Firmware Complete to version no | Firmware\_Complete\_xxxx.eff | Firmware, English Speech, Letter,  Index Braille Default |
| Firmware Update to version no | Firmware\_Update\_xxxx.eff | Firmware only |
| Local Speech | Speech\_Country\_Company.eff | Speech only |
| Local Default | Custom\_Default\_Country\_Company.eff | Local Speech, Default Setting ABC, Own tables |
| Embosser calibration | Calibration data.ecf | Calibration data |

**Firmware Upgrade Process**

1. Use the Embosser Utility to retrieve the firmware file from Internet or CD. (**file/ Open.../)**

2. Press the **Upgrade Embosser** button and enter the information about the current firmware version number. Upgrade the firmware via the USB or Network port. Firmware cannot be downloaded using the serial or parallel ports.

3. For a 4Waves PRO embosser, select to update all embosser module(s). **Note**: Do not attempt to update only one module without contacting Index Braille support.

4. Press **OK** to start the firmware upgrade. The embosser will beep during the Re-Flashing process, it will take 1-5 minutes depending on the computer. It is important to keep the printer on and the flash Utility program running during Re-Flashing.

|  |  |
| --- | --- |
| **Caution**: | If the transmission is interrupted before the start up message from the embosser is received the embosser's firmware may experience a major breakdown. |

**Upgrade verification**

The embosser will issue a start-up message (echoed message) when the firmware upgrade is completed.

**Check for new upgrades**

You can use Embosser Utility to check [www.indexbraille.com](http://www.myhomepage.com/index.html) for new firmware upgrades.

### Software Service Interface

### 

The embossers have a service interface that can be accessed from Windows using:

 Hyper Terminal Serial Interface, see [Hyper Terminal Serial Interface](#topic_TelnetSerialInterface)

 Telnet Network Interface, see [Telnet Network Interface](#topic_TelnetNetworkInterface)

On Mac OS X 10.4 launch the Terminal application to access the Software Service Interface, see [On Macintosh](#topic_On_Mac).

#### On Windows

##### Hyper Terminal Serial Interface

##### 

Connect the embosser directly to your PC using the serial port and Windows Hyper Terminal.

Cable see: [Ports and Cables](#topic_Ports)

Serial cable Index Braille part no 1447 complete with converter.

Brand name "[Null Modem Cable 9/9](#topic_Ports)" with female-to-male converter.

**Hyper Terminal Settings**

***Start/ Programs/ Accessories/ Communications/ Hyper Terminal*** (Windows 2000)

Set Hyper Terminal communication settings to

Bits per second: 38400

Data Bits: 8

Parity: None

Stop Bits: 1

Flow Control: None

Start the [Software Interface menu](#topic_SoftwareServiceInterface) with "?".

Password, menu, etc., see [Software Service Interface menu](#topic_SoftwareServiceInterface).

##### Telnet Network Interface

##### 

Install the embosser directly on your network using a standard network cable.

**Start Telnet**

***Start/ run/ cmd*** (Windows 2000) ***Start/run*** (Windows XP). This opens a command window)

Log on the embosser menu with "telnet (your embosser IP address)"

Example "telnet 192.168.3.13"

Start the [Software Interface menu](#topic_SoftwareServiceInterface) with "?".

Password, menu, etc., see "[Software Service Interface](#topic_SoftwareServiceInterface)".

#### On Macintosh

See the iBraille User's Guide for details how to access the Software Service Interface from a Macintosh.

#### Software Service Interface Menu

Start the Software Service Interface menu with "?".

The following service menus exist:

Main Menu "User Mode"

(Password = Enter)

1. Network settings ...

2. Embosser settings ...

3. Testing of embosser ...

q. Quit

Main Menu "Distributor Menu"

(Password = Contact [support@indexbraille.com](mailto:support@indexbraille.com))

1. Network settings ...

2. Embosser settings ...

3. Load file with TFTP ...

4. Restart embosser ...

5. Change password ...

6. Testing of embosser ...

q. Quit

Follow the menu instructions.

Enter will keep the current value even after edit is selected.

