

# BraillePen Slim

Bluetooth Braille keyboard



## User Guide



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# What's in the box?

Your new BraillePen Slim Slim comes in its own carton, and it is packaged carefully for transport in foam packaging. Please keep the carton and foam packaging safe; if you ever need to ship your BraillePen Slim anywhere, this packaging will help to keep it from damage in transit.

Inside the carton you will find:

- The BraillePen Slim
- The BraillePen Slim Pouch
- The BraillePen Slim Lanyard
- The AC adapter, with the appropriate mains lead for your country
- This User Guide in Print and Electronic formats
- BraillePen Write software on a CD
- Optional: 1 USB Bluetooth adapter and drivers.

Please check the contents of the box carefully as soon as you receive it. If anything is missing or appears damaged, please contact your distributor immediately.

## Regulatory information

This equipment has been developed and tested in order to comply with the EMC and safety requirements of the following directives:

EN 300 328  
EN 301 489-1  
EN 301 489-1  
EN 55022  
EN 61000-4-2  
EN 61000-4-3  
EN 60950-1  
EN 60601-1

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.



This device bears the CE and FCC approval mark.

## Trademark information



Bluetooth™ is a trade mark of the Bluetooth Special Interest Group, [www.bluetooth.com](http://www.bluetooth.com).

Microsoft® and Windows® are registered trademarks of Microsoft Corporation.

WIDCOMM® is a trademark of Broadcom Corporation.

BlueSoleil® is a trademark of IVT Inc.

# Your BraillePen Slim at a glance

## Exploring the BraillePen Slim

Your BraillePen Slim has a 6-dot Braille keyboard, with the keys from left to right: dot 3, dot 2, dot 1, dot 4, dot 5, dot 6.

Below the Braille keys, there are three function keys, from left to right: Shift, Space and Control.

On the rear edge you will find the connector for the battery charger on the right-hand side; on the front edge in the centre is a loop, to clip the lanyard to when you wish to carry your BraillePen Slim on its lanyard.

The keyboard is in the correct position for writing when the Braille keys are furthest away from you and the function keys are nearest you.

To use the BraillePen Slim pouch, slip the BraillePen Slim into the pouch Braille key side first. This allows you to use the lanyard to pull it out, and means that you can use the pouch even with the lanyard attached. If you try to put the BraillePen Slim in the other way, it will not slide all the way into the pouch - the lanyard loop will prevent it. Hold the lanyard to one side if it is attached, and close the pouch with the velcro strip.



*Illustration 1: Picture of the BraillePen Slim with all features labelled*

## Switching BraillePen Slim on and off

Switch your BraillePen Slim on by pressing the following keys simultaneously: Space, dot 1 and dot 3. Use the same key combination to switch the unit off. You will hear beeps to tell you whether you have switched off or on.

## BraillePen Slim sound signals

BraillePen Slim communicates its status using high-pitched beeps. When you first turn your BraillePen Slim on, it gives several beeps.

First you hear a single short beep to let you know that the BraillePen Slim is on.

Then you hear a set of beeps to tell you the battery status.

The third set of beeps tells you that the BraillePen Slim's Bluetooth interface is active and can make a connection with another device.

The sound for "BraillePen Slim on" and the sound for "Bluetooth active" don't change; the battery sounds will change depending on how much charge there is. Here is the full list of battery status beeps:

One long beep, pause, three short beeps means that the unit is not connected to the power and the battery is fully charged.

One long beep, pause, two short beeps means that the unit is not connected to the power, and the battery is charged to half its capacity.

One long beep, pause, one long beep means that the unit is not connected to the power, and that the battery is drained and needs to be recharged immediately.

Two mid-length beeps means that the unit is connected to power and the battery is charging, but doesn't report on the state of the battery.

Two mid-length beeps, pause, three short beeps means that the unit is on charge, and the battery is already fully charged.

## **Connecting the BraillePen Slim**

Before switching your BraillePen Slim on, make sure you first turn on the device you want to connect to. When your device is on, then turn the BraillePen Slim on by pressing Space and dots 1 and 3 together.

Sometimes the connection can take up to 20 seconds to complete, after both devices have been switched on. Listen for the triple-beep that tells you BraillePen Slim's Bluetooth interface is active, and allow up to 20 seconds from there.

If you are connecting to a PC or netbook for the first time, you will need to discover the BraillePen Slim as a Bluetooth device. Once discovered, the connection will be made automatically every time after that. If you are connecting to a phone, discovery is usually automatic once Bluetooth is turned on.

If your BraillePen Slim's battery is getting a little low, you might notice that it's more difficult to connect to other devices, or to stay connected. Recharge the battery, and then consult the Care and Resources section of this manual to find out how to reset your BraillePen Slim.

### ***Bluetooth Adapter Types***

BraillePen Slim is compatible with four adaptor types: WIDCOMM, Toshiba, Microsoft and BlueSoleil. The instructions here apply to those Bluetooth adapters using the Microsoft Bluetooth drivers. If your Bluetooth doesn't work as described, check in the Care and Resources section for connection information for other Bluetooth discovery methods.

### ***Under Windows XP***

First turn on your BraillePen Slim, and wait for the triple-beep. Next go to the Control Panel and choose Bluetooth. Select Add a Device and wait while Windows discovers the device.

The MAC address of the BraillePen Slim, a series of letters and numbers beginning with BP, will appear in the window; there could also be other devices such as other computers or phones. You should select the BraillePen Slim's identifier as your device and click Next.

You will be asked whether you want to enter a pairing code or allow the device to pair without a code. We suggest pairing without a code if you are pairing for the first time; you can remove the BraillePen Slim from the list of devices and pair again with a code later if you wish.

Once you have chosen and clicked Next, the BraillePen Slim and your computer will be paired.

### ***Under Windows Vista or Windows 7***

First, turn on your BraillePen Slim and wait for the triple-beep.

Go to Control Panel and select Devices and Printers. Choose Add a Device.

So long as you have Bluetooth on the computer and your BraillePen Slim's Bluetooth is active, the MAC address of your BraillePen Slim will appear in the window. Select this and click Next.

You will then have three choices; enter a code you already know, have Windows assign a code, or pair without a code.

# Using BraillePen Slim with Apple iDevices

## To pair your BraillePen Slim with your iDevice:

You will only need to perform this exercise once; once paired, unless you reset your iDevice, it will know about your BraillePen Slim indefinitely.

On the iDevice, in Settings, General, page down to accessibility, then go to VoiceOver and then down to Braille.

Switch on the BraillePen Slim using **space + dots 1,3**.

Once you hear the triple-beep on the BraillePen, it should appear in the list of Braille devices to choose from. BraillePen Slim will appear as BraillePen in the list of discovered devices. Single-tap the device name to select it; double-tap the device name to initiate the pairing.

You will be taken to a passcode entry screen; enter the passcode 1234. Use a single tap to select each digit and then a double-tap to enter it. Then single-tap Pair to select it and double-tap to activate. It is important to enter the passcode and complete the process within the short time allowed.

You will hear a single beep to tell you that BraillePen Slim is now connected to the iDevice.

If you don't complete the process quickly enough, the iDevice may come back to you and tell you that pairing failed; sometimes, after this has happened, the iDevice can't find the BraillePen Slim. In this case you need to go to Settings, General, Reset and choose Reset all Settings. Then you can start again from the beginning.

When using a BraillePen Slim with VoiceOver using iOS 4.3 or later, you can use the following key commands, or chords, to navigate.

## iDevices you can use with BraillePen Slim:

iPod touch (3rd generation), iPhone 4, iPhone 3GS (8GB), iPod touch (4th generation), iPad 2.

VoiceOver action	Braille command (chord)
Activate a Back button if present	<b>space + dots 1, 2</b>
Activate the Delete key (backspace)	<b>space + dots 1, 4, 5</b>
Activate the Eject key	<b>space + dots 3, 4</b>
Activate the Home button	<b>space + dots 1, 2, 5</b>
Activate the Return key (New line)	<b>space + dots 1, 5</b>
Activate the Return key (Choose	<b>space + dots 3,6</b>
Activate the Tab key	<b>space + dots 2, 3, 4, 5</b>
Activate the Volume Down button	<b>space + dots 1, 2, 6</b>
Activate the Volume Up button	<b>space + dots 3, 4, 5</b>
Deselect text	<b>space + dots 2, 3, 6</b>
Go back a page	<b>space + dots 1, 2</b>
Go back a screen/page	<b>space + dots 2, 4, 6</b>
Go to bottom right of current page/screen	<b>space + dots 4, 5, 6</b>
Go to new screen/page	<b>space + dots 1, 3, 5</b>
Go to the Status bar	<b>space + dots 2, 3, 4</b>
Go to top	<b>space + dots 1, 2, 3</b>

left of current page/screen	
Move to next item	space + dot 4
Move to next item using rotor setting	space + dot 6
Move to previous item	space + dot 1
Move to previous item using rotor setting	space + dot 3
Move to the first element	space + dots 1, 2, 3
Move to the last element	space + dots 4, 5, 6
Activate the current element	space + dots 3, 6
Notification of rotary setting (Word, character, links etc.)	space + dots 1, 3, 4, 5
Pause or Continue speech	space + dots 1, 2, 3, 4
Phone signal strength	space + dots 2, 3, 4
Privacy screen curtain on or off	space + dots 1 2 3 4 5 6
Read all icons on screen/page	space + dots 2, 4, 5, 6
Read by character	space + dot 6 (forward) or space + dot 3 (backwards)
Read out icons from current position	space + dots 1, 2, 3, 5
Read page number	space + dots 1, 3, 6
Read page starting at selected item	space + dots 1, 2, 3, 5
Read page starting at the top	space + dots 2, 4, 5, 6
Read word by word	space + dot 5 (forward) or space + 2 (backwards)
Scroll left one page	space + dots 2, 4, 6
Scroll right one page	space + dots 1, 3, 5
Select next rotor setting	space + dots 5, 6
Select previous rotor setting	space + dots 2, 3
Select text	space + dots 3, 5, 6
Switch between contracted and uncontracted Braille	space + dots 1, 2, 4, 5
Switch BraillePen on or off	space + dots 1, 3
Toggle announcement history	space + dots 1, 3, 4, 5
Toggle Grade 1 or 2 Braille	space + dots 1, 2, 4, 5
Toggle Screen Curtain on and off	space + dots 1, 2, 3, 4, 5, 6
Toggle speech on and off	space + dots 1, 3, 4

## Getting to know the iPhone

To go to the speech, VoiceOver, practice area: Settings, General, page down to Accessibility, VoiceOver, and practice. Press Home Button when you are done practising.

