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Embossing without Braille2000

This topic contains information you may want to print and send to a person or agency that has received a braille file for embossing but who lacks the Braille2000 software. By following the instructions given here, perfect braille can be embossed without using Braille2000. (Raster-type embossers, such as newer Tiger embossers, may not work.)

Standard ASCII-braille data (background information)

There is a computer character code (ASCII) for all the characters on the keyboard. All 63 braille cells are mapped to upper-case letters plus digits plus the other symbols in a manner known as ASCII-braille (first used at MIT in the late 60's). Almost all traditional (non-image or non-raster) embossers used in the U.S. use this character code (many support multiple codes for world-wide usage but ASCII-braille is usually the default setting).

Braille is usually embossed on pages that are 11" tall and either 11" wide (40 cells wide) or 8½ " wide (30 cells wide) and a file of braille in ASCII-braille notation is a text file with 25 lines per braille pages and lines of characters (in ASCII-braille notation) of either up to 40 or up to 30 characters per line. When such data is written to the embosser, embossed cells are struck to paper.

This type of file (plain ASCII-braille data suitable for embossing) is often given the filename suffix **.BRF** and has been referred to (by Duxbury Systems) as a "braille ready file". The instructions below can be used to emboss such a file to a traditional embosser device. (Settings pertaining to page margins and whether you get one-sided or two-sided embossed output may be found in the operator manual for the embosser.)

Braille files created by Braille2000

The plain braille files (e.g., .BRF) has no automation (no production aids, such as automatic paragraph and page formatting, headings, or page numbering. For those features (which are standard for braille production software) more data are needed in the file. When using Braille2000, the resulting data file may have a suffix of **.ABT**, or **.B2K**, or **.BML**. There are techniques for handling those types as well as the .BRF type mentioned previously.

Strategies for Embossing

This paper is all about embossing these kinds of files when Braille2000 is not available. Solution 1 can be used when you have no braille production software at all. Solution 2 can be used when you have a properly licensed copy of Duxbury Braille Translator

(DBT) from Duxbury Systems, Inc.. In Solution 1 the file data is transmitted directly to the embosser via commands given through the standard "Command Prompt" tool. Solution 2 converts the file you want to emboss to the **.DXB** type that you can open and emboss with DBT. (In Solution 2 you need Braille2000 software but it can be of the free and unlicensed variety, obtainable from the Internet.)

Solution 1: Use this solution to emboss a .BRF, .ABT, or .B2K kind of braille file to a traditional embosser that is connected to your Windows computer.

You need the following items or information:

1. You need the braille file to be embossed, accessible to the computer and at a known location, e.g., on a flash drive or in some folder at a known path.
2. You need to know the port name that feeds data to your embosser. For a parallel cable it will normally be "LPT1:". For a serial cable (obsolete) it will be "COM1:" up to "COM4:". For a USB cable it will be "USB001" up to "USB009". (Note: when a colon is shown it is part of the port name and must be included.) If your embosser is shared on a network (i.e., is physically connected to a different PC), you need its assigned share name in the form \\computername\printersharename.
3. You need to understand the hard-drive directory hierarchy and how to specify file path expressions beginning with the proper drive letter.

The procedure to emboss is simple. You use the (old-fashioned DOS) command COPY to copy the data from your braille file to the proper port device. The details of doing this can be somewhat demanding.

Case 1: You have a braille file called BFILE.BRF on your USB flash drive (in the top-level folder) and your traditional embosser uses a parallel cable (not USB-to-parallel adapter) connected to the LPT1: parallel port.

Procedure

Right-click the Windows Start button** and select "Explore" or "Windows Explorer" or "File Explorer" and look at the list of drives (under "Computer"). Find the drive letter for your USB flash drive. For our discussion, let's say it is L. (** on Windows 10, drag the mouse to the extreme lower-left corner of the screen (until it disappears) and click the right-hand mouse button).

Start the Command Prompt tool (begin by clicking the Windows Start button; it is in the "Accessories" group** (** on Windows 10, drag the mouse to the extreme lower-left corner of the screen (until it disappears) and click the right-hand mouse button), click "run" and enter "cmd" and press Enter).

The last line displayed in the prompt for keyboard input. Enter the drive letter for your data file (L) followed by a colon (:) and press Enter.

Type the COPY command as follows: (turn on and prepare your embosser now)

```
COPY /A BFILE.BRF LPT1:
```

(We show uppercase for clarity, you can use upper or lower case as you wish.)

Case 2: You have a braille file and embosser as per Case 1, but the filename is BFILE.ABT (i.e., the file is a different type).