## Vertical Alignment

## 

**Adjusting Using Front Panel**

Adjustments are made by moving the middle dot row, dots 2 and 5.

1. Press ***help + multiple***.   
- Echo "help mode 100 start at #.##" (0.00 = default).

2. Adjust the middle row by ***1, 10*** and ***multiple*** (numerical values). Each step is 0.01 millimeters and increasing values move the middle dot row to the left.

3. Press ***setup*** to save the adjusted vertical alignment value.   
- Echo "save #.##"  
- an alignment test page with the adjusted values is embossed.

4. 4Waves Only  
Repeat step 1-3 for modules 2, 3 and 4 to adjust vertical alignment on all modules.

**Checking Vertical Alignment Mechanics**

If the above instructions do not give acceptable results please check the following.

 Gear wheel, gear bar and spring stretcher

 Stepper motor, stepper motor brackets, stepping motor cables and stepping motor drivers

 Paper movement rollers and formula tractors

|  |  |
| --- | --- |
| **Correct alignment** | **Incorrect Alignment** |
|  |  |

## Paper Calibration Everest/4X4 PRO

## 

For embossers equipped with firmware 10.20 or higher.

**The Four Paper-Calibration Steps**

 Paper Movement Value - Calibration of paper movement value  
To adjust step length for handling different paper quality, length, thickness, etc.

 Paper Sensor Value - Calibration of paper sensor value  
To adjust sensor sensitivity for handling different texture, color, transparent foil, etc.

 Distance Paper Sensor/ Edge - Adjustment of the distance between the paper sensor and the paper edge

 Distance Paper Edge/ First Braille Line - Adjustment of the distance between paper edge and first Braille line

### Paper Movement Value

The length of the paper you are using must be known in millimeters. Please measure the paper and place it in the sheet feeder.

Press ***form feed + form feed*** and the paper length is echoed. If the length differs by more than 3 millimeters from the measured paper length, the paper movement value must be adjusted.

**Paper Movement Calibration Steps**

1. Press ***help + item***.   
- Echo: "calibration start at (297)"

2. Adjust to the measured paper length with ***1, 10*** and ***multiple***.

3. Press ***setup*** to save and start the calibration of paper movement.   
- A [**calibration page**](#topic_Calibrationpage) is embossed containing:   
 Calibration line - one line of Braille dots placed on the top edge of the paper.  
- The new paper movement value is now stored and the Braille page format echoed out.

**VIDEO:** **adjust paper length Everest.wmn**

### Paper Sensor Value

**Firmware up to 12.00**

 Place the paper against the top rollers between the aluminum covers in front of the sheet feeder

 Press ***help + group*** to start the paper sensor value calibration. Three different numerical values are echoed. They are the paper sensor value without paper, that with paper and the value used.

**VIDEO:** **calibrate paper sensor Everest 4X4.wmn**

**Firmware 12.01 and higher**

Press ***help + group*** tostart the paper sensor value calibration. Echo the current calibration value.

 Complete the paper sensor calibration by placing a page against the top rollers between the aluminum covers in front of the sheet feeder and pressing ***setup.*** Three different numerical values are echoed. They are the paper sensor value without paper, that with paper and the value used.

 Cancel the paper sensor calibration by pressing ***on line***.

 Select factory default sensor value (500) by pressing ***normal***.

## First Braille Line Position

Adjustment steps.

Step 1. First set the First Line Offset to 0 and adjust the Top of Form Setting until the first Braille line (dots 1 and 4) is on the edge of the paper.

Step 2. Adjust the First Line Offset to move the Braille to the preferred position on the paper.

### Top of Form Offset

The top of form value sets the distance between the paper sensor and paper edge on Basic, Everest, 4X4 PRO and 4Waves PRO.

**Adjusting sequence**

1. Press ***help*** + ***10***   
- Echo: "Top of form in mm start at (##.#)".  
- only 4Waves PRO; Echo "beep #1 top of form in mm start at (##.#)" where "beep#1" is embossing module number.