Function	Key or Gesture
Switch on or off	Hold down power button for 5 seconds
Unlock iPhone	Right swipe bottom of screen
Explore icons	One finger right or left swipe or one finger touch and move about screen
Turn speech off or on	Three presses home button
Stop or start podcast/video	Two finger tap anywhere



Privacy screen curtain on or off	Three finger triple tap
Turn app switcher on or off (just four icons per screen, less confusing )	Double tap home button
Volume control	Two rectangular buttons top left side
Read strength of phone signal	Very top left of screen
Read time	Middle of very top of screen
Battery strength	Right of very top of screen
Rotary choices (words or characters, links or headings and so on)	Two fingers, like turning a knob
Reset iPhone	Hold the home button and press the power button (you don't lose date)

# BraillePen Slim with the Dolphin Pen

## Setting up BraillePen Slim as a keyboard for Supernova

- In Supernova, Select Control Panel, Popup Menu, Configuration, SAM Setup.
- Select BraillePen Slim from the list box
- Press the Configure button
- Select Manual Configuration radio button
- Turn on your BraillePen Slim using Space and dots 1 and 3.
- Press the Bluetooth Find button in the SAM dialog and wait for a minute.
- When detected press the OK button.
- In the SAM dialog, press the Detect All Devices Now button.
- Click OK to accept the hardware change dialogs
- Your SAM dialog should now show BraillePen Slim 1
- Tab using Space and dots 5 and 6 to move to the close button and press Joystick Enter to select.

For questions about the Dolphin Pen, please contact [support@dolphinuk.co.uk](mailto:support@dolphinuk.co.uk)

For questions about BraillePen Slim please contact your distributor.

## BraillePen Slim keystrokes for use with Supernova

Action	BraillePen Slim Braille key
Open Control Panel	Space and dots 1 3 5
Popup Menu	Space and dots 1 2 3 4
Mute Speech Control	
List System Tray	Shift, Space and dots 2 3 4 5
Application Hotkey Information	Space and dots 1 2 5
Toggle Key Describe Mode on/off	Space and dots 1 4 5 6
<b>Speak Keys</b>	
Speak PDA Battery Status	Space and dots 2 3 4
Speak current time/date	Space and dots 1 4 5
Speak Status Bar	Shift, Space and dots 2 3
Speak Selection	Shift, Space and dot 2
Speak Focus	Shift, Space and dots 3 5 6
Speak Headings	Shift, Space and dots 2 5
Speak Control	Shift, Space and dots 4 6
Speak Window	Shift, Space and dots 3 5
Where am I? (Application, file & focus)	Space and dots 2 4
Describe Focus position	Shift, Space and dots 2 3 6
<b>Navigation</b>	
Press Ok/Close Icon	Shift, Space and Control
Enter	Space and dots 4 6
Space	Space
Page Up	Space and dots 1 2 6
Page Down	Space and dots 3 4 5
Tab	Space and dots 5 6

<b>Action</b>	<b>BraillePen Slim Braille key</b>
Shift Tab	Space and dots 2 3
Escape	Space and dots 1 5
BackSpace	Space and dots 1 2
Delete	Space and dots 1 3 4 6
Start Menu (Windows Key)	Space and dots 2 4 5 6
Cursor Up	Space and dot 1
Cursor Down	Space and dot 4
Cursor Left	Space and dot 3
Cursor Right	Space and dot 6
Home	Shift, Space and dots 1 2 3
End	Shift, Space and dots 4 5 6
Control Home	Space and dots 1 2 3
Control End	Space and dots 4 5 6
Alt	Control and Space
Alt tab	Shift and Space
<b>Virtual Focus (VF)</b>	
Choose Virtual Focus (VF)	Control and dots 3 6
VF Activate Press	Space
VF Interact with control	Space and dots 4 6
VF Interact with control	Space and Control
VF Next Line	Space and dot 4
VF Previous Line	Space and dot 1
VF Right	Space and dot 6
VF Left	Space and dot 3
VF Right Word	Space and dot 5
VF Left Word	Space and dot 2
VF Choose Live Focus	Control and dots 3 6
VF Next Object	Space and dots 5 6
VF Previous Object	Shift, Space and dots 5 6

# Using BraillePen Slim with MobileSpeak

You need first to pair BraillePen Slim with your phone. First turn MobileSpeak off, and then set Bluetooth on your phone to On. Make sure your phone is in discoverable mode.

Now turn your BraillePen Slim on, and wait to hear the triple-beep that tells you Bluetooth is active. Pair your phone with BraillePen Slim.

Then connect MobileSpeak and the BraillePen Slim, by going to the MobileSpeak folder on your phone and opening Configure, and going to the Options, Braille menu item. Once you have the connection, you are able to use BraillePen Slim as a Bluetooth keyboard to your phone.

## BraillePen Slim keystrokes for MobileSpeak

Some of these keystrokes only apply when you are using a smartphone with Windows Mobile; others apply to both Windows Mobile and SymbianOS phones.

Previous line	Space and dot 1
Next line	Space and dot 4
Previous character	Space and dot 3
Next character	Space and dot 6
Page up	Space and dots 1 2 6
Page down	Space and dots 3 4 5
Home	Space and dots 1 2 3
End	Space and dots 4 5 6
Backspace	Space and dots 1 2
Delete	Space and dots 4 5
Escape	Space and Shift
Tab	Space and Control
Shift	Shift
Stop speech	Control
Enter	Space, Shift and Control
Start menu	Space and dots 2 4 5 6
Menu bar	Space and dots 1 3 4
Context menu	Space, Shift and dots 1 3 4
Close current window	Space and dots 1 3 4 6
Toggle Edit Mode/Read Mode	Space and dots 2 4
Read entire screen	Space and dots 1 2 4
Display status information	Space and dots 2 3 4
Open MSP Control Panel	Space and dots 1 4
Display date and time	Space and dots 1 4 5
Mute Speech on/off	Space and dots 1 3 6
Move focus to taskbar	Space and dots 2 3 4 5
Stylus Mode on/off	Space and dots 1 2 4 5

# BraillePen Write

BraillePen Slim can act as a fully-functioning Windows keyboard, using BraillePen Write.

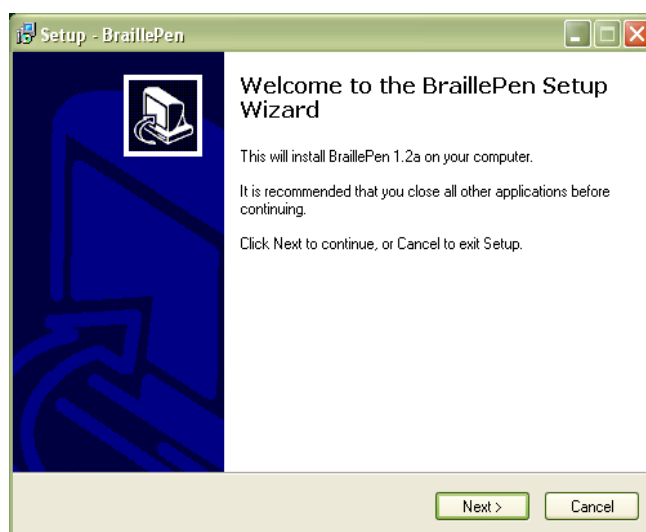
Your computer must have a Bluetooth adapter, either internally or using a USB Bluetooth dongle.

BraillePen Write requires Windows® XP or higher.

## Installing BraillePen Write

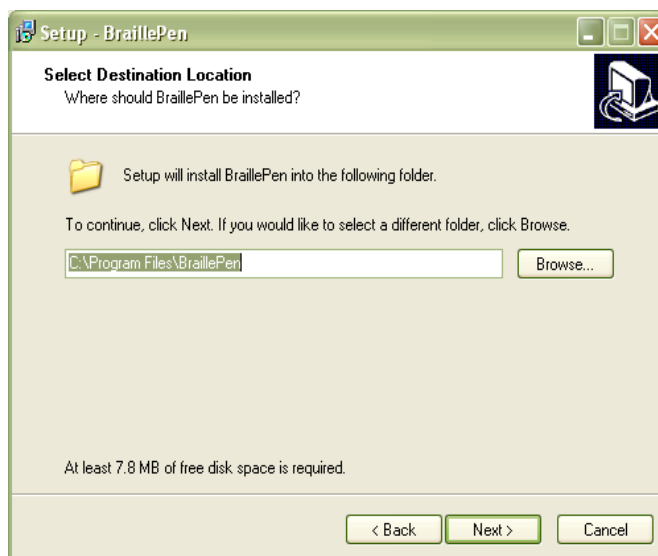
BraillePen Write installer is supplied to you on a CD. When you insert the CD, either allow it to auto-run, which will bring up the installer automatically, or navigate to the CD and double-click on the file called BP-setup.exe or similar. The filename of the installer may contain other information such as language and version number.