Procedure

The procedure is the same, except for the name of the file. You should type

```
COPY /A BFILE.ABT LPT1:
```

You can also use this procedure if you received a .B2K type of file.

Case 3: You have an .ABT type of braille file called BFILE.ABT that is located on your Windows desktop

Procedure

Start the Command Prompt tool (see above)

The last line displayed in the prompt for keyboard input. Enter the command

```
CD DESKTOP
```

Type the COPY command as follows: (turn on and prepare your embosser now)

```
COPY /A BFILE.ABT LPT1:
```

Case 4: You have a file as per Case 3 but your embosser uses the serial port COM3:.

Procedure

Follow the procedure for Case 3 but use the command

```
COPY /A BFILE.ABT COM3:
```

Case 5: You have a file as per Case 3 but your embosser uses a USB cable and you know the portname is USB002.

Procedure

USB portnames cannot be used in the COPY command. You have to set up an indirect path to the embosser via LPT2:.. This configuration requires several things.

a) You need to create a new printer icon. View the Windows Control Panel and go to "Devices and Printers" and click on "Add Printer". You need to create a "local printer" whose port is USB002, whose manufacturer is "Generic" and whose printer model is "Generic / Text Only". When this is done there will be a printer icon named "Generic / Text Only".

b) You need to view the Devices and Printers folder, right-click the new "Generic / Text Only" icon and select "Properties" or "Printer Properties". Click the "Sharing" tab and assign to it a simple share name, such as "GT".

c) You need to know the assigned name for your PC (its "computer name" as used for networking). If unknown you can find this in the "System" element of the Windows Control Panel. For this discussion, suppose your computer name is MYPC.

Start the Command Prompt tool (see above)

The last line displayed in the prompt for keyboard input. Enter the command

```
CD DESKTOP
```

Enter the command

```
NET USE LPT2 \\MYPC\GT /yes
```

Type the COPY command as follows: (turn on and prepare your embosser now)

```
COPY /A BFILE.ABT LPT2:
```

(Note: via "net use" you can equate a virtual parallel port (say LPT2:) with a printer icon (in this case a do-nothing driver called Generic / Text Only) that will pass the data to the designated port (namely USB002). This round-about is all because the COPY command does not understand USBxxx names.

Case 6: You have a file as per Case 3 but your embosser is attached to another PC on your network with a sharename.

Procedure

You have to know (a) the computer name where the embosser is attached and (b) the sharename that computer assigns to it. The rest is like Case 5.

Enter the command

```
NET USE LPT2 \\remotecomputername\assignedsharename /yes
```

Type the COPY command as follows: (turn on and prepare your embosser now)

```
COPY /A BFILE.ABT LPT2:
```

Solution 2: Use this solution to emboss a .BRF, .ABT, .B2K, .BML, .ACN, or .BRL kind of braille file by converting it to a .DXB type that is ultimately opened by DBT and embossed by DBT.

You need the following items or information:

1. You need a licensed copy of Duxbury Braille Translator (DBT) installed on your PC.
2. You need an unlicensed (i.e., free) copy of Braille2000 installed on your PC. This software can be obtained from www.braille2000.com. Install Version 2 for best results.
3. You need the braille file to be embossed, accessible to the computer and at a known location, e.g., on a flash drive or in some folder at a known path.
4. You need to understand the hard-drive directory hierarchy and how to specify file path expressions beginning with the proper drive letter.

Case 1: You have an .ABT type of braille file called BFILE.ABT that is located on your Windows desktop

Procedure

Start the Command Prompt tool (see above)

Enter the following command

```
SET PATH=%PATH%;C:\PROGRAM FILES\CASC\BRL2000B
```

(Note: you should use the directory path to where Braille2000 is installed. Version 2 normally goes to the path shown above. Version 1 normally goes to a path without the final B, i.e., to C:\PROGRAM FILES\CASC\BRL2000.

Enter the following command to select the desktop as the source folder:

```
CD DESKTOP
```

Enter the following command to convert the file:

```
BRL2000.EXE /COPY BFILE.ABT BFILE.DXB
```

The general form of the command is BRL2000.EXE /COPY inputfile outputfile where the suffixes on the inputfile name and the outputfile name determine the incoming file format and the outgoing file format. The new file (BFILE.DXB) will be created on the DESKTOP.

You then open BFILE.DXB using DBT and emboss it.

(Note: BRL2000.EXE is the same executable for the interactive Braille2000 application. When used this way from the Command Prompt window, it is not interactive and it merely copies the input file to the output file, with data format conversion (for any formats known to Braille2000)).