2. Adjust the value with ***1***, ***10*** and ***multiple***.

3. Press ***setup*** echo "saving ##.#" to save the new top of form value.

4. 4Waves PRO only - Repeat steps 1-3 for modules 2, 3 and 4.

5. When completed, the [Braille format page](#topic_Brailleformatpage) is embossed with the new top of form value.

|  |
| --- |
|  |

### First Line Offset

This function is used to move the position of the Braille block on the paper on on Basic, Everest, 4X4 PRO and 4Waves PRO.

**First line offset adjusting sequence**

1. Press ***help + 1***.   
- Echo: "First line offset in millimeter start at (2.0)".

2. Adjust the distance with ***1, 10*** and ***multiple***.

3. Press ***setup*** to save the new first line offset value.

1. 4Waves PRO only - Repeat steps 1-3 for modules 2, 3 and 4.

4. When completed, the [**Braille format page**](#topic_Brailleformatpage) is embossed with new first line offset value.

|  |
| --- |
|  |

## Clearing Paper Jam in Everest/4X4 PRO

## 

1. Power off the embosser.

2. Remove the paper stack.

3. Open the document out cover.

4. Check where the paper is jammed.

5. Remove the paper manually by rotating the paper movement axles with a screw driver in the axle end. It is located under the black cap on the right side of the embosser.

6. If necessary remove the embossing head and clear it of jammed paper.

**VIDEO:** **remove paper jam Everest jam.wmn**

## Maintaining Sheet Feeder

## 

**Out of Paper Message or Double Feed - Check the Following**

1. Sheet/card selector is in card position.

2. The pick-up roller surface is worn or hardened.

3. Margin guides are smoothly pushed against the edge of the paper stack.

4. Paper supports are in the correct position.

5. Paper quality is OK.

**Ready Document Adjustment**

1. Adjust the green document guide to 10 mm (1/2") from paper edge.

2. Adjust the angle on the lower document cover.

**Paper Jam Message**

**VIDEO:** **remove paper jam Everest.wmn**

|  |
| --- |
| **Sheet Feeder Replacement**  **VIDEO:** **replace sheet feeder Everest/4X4 PRO.wmn** |
|  |

## Clean Pick-up Roller

## 

1. Remove the paper stack.

2. Hold a very fine sandpaper against the pick up roller.

3. Rotate the rollers by pressing ***Form Feed*** followed by ***On Line*** for more movements until the surface is sticky.

4. Repeat this with the other pick-up roller.

**VIDEO:** **clean pick-up rollers Everest/4X4 PRO.wmn**

## Internal Network 4Waves PRO

## 

The Internal TCP/IP network is automatically checked when powering on the 4Waves PRO. This is confirmed by the messages "check module one"....."four waves ready".

**Internal Network Error Messages**

No reply from module no # - echo "module # no reply"

No connection to the local network module no # - echo "module # peep"repeated after two seconds.

## Replacing Embosser Head

## 

## 

## 

See [www.indexbraille.com](http://www.indexbraille.com) for further information.

### Replacing Basic

### 

**VIDEO:** **replace embossing head Basic.wmn**

### Replacing Everest/4X4 PRO

### 

**VIDEO:** **replace embossing head Everest/4X4 PRO.wmn**

|  |  |
| --- | --- |
|  |  |

## Replacing the Main Board

### Main Board Contact Position

### 

|  |  |  |  |
| --- | --- | --- | --- |
| **No** | **Function** | **Text on Board Surface** | **Comments** |
| 1 | Front Panel | KEYBOARD |  |
| 2 | Sheet Feeder | P\_FEED | Everest/4X4 PRO |
| 3 | Power supply |  |  |
| 4 | Movement Stepper Motor | PF |  |
| 5 | Embosser Head Stepper Motor | PH |  |
| 6 | Embosser Head |  |  |
| 7 | Speaker and Paper Sensor Board | P9 | Basic and 4Waves PRO  Speaker = 1, 2  Everest, 4X4 PRO Speaker and Paper Sensor Board =1-6 |
| 8 | Paper Sensor | P\_SENS | Basic and 4waves PRO  Switch formula tractor |
| 9 | DIP switch |  | Setting see [instructions](#topic_DipSwitchSettings) |
| 10 | Service port |  | Not used |
| 11 | Interface Board | P6 |  |
| 12 | Interface Board | P7 |  |
| 13 | Grounding |  |  |
| 14 | Service port |  | Not used |
| 15 | RS485 | EXP | 4Waves PRO internal communication |