The first dialog of the installation process tells you the version of the software you are installing.



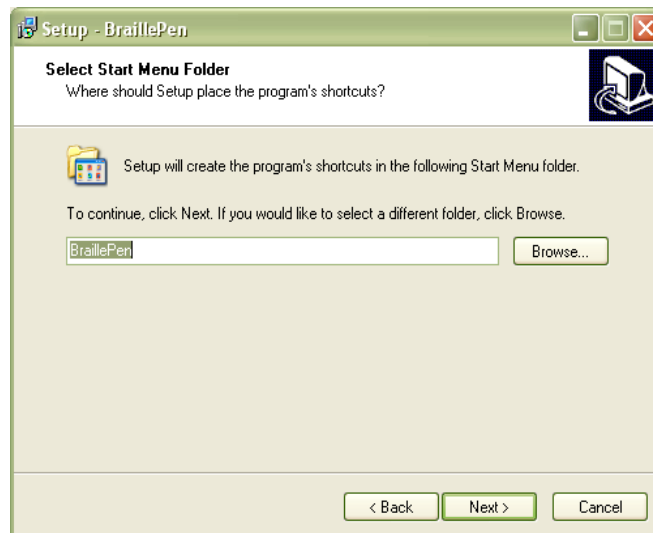
*Illustration 2: The first dialog in BraillePen Write install process.*

The next dialog offers you the chance to change the installation location, although the standard location usually works well.



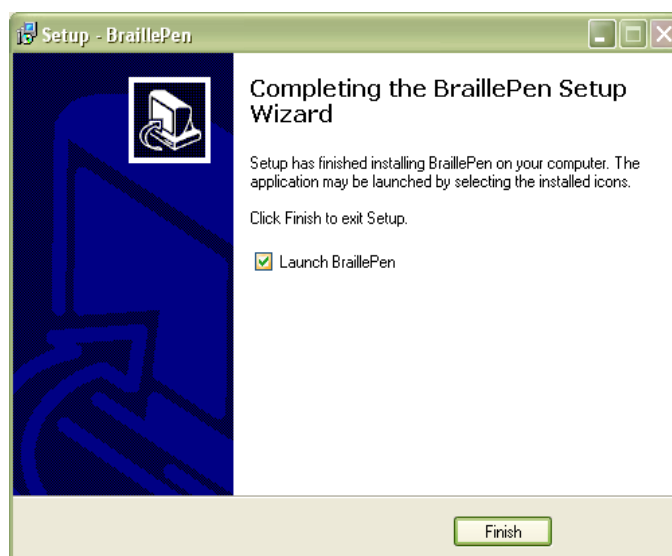
*Illustration 3: Step 2 in BraillePen Write install process.*

The third dialog offers you the chance to nominate the program's shortcut location in your Programs menu.



*Illustration 4: Step 3 in BraillePen Write install process.*

The fourth dialog asks if you would like a desktop icon or a quick launch icon or both; and the fifth dialog gives you the chance to review your choices and go back to change them.



*Illustration 5: Final step in BraillePen Write install process.*

The sixth step is the actual installation, where you can monitor the installation progress.

The final dialog of the installation asks whether you want to launch the software when you click Finish to exit the installation process.

If you leave "Launch BraillePen Slim" checked, then once you click Finish, the software will run.

## Running BraillePen Write

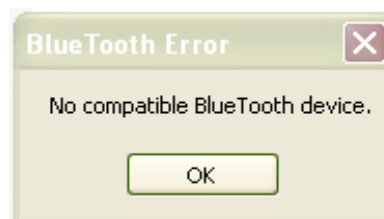
### *The Main Window*

When you launch BraillePen Write, the main window appears:



*Illustration 6: The main BraillePen Write window.*

If you don't have a Bluetooth adapter installed, instead of this window you will see the following error message:



*Illustration 7: No Bluetooth error dialog.*

If you see this message, you need to add a Bluetooth adapter to your computer. Consult your distributor about a suitable adapter.

The main window has three buttons: Connect, Search and Exit. If your BraillePen Slim is on and Bluetooth is active, the MAC address will appear in the window; if you have not yet turned on your BraillePen Slim, turn it on now, and once you hear the triple-beep, click Search.

When the address appears in the window, select it and click Connect.

Once connection is established between your BraillePen Slim and the computer, the Connect button changes to Disconnect.



Illustration 8: MAC address showing, ready to connect.

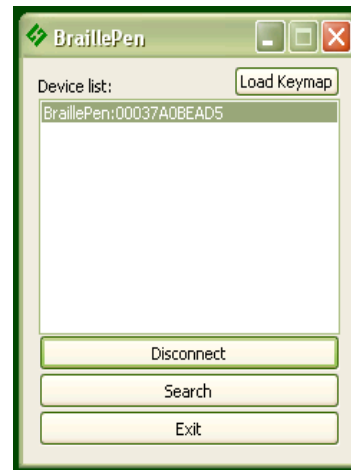


Illustration 9: BraillePen Slim12 connected, showing Disconnect button.

You can now minimise the window and use your BraillePen Slim as a Bluetooth keyboard in any Windows application.

If you want to load a different keymap, for instance for Braille entry into a translation program, click the Load Keymap button and browse to the new keymap file and click OK. The new keymap will load, and you are again ready to use the BraillePen Slim.

## Emulating a Windows Keyboard

BraillePen Write can emulate any kind of PC keyboard under Windows. It does this using a keyboard map or keymap. When you press a key combination, or keystroke, on the BraillePen, BraillePen Write uses the keymap to translate this keystroke into a Windows keystroke, and sends it to Windows.

BraillePen Write comes with a default keymap for your location; we have also made several other keymaps, or you can make your own. We will make new ones available as they are made. You might like to share yours with other users, too!

When you first use BraillePen Write, it loads the default keymap for your location. The table for this keymap can be found in Appendix B, Windows Keymaps.

There are some special keystrokes in BraillePen Write that we hope you will find helpful.

### The Combo keystroke

From version 1.2i, BraillePen Write allows you to combine a sequence of keystrokes from your currently-loaded keymap, so that Windows will see the sequence as a single keystroke. This can allow you to enter complex keystrokes such as Control-Alt-F12, or Tab-Delete-Backspace, or any other complex keystroke which might be required by your software.

Begin a keystroke sequence with the Combo keystroke, **shift + control + dots 3 6**. Then type the keystrokes you want to combine. Then type the Combo keystroke to complete the sequence. Your combined keystroke will then be activated.

For example, to type AltGr-4 for the Euro sign on a UK Standard Windows keyboard, use the following sequence of keystrokes on your BraillePen, with the UK keymap loaded:

```

shift + control + dots 3 6
shift + dot 6
dots 2 5 6
shift + control + dots 3 6

```



After the last keystroke, you will have a Euro sign.

You can use any standard keystrokes from the active keymap, between the two combo keystrokes, and they will be activated as a Windows key combination after the second combo keystroke has been entered.

### ***Using Complex keystrokes on the BraillePen:***

Your BraillePen allows you to add more keys to a single keystroke than you have fingers, and this can be very useful if you want to assign a complex keystroke to a special Windows keystroke.

If you press one or some of the Braille dots first, and hold down at least one Braille dot key, you can then lift your fingers from any of the other keys and press any or all of the other keys, Pan keys or Joystick actions. When you lift your fingers off the Braille keys, the keystroke will consist of every key you have pressed, even if you let it go.

This makes it possible for you to have a keystroke that uses more than one Joystick action, for instance.

If you begin your keystroke with a key that isn't a Braille dot, then BraillePen Write won't begin to add keys until you have pressed the first Braille dot key. You must also make sure that the last key you release is a Braille dot.

You can add these keystrokes to your keymap using BPConfig.

### ***Assigning more than one Windows keystroke to a BraillePen Write keystroke***

If you would like to have a single BraillePen keystroke take the place of a sequence of Windows keystrokes that you use all the time, you add it to your keymap in BPConfig.

Remember to use one of the unused keystrokes from the file **available-keystrokes.txt** on the BraillePen CD, and when you enter the Windows keystroke into BPConfig, make sure you press the Windows keys in the correct order.

### ***Special behaviour for Alt***

Each keymap contains two keystrokes representing the Alt key on the Windows keyboard.

The first, **shift + dot 3**, activates Alt for use with menus, and behaves as though Alt has been pressed and released; the next keystroke is expected to be a letter from a menu item, an arrow key or Enter.

The second, **shift + dot2**, activates Alt for use with a second key, and behaves as though Alt has been pressed and held down. Use this for such combinations as Alt-F4 to close a program.

On UK and European keyboards using the AltGr key in place of the Right Alt key, there are two similar keystrokes; **shift +dot 6** activates the AltGr key, and behaves as if AltGr has been pressed and released; use this keystroke with the Combo keystroke. **shift + dot 5** activates AltGr for use with a second keystroke, and behaves as if AltGr has been pressed and held down. Use this for combinations like AltGr-e for é.

## **Configuring a New Keymap - BPConfig**

It is possible to add new keyboard maps to BraillePen Write, or edit existing maps so that they suit your needs. To make sure you are adding keystrokes, and not using ones you already have assigned, we have included a file containing a list of the unused keystrokes on your BraillePen CD called **available-keystrokes.txt**.

The keyboard map, or keymap, is a file stored in the BraillePen Slim folder. It will always have the extension .kmf; for instance the United Kingdom keymap is called UK.kmf. This file contains information about BraillePen Write keystrokes on the BraillePen Slim and their corresponding keystroke combinations on the keyboard.

When you build a new map file, or edit an existing one, you can save the map to a file so that you can choose it any time you use BraillePen Slim; you can save it either to the BraillePen Slim program folder or to another folder.

The program is called BPConfig. It can be found on the Programs menu under BraillePen.

You cannot run both BraillePen Write and BPConfig together. If you should try, you will see an error dialog telling you that another instance of either BraillePen Slim or BPConfig is running.

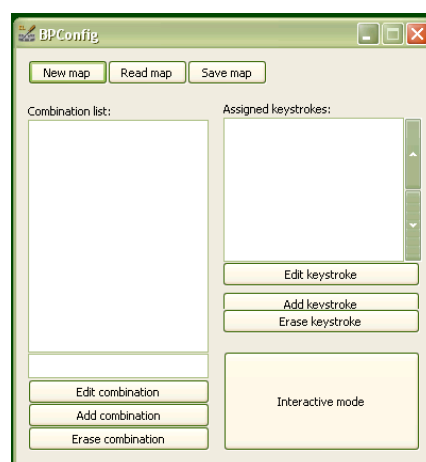
### ***The Main BPConfig Window***

When you run BPConfig, the main window opens with a number of choices.

There are three buttons across the top of the window, giving you the choice of starting a new keymap, reading in an existing keymap from a file, or saving a keymap you have been editing.

Below these buttons are two display spaces; on the left is the Space which displays the existing key mappings for a file you have loaded, and on the right is the Space where the keymap you are editing is displayed.

Below each of the display spaces there are three buttons, each of which acts on the Space above it. The buttons for the left Space are Edit combination, Add combination and Erase combination; for the right Space, Edit keystroke, Add keystroke and Erase keystroke. In either case, before you can edit or erase, you must select the relevant combination inside the Space.



*Illustration 10: BPConfig main window.*

If you begin a new keymap, nothing appears in either of these Spaces; if you load a keymap, the contents of that keymap are loaded in the left display space, and then any combination you select in the left Space is displayed in the right display space.

When you are editing, either in Interactive Mode or in the editing window, if you enter a new key combination for an existing keymap, the previous keymap is overwritten with the new one. To make sure you are using a keystroke that isn't already in use, we have included a file of available keystrokes on the BraillePen CD called **available-keystrokes.txt**.

The last button on the main window is Interactive mode. This allows you to build a new keymap, or edit an existing keymap, by using the BraillePen Slim keyboard and the PC keyboard to type the BraillePen Slim keystrokes and their corresponding PC keyboard keystrokes.

Before you can use the Interactive mode, you have to either choose to start a new keymap or load an existing keymap; if you don't remember to do that, you will see an error message reminding you (see Illustration 11).

Once you have loaded a keymap or chosen to begin a new keymap, the Interactive window will appear, and BPCConfig will begin searching for your BraillePen Slim - make sure it is turned on and Bluetooth is active.

First there is a flashing Bluetooth icon in the centre of the left panel (see Illustration 12), and then when BPCConfig has discovered your BraillePen Slim, it will put the MAC address in the left-hand side of the window, and you can then click Connect.

On the right side of the window is a display space to list the key mappings as you build them up. Under that display space is a pair of buttons: Add keystroke and Erase keystroke.

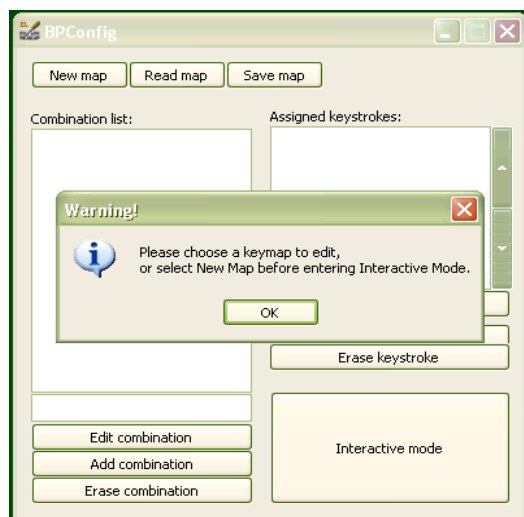


Illustration 11: BPCConfig Interactive Mode Error - no keymap loaded

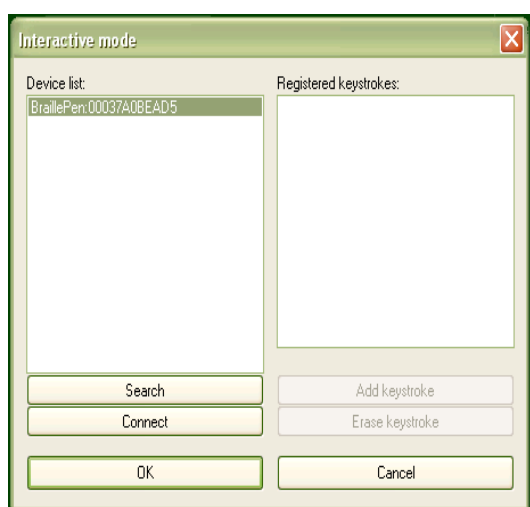


Illustration 12: BPCConfig ready to connect.

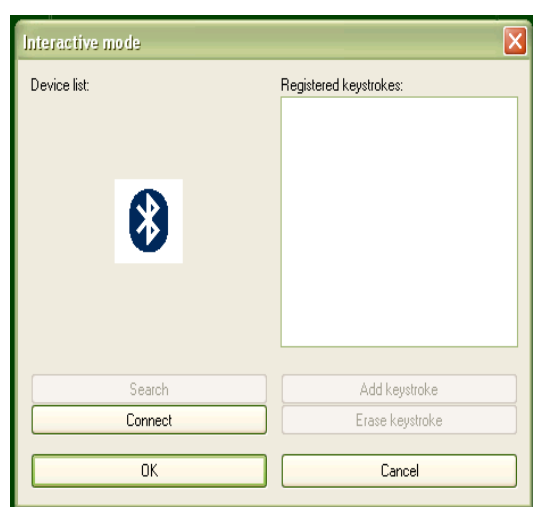


Illustration 13: BPCConfig Bluetooth search screen.

When you click Add keystroke, a new window appears inviting you first to press the keystroke on one or other of the keyboards - it doesn't matter whether you begin with the BraillePen Slim or the PC keyboard.

When you have pressed that keystroke, the message then invites you to press the corresponding keystroke on the other keyboard. When you have done that, the new window disappears, and your new combination is displayed in the right-hand display space.

If you should enter a combination in error, you can use the Erase keystroke button to delete that keymap from the list, and then use Add keystroke to do it afresh.

The two buttons at the bottom of the Interactive Mode window are OK and Cancel. Cancel takes you back to the main BPCConfig window, without making any changes to the keymap you have loaded; OK takes you back to the main window and writes your changes into the file you have loaded - you can check the display space for your changes and additions, which will appear at the bottom of the list.

Remember to save the keymap file from the main window to write it to the disk as a file; use the Save keymap button in the main window to do this.

# BraillePen Slim and 6-key entry into Braille files

BraillePen Slim with the Windows Keyboard software can be used for 6-key entry into Braille files from Duxbury Braille Translator or other translators. Note that 6-key or direct Braille entry is only available after the file has been translated. Before translation, your BraillePen Slim will enter text into the editor part of your translation software in the same way as your standard keyboard.

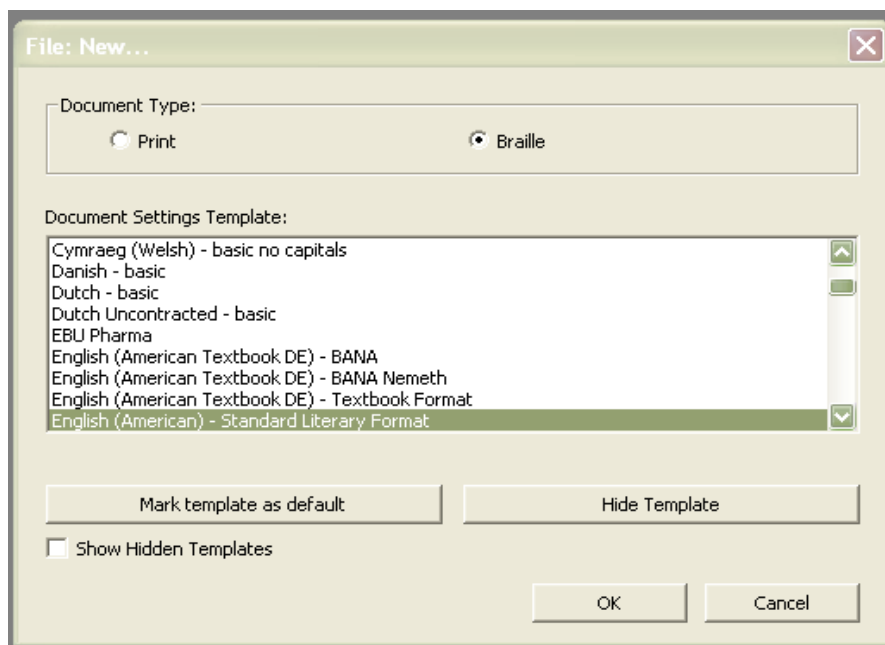
## The US-ASCII Keymap

This keymap has been specially developed to allow 6-key entry into Braille files, so that the Braille character entered corresponds exactly to the Braille which will be embossed. This keymap is supplied with every BraillePen Slim. Generally the US ASCII keymap will be correct; ask your dealer to supply you with the correct keyboard map for 6-key entry into your chosen Braille translation software if you find that US-ASCII doesn't work for you.

## Duxbury Braille Translator

To install BraillePen Write, see the previous section. Once you have the driver installed, select and load the US-ASCII keymap file. This keymap file gives you keyboard emulation functionality while making sure that the Braille dots you press are echoed exactly on the screen. Consult the Keymap Appendix for information about the available keystrokes.