### Setting the Dip Switches

### 

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| The same version of the electronic main board and firmware is used in all Index Braille Embossers. However, the DIP switch settings for each embosser model are unique, so you have to set the DIP switches according to the table below before you insert a board in an embosser. Otherwise you will not receive the expected functionality. | | | | | |
| **EMBOSSER MODEL** | **Switch 1** | **Switch 2** | **Switch 3** | **Switch 4** | **Switches 5, 6, 7, 8** |
| **Basic-D** | ON | ON | ON | ON | (Not used) |
| **Basic-S** | OFF | ON | ON | ON |  |
| **Everest** | ON | OFF | ON | ON |  |
| **4X4 PRO** | OFF | OFF | ON | ON |  |
| **4Waves PRO** | ON | ON | OFF | ON |  |
| **CONFIGURATION** | **Switch 5** | **Switch 6** | **Switch 7** | **Switch 8** |  |
| **First Release** | ON | ON | ON | ON |  |
| **Impact level +20% for negative hammers. Only used in firmware 10.04.**  **Contact Index support for further information.** | OFF | ON | ON | ON |  |

### Replacing Main Board Basic and 4Waves PRO

### 

**VIDEO**: **replace main board Basic.wmn**

### Replacing Main Board Everest/4X4 PRO

### 

**VIDEO:** **replace main board Everest.wmn**

### Changing Board Size

### 

## Replacing Paper Sensor Board Everest/4X4 PRO

## 

|  |  |
| --- | --- |
| The Paper Sensor Board is located above the embosser head and equipped with a reflective sensor.  1. To exchange the Paper Sensor Board, Index Braille part no 1182, follow the video instructions  2. To calibrate the sensor see [Paper Calibration](#topic_PaperCalibration).  **VIDEO:** **replace paper sensor board Everest.wmn** | |
|  |  |

## Replacing Embossing Module 4Waves PRO

### Replace with Service Embossing Module

### 

1. Turn off the power to the embosser

2. Lift the selected embosser module and place it carefully into the transport box, see [Transporting the Embosser](#topic_ReturnShipment).

3. Carefully lift the replacement module and place it in the empty position. The embosser module in position 1 has to have the three steel bows in place.

4. Turn on Power and wait for the speech feedback: "one wave", "two waves", "three waves", "four waves ready".

|  |  |
| --- | --- |
|  |  |
|  |  |

**Check installed firmware version**

1. ***Help + b, Group 1, Item 2,*** Check Firmware, Braille table and Letter font in all embossing modules. The status message replies if any embossing module needs a new firmware version.

2. If necessary, update the firmware and/or Own Braille table with [Embosser Utility](#topic_Introduction).

### Allowed Combinations of Embossing Modules

### 

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | | | | |
|  | | | | |
|  | | | | |
| **Allowed Combinations of Embossing Modules and Speed** | | | | |
| Embossing Module 4 | Embossing Module 3 | Embossing Module 2 | Embossing Module 1 | Speed  (Characters Per Second) |
| X | X | X | X | 300 CPS |
|  | X | X | X | 242 CPS |
|  |  | X | X | 187 CPS |
|  |  |  | X | 130 CPS |
|  |  |  |  |  |

See [Replacing a Service Embossing Module](#topic_ReplacewithServiceEmbossing) for details on how to replace one embosser module.

## Replacement Modules

## 

See [www.indexbraille.com](http://www.indexbraille.com) for further information.

## Removing Index Braille Software

### Removing Index Printer Drivers on Windows

### 

There are three reasons to remove the existing Index Braille Printer Drivers from Windows:

1. The embosser is no longer connected.

2. Before installation of a new WinBraille version.

3. Trouble shooting.

1. Start the Printers and faxes dialogue: **Start/ Settings/ Printers and Faxes/**

2. Select the Index Braille printer and remove it.

### Removing Index Printer Drivers on Mac OS X 10.4

See the iBraille User's Guide for details how to remove the Index Braille Printer Drivers for Macintosh.