For Braille entry directly into a Duxbury Braille file, you can either open a new Braille file or open an existing Braille file. For illustration purposes, we have opened a new file, using File, Open from the menu. Duxbury displays the following dialog:



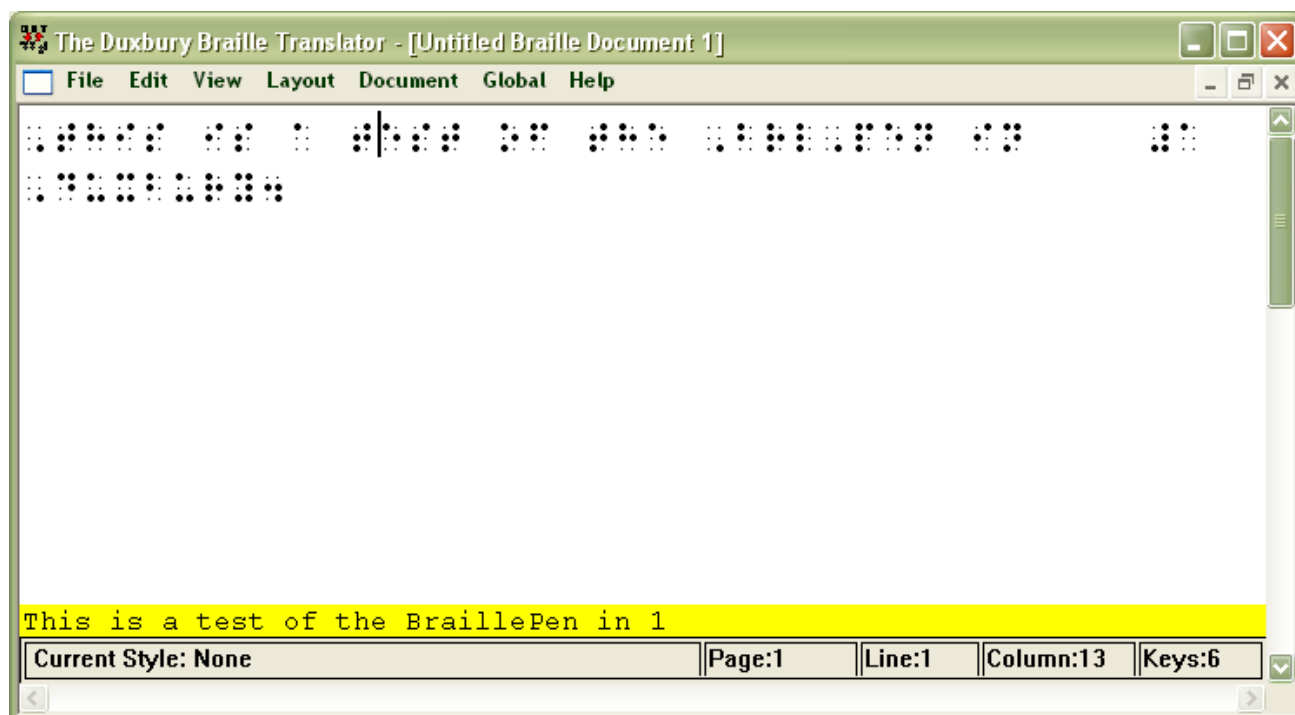
*Illustration 14: Duxbury Braille Translator's opening dialog*

Make sure that you click the radio button next to Braille in Document Type. The template you select is not so important, as you will not be translating this file; it will be sent directly to the embosser.

Once the file is open, you can type Braille directly into the editing window.

Use the other available keystrokes in the keymap to access all the Duxbury menus and commands. Remember you have two Alt keystrokes for different purposes.

Load a standard keymap if you wish to edit a text file in Duxbury.



*Illustration 15: Duxbury Braille Translator showing Braille typed from the BraillePen Slim12*

# Appendix A: Care and Resources

## Making the Bluetooth Connection

BraillePen Slim supports Bluetooth connections with four main types of Bluetooth adapters or dongles. These may be built in to a device, or they may be a USB-based add-on for a PC or netbook.

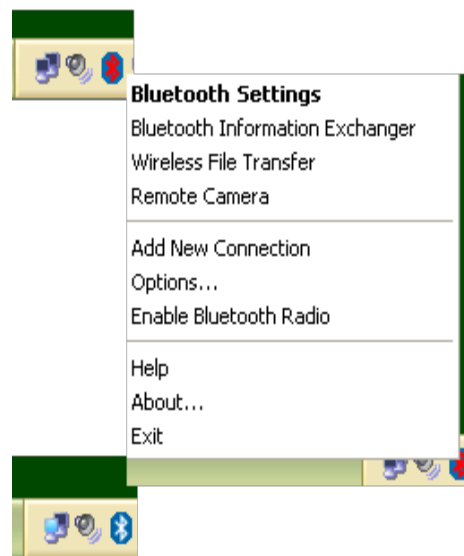
The four supported types are:

- Microsoft drivers, described in the first section of this User Guide;
- Toshiba;
- Broadcomm/WIDCOMM; and
- Blue Soleil.

With each of these types of adapter, BraillePen Write will connect in the same way. However, if you wish to pair your BraillePen Slim with a PC for other uses, the following sets of instructions may be helpful:

## Pairing your BraillePen Slim with the Toshiba Bluetooth Adapter

Once the Toshiba Bluetooth software has been installed on your PC or netbook, make sure that Bluetooth is enabled on your netbook.



*Illustration 16: Bluetooth icons and the right-click menu.*

If the icon in the system tray shows red on blue, Bluetooth has been turned off. You can right-click on the Bluetooth icon in the system tray to check whether Bluetooth has been disabled; there will be a menu item “Enable Bluetooth Radio” if Bluetooth is off.

Once Bluetooth is enabled, the icon will return to white-on-blue, and the “Enable” item on the right-click menu will change to “Disable”.

To add a device, first find Bluetooth in your Programs menu. Select Bluetooth Settings from the sub-menu, and a window will pop up. To pair with the BraillePen Slim, click on New Connection.



Illustration 17: Toshiba Bluetooth Add New Device window

The dialog that follows gives two choices: Express Mode, which is the recommended mode, and Custom Mode. Express Mode is usually trouble-free, so unless you have some special requirements we would suggest that you use it.

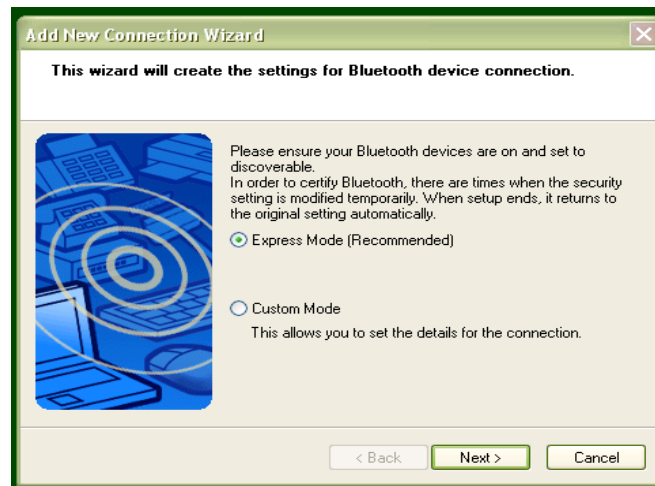


Illustration 18: Toshiba Bluetooth Wizard, Step 1

Make sure that BraillePen Slim is on and the three-beep activation sound has happened; then click Next.

A new dialog opens to tell you that the Bluetooth application is searching for devices.

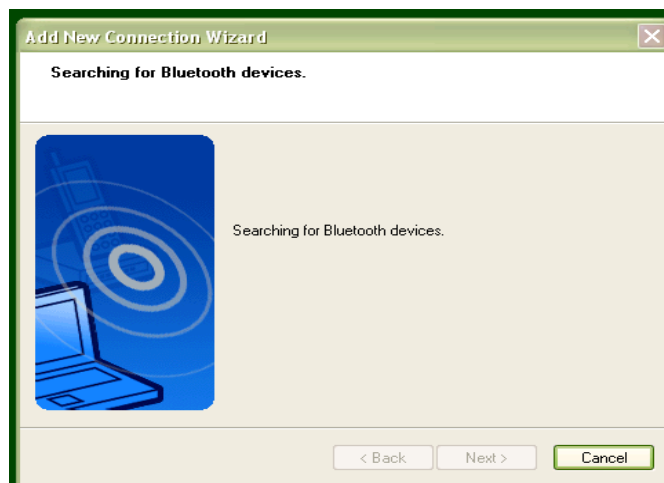
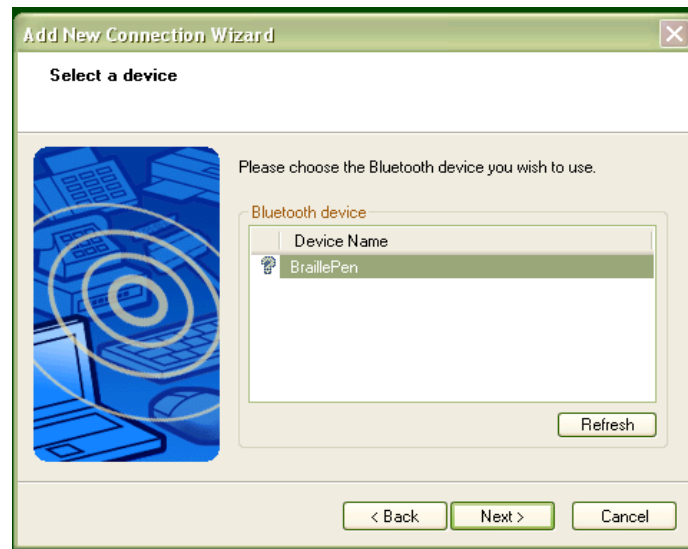


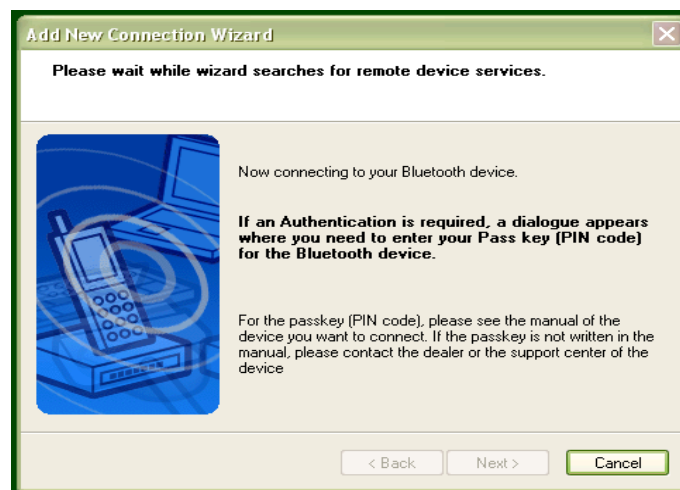
Illustration 19: Toshiba Bluetooth Device Search

Next you will see the dialog with the BraillePen Slim listed. Select it and click Next.