### Removing WinBraille from Windows

### 

Use the standard Windows method to remove WinBraille, **start/ settings/ control panel/ add remove program/**

Select WinBraille from the list of available programs and request removal.

### Removing Embosser Utility from Windows

### 

Use the standard Windows method to remove Embosser Utility, **start/ settings/ control panel/ add remove program/**

Select Embosser Utility from the list of available programs and request removal.

## Transport and Service

## 

 Lock the embossing head.

 Pack the embosser in its original packing box. The warranty will only be valid if the embosser is transported in professional packaging.

 To get quick and effective service, please include a fault description and sender information.

 Before shipping, contact Index Braille for a service ID number.

### Locking the Embosser Head

Place the embossing head in the correct position by pressing ***help + double*** and insert the print head lock.

#### Basic-D/S

#### 

|  |  |
| --- | --- |
|  |  |

#### Everest/ 4X4 PRO

#### 

|  |  |
| --- | --- |
|  |  |

#### 4Waves PRO

#### 

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| --- | --- |
|  |  |

## Status Check

### 4Waves PRO

### 

**Status Feedback from the Front Panel**

 Make sure the 4Waves PRO is correctly loaded with paper.

 Press ***Group 1, Item 3, value (on), setup***.

 The Automatic Status Feedback embossing starts.

- Embossing of one page testing hammers 1-13; see below.

- The test result are embossed on page 2.

 Check the status feedback printout and result.

Setting of Warning and Error level in status feedback: see Embosser Utility.

## Appendix

### Front Panel Summery link

Link to [Information Feedback.](#topic_FrontKeyFunction_3_2_2)

Link to [Common Commands](#topic_FrontKeyFunction_4_2)

Link to [Setup Commands](#topic_FrontKeyFunction_4_2_3)

Link to [Embosser Calibration](#topic_FrontKeyFunction_4_2_2)

### Letter Fonts

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| Embossed raised tactile letters, (A-Z, a-z), are used to give embosser feedback to sighted persons. You can, for example, press ***help + help*** to receive embosser information in raised tactile letters. You can also use a text file with esc sequences to emboss raised letters either as a complete document or as a part of a Braille document.  See [Controlling the embosser with ESC sequences](#topic_ESCsequenses) for details. (Note: 4X4 PRO does not support letter graphics).  **Non-Western Alphabet**  You can get raised tactile graphics with other alphabets, for example Moon, Cyrillic, Arabic, etc.  For further information please contact Index Braille support [support@indexbraille.com](mailto:support@indexbraille.com) |
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### Error Codes

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| --- | --- | --- | --- |
| **Error Number** | **Description** | **Embosser Models** | **Comments** |
| 181 | The internal network communication has stopped due to a buffer problem. | 4Waves PRO only | Restart the embosser |
| 201 \* | One embossing module does not respond after receiving a message from embossing module 1. | 4Waves PRO only |  |
| 202 \* | One embossing module does not respond at all on a messages from embossing module 1. | 4Waves PRO only | Error after resending the message 10 times  ***Help*** = Echo embossed number of complete copies and Braille pages currently in the embossing process. |
| 203 | Distribution of pages between the modules fails. | 4Waves PRO only | ***Help*** = Echo embossed number of complete copies and Braille pages currently in the embossing process. |
| 220 \* | Wrong Firmware version in embossing module 2, 3 or 4. | 4Waves PRO only | Compares the firmware version in embossing modules 2, 3 and 4 with embossing module 1during power on. |
| 230 \* | Wrong Own Braille table in embossing module 2, 3 or 4. | 4Waves PRO only | Compares the Own Braille tables in embossing modules 2, 3 and 4 with embossing module 1during power on. |
| 240 \* | Wrong letter font in embossing module 2, 3 or 4. | 4Waves PRO only | Compares the letter font in embossing modules 2, 3 and 4 with embossing module 1during power on. |
| Audio signal  tick, tick...... | Signal when deleting text buffer in each module during the embossing of several documents. | 4Waves PRO only | Information feedback. |
| \* = Embossing Module number information | Error ### beep # ### = error number # = Embossing Module number 2, 3 or 4. | 4Waves PRO only | Gives faulty embossing module position. |
| Only beeping during start up | One embosser module is not receiving an internal IP address from the router. | 4Waves PRO only | Check network cables. |
| Error 182 beep # Module | The checksum for the file is not identical in the specified module. | 4Waves PRO only | Turn off 4Waves PRO, start it and reprint the document. |