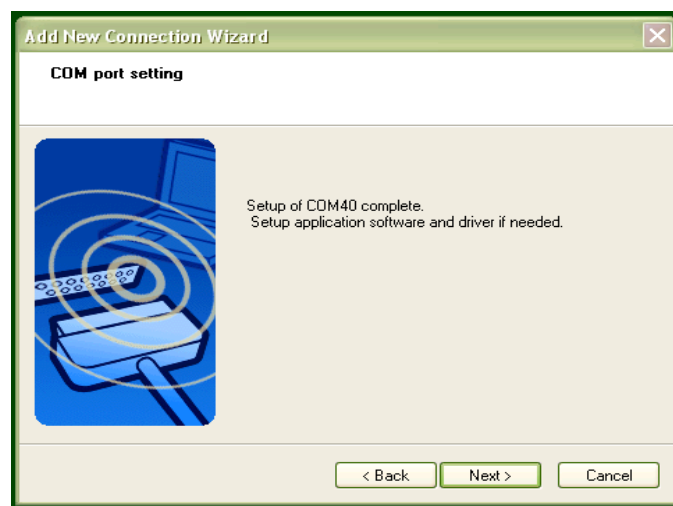
*Illustration 20: BraillePen Slim12 showing in Device List*

Then the software will check for the services available to the BraillePen Slim, and let you know that you might need to authenticate; this is not required with the BraillePen Slim.



*Illustration 21: Connecting to BraillePen Slim12*

The final dialog in the process is a confirmation that the pairing is complete; the COM port assigned is given here. Click Next to continue.



*Illustration 22: Setup Complete, and COM port notification*

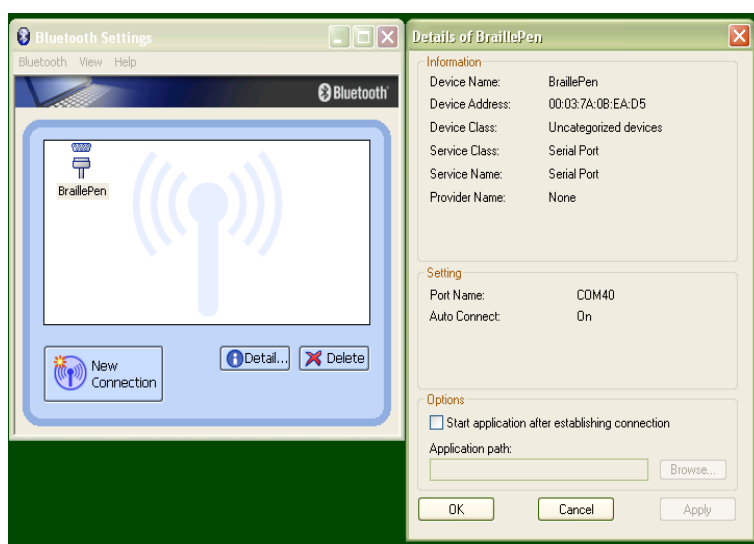


After the pairing is complete, the software returns to the Bluetooth Settings window from the beginning; your BraillePen Slim is now shown in the window.



*Illustration 23: Bluetooth Settings Window showing BraillePen Slim12*

You now have access to two extra buttons, Detail and Delete. Delete allows you to un-pair from your BraillePen Slim; Detail gives you all the information about the Bluetooth connection with your BraillePen Slim, including the COM port number assigned to it, which you might



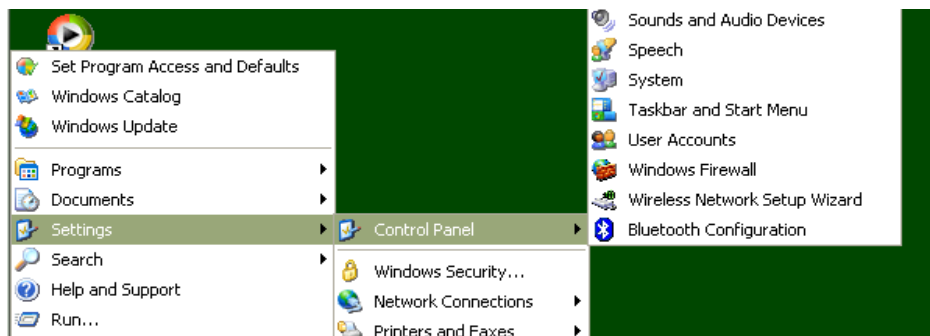
*Illustration 24: The details shown when the Details button is clicked.*

need to know for your access software.

## **Pairing with the Broadcom WIDCOMM® Bluetooth Adaptor**

To run the pairing software, go first to the Control Panel and click Bluetooth Configuration.

Again, make sure that Bluetooth is enabled; right-click on the Bluetooth icon in the system tray, and if it isn't enabled, click to enable.



*Illustration 25: Windows XP Menu showing Bluetooth Configuration*

Clicking on Bluetooth Configuration will start a Wizard. Make sure your BraillePen Slim is on, and you have heard the triple-beep. Then click Next.



*Illustration 26: The first screen of the WIDCOMM setup.*

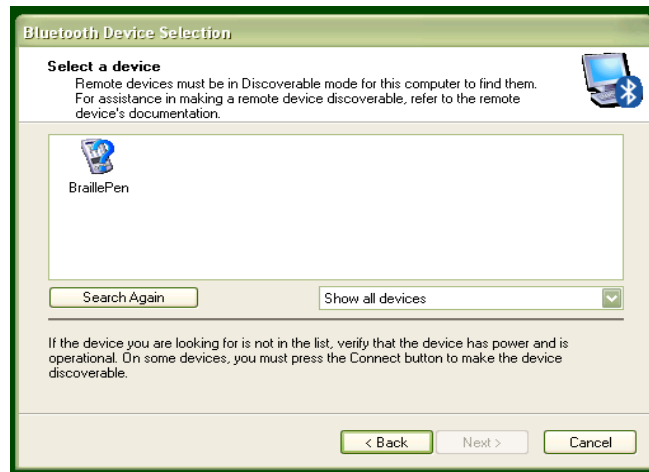
The next dialog will show any Bluetooth devices within range. The default setting is “show all devices”; it is safest to leave this at this setting, to make sure that the software can discover the BraillePen Slim.



*Illustration 27: WIDCOMM Setup searching for devices*

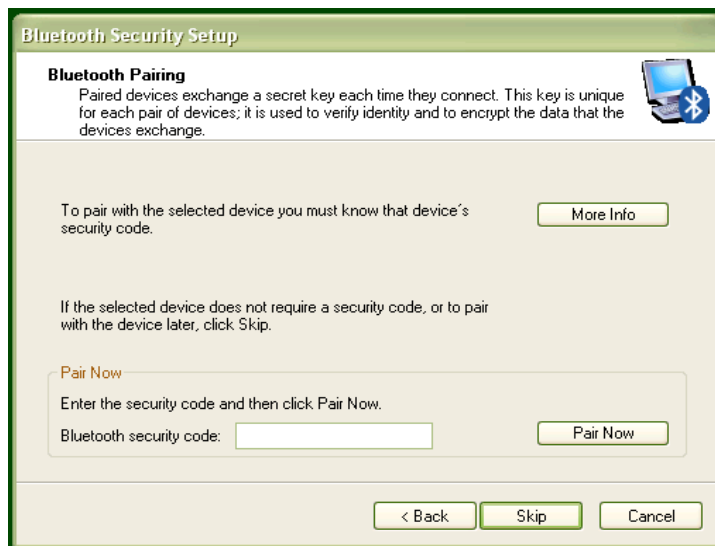
Once the BraillePen Slim has been discovered, the search will stop, and you will see the BraillePen Slim in the window.

Select it and click Next.



*Illustration 28: BraillePen Slim12 showing in the WIDCOMM Devices window*

The following dialog appears to be asking for a passcode or security code. However, if you don't want to set one up for your BraillePen Slim, click Skip, and the software will try to pair with the device without using a code. If the pairing fails at this step, the following notes could be of help.



*Illustration 29: Widcomm window asking for Passcode*

### ***Special note for potential problems with the Broadcom WIDCOMM drivers:***

Occasionally these drivers can cause communication problems between your device and the BraillePen Slim, because their inbuilt security prevents the connection from operating properly. To correct this, there are two steps to take.