### Index Default Braille Table

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| Index Braille Code is the commonly used translation from the Western character set to Braille. The same translation is used with many names for example, MIT-code, US Grade 0, US Computer Braille, American Grade 0. |
| **The Index Braille Table list is installed by default in all embosser.**  1st Line: a b c d e f g h i j  1st Line: A C I Y Q K [ S J Z  2nd Line: k l m n o p q r s t  2nd Line: E G M ] U O \_ W N ^  3rd Line: u v x y z & = ( ! )  3rd Line: e g m } u o  w n ~  4th Line: \* < % ? : $ ] \ [ w  4th Line: a c i y q k { s j z  5th Line: 1 2 3 4 5 6 7 8 9 0  5th Line: B F R r b V v f T t  6th Line: / + # > ' -  6th Line: L l | \ D d  7th Line: @ ^ \_ " . ; ,  7th Line: H X x P h p ` |

### List of Index file formats

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**Embosser Utility and Speech Tool**

Embosser Factory Settings files (\*.efs) = Specify default setup values, A, B, C.

Embosser Letter Font (\*.elf) = Tactile letter font embosser test page, etc.

Embosser Braille Codes (\*.ebc) = Own Braille code, Own 1, Own 2, Own 3, Own 4.

Braille Component Packages (\*.bcp) = package of several Braille tables.

Embosser Flash Files (\*.eff) = Package of files which can be used to Upgrade the embosser, speech, firmware, tables, etc.

Embosser Web Files (\*.ibe) = For internal use at the Index Braille factory.

Embosser Calibration File (\*.ecf) = Calibration of embosser production settings

**WinBraille**

Text Files (\*.txt)

HTML Files (\*htm,\*.html)

Rich Text Files (\*.rtf)

Word Files (\*.doc)

Braille File Format (\*.brf) = for example Duxbury Braille translated file format.

WinBraille Files (\*.wbr) = file containing the information in the translated Braille document.

WinBraille Template Files (\*.wtf) = template file to define Braille document format.

WinBraille Interchangeable Files (\*.wif) = file including the complete information used by WinBraille to produce a Braille document. A .wif file can be opened in any computer even with other WinBraille settings. Containing source document, Braille document, Braille translation tables, profiles, etc.

**Index Speech Tool**

Speech Files (\*.ispf) = Local speech interface with words in Wave format. This file has to be converted into the embosser speech format using the development platform at Index Braille factory.

Embosser Speech File (\*.esf) = Local speech file ready to be used to upgrade the embosser using Embosser Utility.

### Power Module 4Waves PRO

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The 4Waves PRO power modules use the same power supply board and transformer as the other Index embosser models.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Define Module number with Dip Switch settings** | | | |
|  | Power Module | | | |
|  | No 4 | No 3 | No 2 | No 1 (Master) |
| DIP Switch Setting |  |  |  |  |

### Power Supply Basic/Everest/ 4X4 PRO

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| --- | --- |
| **Power Supply Information**  Green LED indicates incoming 42 V.  Yellow LED indicates regulated 38.6 V DC to embosser main board.  **Power Supply Data**  Tolerances on incoming voltage 230 V +/- 20%, 115 V +/-20%  Fuse glass 5x20 mm  Incoming fuse = 4.00 A/250 V Slow blow  Power supply fuse = 6.3 A/250 V Slow blow  Power 160 W | |
|  |  |

Your index page goes here...

In MS-Word, select INDEX AND CONTENTS from the INSERT menu.

Select INDEX and click OK.