When you are configuring the driver, the software is set by default to ask for a security PIN. You need to turn this feature off. In Bluetooth Places on your computer, click on the Window menu "Bluetooth Interface" and select the function "Advanced Configuration". After the window appears, choose "Local Services" and double-click on the item "Bluetooth Serial Port". Turn off the "Connect Safely" setting.

Then, in the same window, on the tab "Client applications", select "Bluetooth Serial Port Interface" and disable the "Secure connection". After you have completed the configuration your connection between the device and BraillePen Slim will operate correctly.

After the pairing takes place, the service discovery is done, and you are asked to select a service and, optionally, configure it.

If you don't select and place a check next to a service in this step, no services will be activated – so although BraillePen Slim and your PC or netbook will be paired, you won't be able to do anything with the connection.

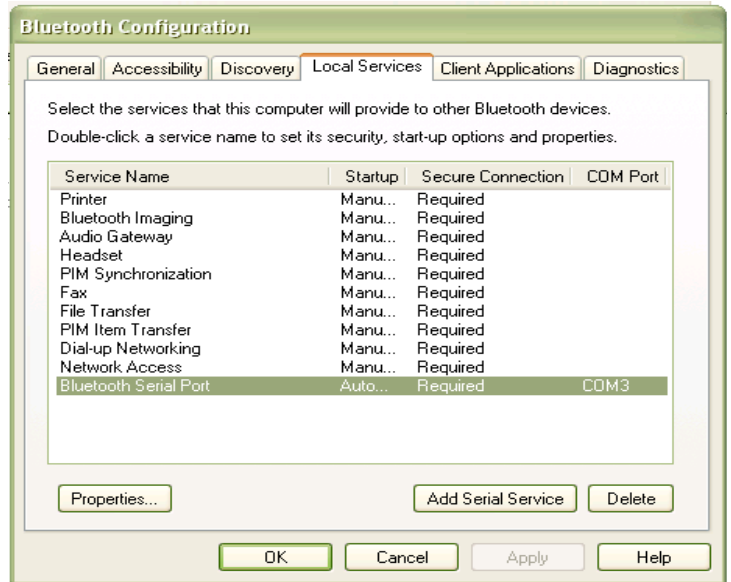


Illustration 30: Turning off WIDCOMM security stage 1

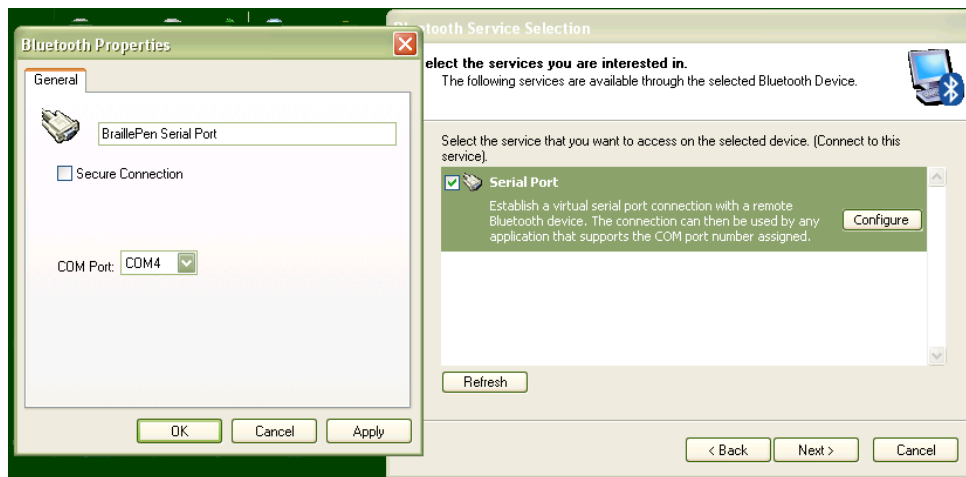


Illustration 31: Turning off WIDCOMM Security - stage 2

For the BraillePen Slim, the only service available is Serial Port; select it and make sure the checkbox is checked, and then click Next.

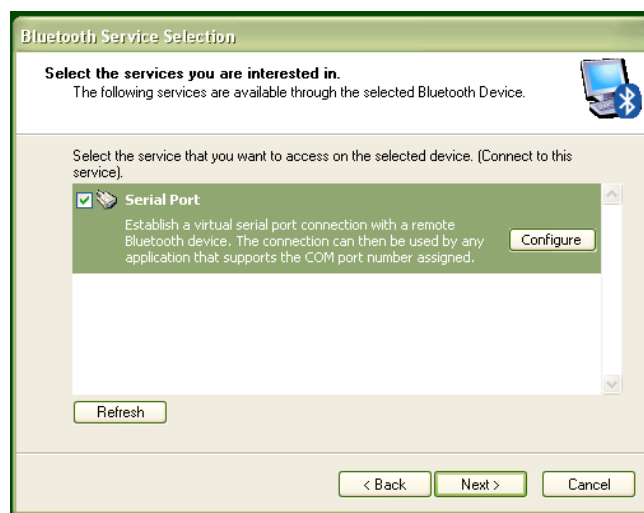


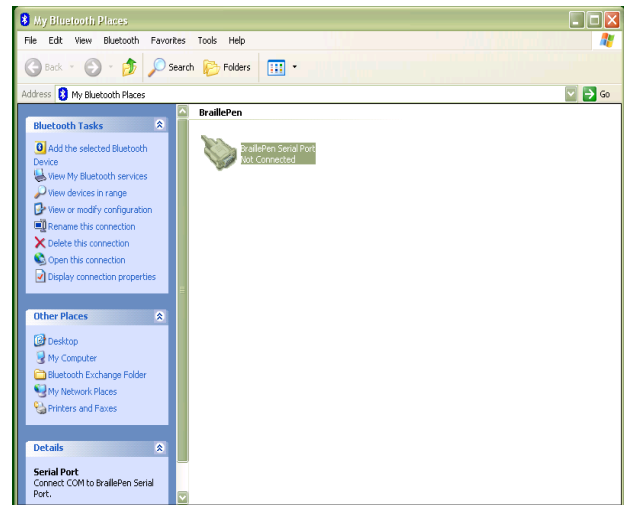
Illustration 32: WIDCOMM Service Discovery

A shortcut will be placed on the desktop, and then the final screen of the Wizard appears. Click Finish.

There is still one last step; the pairing is done, but you have still to connect. Go to the desktop and double-click on My Bluetooth Places, which the Wizard has just put there. You will find your BraillePen Slim Serial Port service in the window that opens.



*Illustration 33: Final screen of WIDCOMM setup*



*Illustration 34: My Bluetooth Places window showing BraillePen Slim12, ready to connect*

Make sure that your BraillePen Slim is on and Bluetooth is active; then right-click on the BraillePen Slim Serial Port icon and click Connect. Connections made after this should be automatic.

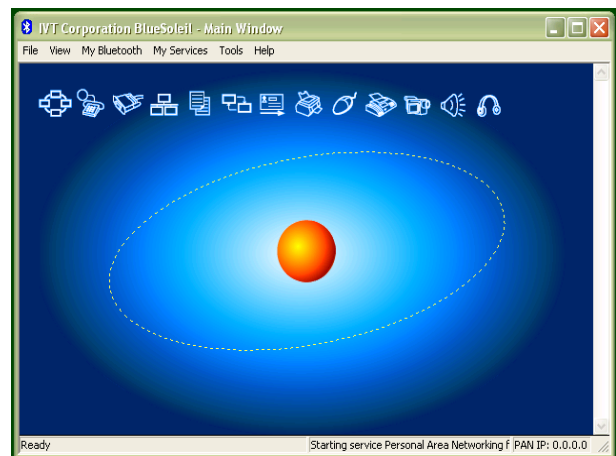
## Pairing with the BlueSoleil drivers

Although the BlueSoleil USB Bluetooth adapter comes with software for pairing, it is quite inaccessible. For pairing with these drivers between your PC and BraillePen Slim, we would advise that you seek sighted assistance.

BlueSoleil's software installs under Programs in the Start Menu. Once the software is running, a dialog comes up with a graphical representation of an orange ball which is to be clicked. However, there is also a menu item under My Bluetooth to discover Bluetooth services.

Unfortunately, once the device is discovered, there is no accessible way to tell the software to make the connection; it requires the user to click on the discovered device in the graphical interface. Once this is done, re-connection should be automatic.

Although BraillePen Slim will work seamlessly with these drivers using BraillePen Write, we can't recommend them for more general use.



*Illustration 35: Graphical connection screen of BlueSoleil software*

## To reset the BraillePen Slim

You know your BP needs a reset when you get no sound, or a sound takes a very long time after switch-on; or if the response is sluggish.

Performing a reset will not harm your BraillePen Slim, so do it whenever you think the BraillePen Slim is slowing down.

First turn BraillePen Slim off. Then, on the base of the BraillePen Slim, right in the centre, find the small hole.

Use a fine ball-point pen, or a paper clip, to gently press the button inside this hole. Now turn BraillePen Slim on again; you should now have returned to the normal speedy response.

## Updating BraillePen Write

From time to time there will be updated versions of this software. Each update is a full installation of the software, and requires you to uninstall the version you currently have installed.

Always uninstall BraillePen Write from the Control Panel. In Windows XP, choose Add and Remove Programs; in Vista choose Programs and Features, and in Windows 7 choose Programs and Features.
















As well as uninstalling BraillePen Write, you must also uninstall a file which will usually be first on the list, called `__mfc_vcr`. Once you have uninstalled BraillePen Write and `__mfc_vcr`, you will be able to install the updated software; if you have not uninstalled both files, you will receive an error message.

## Braille ASCII or computer Braille

This table gives the correspondence between ASCII characters and Braille characters, used to send translated Braille to an embosser. You may need to use it to type Braille into some devices, where the BraillePen Slim12 driver or the device's internal software has no Braille translation built in.

ASCII Glyph	Braille Dots	Braille character
space		
!	2-3-4-6	
"	5	
#	3-4-5-6	
\$	1-2-4-6	
%	1-4-6	
&	1-2-3-4-6	
'	3	
(	1-2-3-5-6	
)	2-3-4-5-6	
*	1-6	
+	3-4-6	
,	6	

ASCII Glyph	Braille Dots	Braille character
-	3-6	⠤
.	4-6	⠠
/	3-4	⠢
0	3-5-6	⠨
1	2	⠩
2	2-3	⠪
3	2-5	⠫
4	2-5-6	⠬
5	2-6	⠭
6	2-3-5	⠮
7	2-3-5-6	⠯
8	2-3-6	⠰
9	3-5	⠱
:	1-5-6	⠶
;	5-6	⠷
<	1-2-6	⠸
=	1-2-3-4-5-6	⠼
>	3-4-5	⠹
?	1-4-5-6	⠿
@	4	⠺
A	1	⠁
B	1-2	⠃
C	1-4	⠉
D	1-4-5	⠑
E	1-5	⠣
F	1-2-4	⠆
G	1-2-4-5	⠎
H	1-2-5	⠇
I	2-4	⠨
J	2-4-5	⠊
K	1-3	⠅
L	1-2-3	⠫
M	1-3-4	⠍
N	1-3-4-5	⠎
O	1-3-5	⠏
P	1-2-3-4	⠕

ASCII Glyph	Braille Dots	Braille character
Q	1-2-3-4-5	
R	1-2-3-5	
S	2-3-4	
T	2-3-4-5	
U	1-3-6	
V	1-2-3-6	
W	2-4-5-6	
X	1-3-4-6	
Y	1-3-4-5-6	
Z	1-3-5-6	
[	2-4-6	
\	1-2-5-6	
]	1-2-4-5-6	
^	4-5	
_	4-5-6	



# Appendix B: Windows Keymaps

## Using the BraillePen Write Keymap

The tables below contain all the default keystroke assignments for BraillePen Write for the United Kingdom Standard keyboard in Windows. Unused combinations can be found in the file **available-keystrokes.txt**, on your BraillePen CD.

### *Using the Combo keystroke:*

From version 1.2i, BraillePen Write allows you to combine a sequence of keystrokes from your currently-loaded keymap, so that Windows will see the sequence as a single keystroke. This can allow you to enter complex keystrokes such as Control-Alt-F12, or Tab-Delete-Backspace, which can be required by the software you use.

Begin with the Combo keystroke, **shift + control + dots 3 6**. Type the keystrokes you want to combine. Then type the Combo keystroke to complete. Your combined keystroke will then be activated.

For example, to type AltGr, 4 for the Euro sign, use the following sequence of keystrokes on your BraillePen:

**shift + control + dots 3 6**

**shift + dot 6**

**dots 2 5 6**

**shift + control + dots 3 6**

After the last keystroke, you will have a Euro sign.

You can use any standard keystrokes from the tables below between the combo keystrokes, and they will be activated as a Windows key combination after the second combo keystroke has been entered.

### *Using Complex keystrokes on the BraillePen:*

Your BraillePen allows you to add more keys to a keystroke than you have fingers, and this can be very useful if you want to assign a complex keystroke to a special Windows keystroke.

If you press one or some of the Braille dots first, and hold down at least one Braille dot key, you can then lift your fingers from any of the other keys and press any or all of the other keys, Pan keys or Joystick actions. When you lift your fingers off the Braille keys, the keystroke will consist of every key you have pressed, even if you let it go.

This makes it possible for you to have a keystroke that uses more than one Joystick action, for instance.

You can add these keystrokes to your keymap using BPConfig, at any time.

### *Assigning more than one Windows keystroke to a BraillePen Write keystroke*

If you would like to have a single BraillePen keystroke take the place of a sequence of Windows keystrokes that you use all the time, you add it to your keymap in BPConfig.

Remember to use one of the unused keystrokes from the table at the end of this section, and when you enter the Windows keystroke into BPConfig, make sure you press the Windows keys in the correct order.

## The UK standard keyboard (UK.kmf)

### Letters and numbers

BraillePen keys	Windows key
dot 1	a
dots 1 2	b
dots 1 4	c
dots 1 4 5	d
dots 1 5	e
dots 1 2 4	f
dots 1 2 4 5	g
dots 1 2 5	h
dots 2 4	i
dots 2 4 5	j
dots 1 3	k
dots 1 2 3	l
dots 1 3 4	m
dots 1 3 4 5	n
dots 1 3 5	o
dots 1 2 3 4	p
dots 1 2 3 4 5	q
dots 1 2 3 5	r
dots 2 3 4	s
dots 2 3 4 5	t
dots 1 3 6	u
dots 1 2 3 6	v
dots 2 4 5 6	w
dots 1 3 4 6	x
dots 1 3 4 5 6	y
dots 1 3 5 6	z
shift + dot 1	A
shift + dots 1 2	B
shift + dots 1 4	C
shift + dots 1 4 5	D
shift + dots 1 5	E
shift + dots 1 2 4	F
shift + dots 1 2 4 5	G
shift + dots 1 2 5	H
shift + dots 2 4	I
shift + dots 2 4 5	J
shift + dots 1 3	K
shift + dots 1 2 3	L
shift + dots 1 3 4	M
shift + dots 1 3 4 5	N
shift + dots 1 3 5	O
shift + dots 1 2 3 4	P
shift + dots 1 2 3 4 5	Q
shift + dots 1 2 3 5	R
shift + dots 2 3 4	S
shift + dots 2 3 4 5	T
shift + dots 1 3 6	U

shift + dots 1 2 3 6	V
shift + dots 2 4 5 6	W
shift + dots 1 3 4 6	X
shift + dots 1 3 4 5 6	Y
shift + dots 1 3 5 6	Z
space	space
dots 3 5 6	0
dot 2	1
dots 2 3	2
dots 2 5	3
dots 2 5 6	4
dots 2 6	5
dots 2 3 5	6
dots 2 3 5 6	7
dots 2 3 6	8
dots 3 5	9

### ***Punctuation and special characters***

BraillePen keys	Windows key
dot 6	,
dots 4 6	.
dots 5 6	;
dots 1 5 6	:
dots 3 6	-
dot 3	'
dot 5	"
dots 1 4 5 6	?
dots 2 3 4 6	!
dots 1 4 6	%
dots 1 2 3 5 6	(
dots 2 3 4 5 6	)
dot 4	@
dots 3 4	/
dots 4 5 6	_
dots 2 4 6	[
dots 1 2 4 5 6	]
dots 4 5	^
dots 1 6	*
dots 1 2 3 4 6	&
dots 1 2 5 6	\
dots 3 4 5 6	#
dots 3 4 6	+
dots 1 2 6	<
dots 1 2 3 4 5 6	=
dots 3 4 5	>
dots 1 2 4 6	£
control dots 1 2 4 6	\$
shift control dots 1 2 4 5	
control dots 1 2 4 5	`
control dots 1 4 6	~
shift control dots 1 4 6	ebcdic symbol ¬

## Modifier and control keys

BraillePen keys	Windows key
control dot 1 <i>or</i> joystick left <i>or</i> left pan	left arrow
control dot 4 <i>or</i> joystick right <i>or</i> left pan	right arrow
control dot 5 <i>or</i> joystick down	down arrow
control dot 2 <i>or</i> joystick up	up arrow
control dots 1 2 3	pgup
control dots 4 5 6	pgdn
shift	shift
space	space
control	left control
control dots 1 2 3 5	right control
space dots 2 3 4 5	tab
shift space dots 2 3 4 5	shift + tab
space dots 1 2	backspace
space control <i>or</i> joystick enter	enter
control dots 2 4	ins
space dots 4 5	del
shift control dot 3 <i>or</i> space dots 1 2 3	home
shift control dot 6 <i>or</i> space dots 4 5 6	end
shift space	esc
shift dot 3	alt
shift dot 2	alt +
shift dot 6	alt gr
shift dot 5	altgr +
shift control dots 3 6	start or end combo keystroke
shift space dots 1 3 4	printscrn
shift space dots 1 2 3 4 5	pause
shift space dots 1 3 5	scroll lock
shift space dots 2 4 5 6	left windows key
space control dots 2 4 5 6	right windows key
control space dots 1 3 4	menu
control dots 1 4	capslock
control dots 1 3 4 5	numlock

## Function keys

BraillePen keys	Windows key
shift space dot 2	F1
shift space dots 2 3	F2
shift space dots 2 5	F3
shift space dots 2 5 6	F4
shift space dots 2 6	F5

shift space dots 2 3 5	F6
shift space dots 2 3 5 6	F7
shift space dots 2 3 6	F8
shift space dots 3 5	F9
shift space dots 3 5 6	F10
shift space control dot 2	F11
shift space control dots 2 3	F12

### ***Numeric keypad keys***

<b>BraillePen keys</b>	<b>Windows key</b>
control space dots 2 4 5	Numpad 0
control space dot 1	Numpad 1
control space dots 1 2	Numpad 2
control space dots 1 4	Numpad 3
control space dots 1 4 5	Numpad 4
control space dots 1 5	Numpad 5
control space dots 1 2 4	Numpad 6
control space dots 1 2 4 5	Numpad 7
control space dots 1 2 5	Numpad 8
control space dots 2 4	Numpad 9
control dots 5 6	Numpad +
control space dot 2	Numpad .
control dots 2 3	Numpad -
control space dots 3 5	Numpad *
control space dots 2 5 6	Numpad /
control dots 1 3 4 5	NumLock

### **Unused keystrokes in the UK keymap**

Please check the BraillePen CD for the file available-keystrokes.txt.