# Transcription of print music into Braille music

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## Introduction

This document offers advice and links to software and projects relating to the automated transcription of print music into Braille music. General information about Braille music is available on the RNIB website. Information covering access to score reading and score writing packages and accessibility of digital audio work stations, audio editing and sequencing tools are available on separate factsheets from [www.rnib.org.uk/music](http://www.rnib.org.uk/music). We also maintain a list of [braille music transcribers](http://www.rnib.org.uk/braille-and-moon-%E2%80%93-tactile-codes-braille-music/braille-music-transcribers) in the UK.

Whilst the sections below have been checked by the suppliers mentioned and we make every effort to ensure the contents are up-to-date, we recommend you visit the relevant websites and contact the suppliers for specific information about latest releases, compatibility and accessibility with your preferred access technology. Please contact us by email to mas@rnib.org.uk if you think we have missed something.

This document has been compiled to assist you in the production of your own braille music scores. It provides details of commercial and freeware tools to accomplish this. Whilst the tools vary in their capabilities, the basic requirements and process remain the same.

Automated braille music translation packages convert electronic music files produced in a music notation editor and exported as MusicXML into electronic braille. The resulting braille file may be read on a computer or embossed using a braille embosser. There is further information about MusicXML below.

There are three main ways to obtain print music files for this purpose:

a. Download the music from the internet if you can find the piece, arrangement and edition you require.

b. Scan the music from print hard copy into a music notation editor.

C. Have a sighted assistant produce an electronic print file for the purpose of producing a braille translation.

Music scanning and recognition software is increasingly accurate, however sighted assistance is necessary to edit the resulting electronic file to ensure it is consistent with the original before translating into braille.

## Issues to consider

Quality. The quality of the braille music file is largely dependent on the quality of the source print file, for which some sighted assistance is usually required.

* Speed of access. The development of automated braille music translation software has allowed faster and potentially more independent access to print and electronic music scores for blind musicians as an alternative to using the services of a braille music transcriber or taking dictation from a sighted musician.
* Cost. There is a distinction to be made between commercial Braille music translation packages and free online tools. The cost of software can in part be set against the cost of using a transcriber, reader or amanuensis.
* Required technical expertise. Although the process of converting electronic music scores into braille is straightforward, basic computer knowledge and competence is required to become a fluent user of the software packages. Many users find it is helpful to include some expert training to get started. The online tools require only the ability to use the internet competently. A Braille editor such as Duxbury Braille Translator is optional, but strongly recommended for including annotations, adapting the layout to suit personal taste, or altering the page set-up to suit different braille embossers.
* Flexibility. Electronic braille music files offer the blind musician the option of reading music scores via an electronic braille device such as a notetaker or braille display connected to a computer.

## Music XML – a short explanation

MusicXML is “the standard open format for exchanging digital sheet music”. “Just as MP3 files have become synonymous with sharing recorded music, MusicXML files have become the standard for sharing interactive sheet music. With MusicXML you can create music in one program and share your results – back and forth – with people using other programs. Today more than [200 applications](http://www.musicxml.com/software/) include MusicXML support.”

Taken from <http://www.musicxml.com/>

Accessed on 29 September 2016.

As well as offering a means of sharing electronic music files created in different music notation packages, MusicXML is a particularly significant tool for the conversion of stave notation into alternative accessible formats such as Braille music and Talking Scores. It is referenced frequently throughout this document.

## Automated braille music translation

## Goodfeel®

GoodFeel is a package of three programs:

* SharpEye music scanning and recognition software,
* Lime music editor with Lime Aloud scripts for JAWS and
* GoodFeel Braille Music Translator.

The software allows blind musicians to perform a range of tasks, including:

* scan, edit and translate hard copy print music into braille music;
* notate scores via a midi keyboard or the computer keyboard, and produce print and braille music independently;
* convert electronic music files from Sibelius, MuseScore or other notation package into braille by importing MusicXML files.

Blind users are able to review the scores using braille, musical and verbal cues.

Sighted musicians are able to create what Dancing Dots calls a talking braille score. They should know the basics of notating music in print but need not necessarily know anything about braille or assistive technology in order to create accessible scores. They need not have JAWS or LimeAloud, and the Lime notation editor itself is available to download for free.

Compatibility

GoodFeel 3.2 is only compatible with the JAWS screen reader. GoodFeel 3.2 runs only under Windows. Use of a refreshable Braille display is strongly recommended to access the Braille scores.

Resources

GoodFeel includes a comprehensive tutorial. There is an email discussion group for users of the software. The Dancing Dots website includes a comprehensive FAQ section, tutorials and searchable archive of the email discussion forum. The purchase price includes an optional 30-minute orientation session.

Purchasing and evaluation

You can [download a timed evaluation version of GoodFeel](file:///G%3A%5CMusicAdvServ%5CMAS%20website%20content%5CMAS%20website%20downloads%5CEducation%5C%E2%80%A2%09http%3A%5Cwww.dancingdots.com%5Cmain%5Cdemodl.htm) from Dancing Dots.

Goodfeel is available in the UK from [Techno-Vision Systems](http://www.techno-vision.co.uk/) Ltd.

## Braille Music Editor

Braille Music Editor (BME) allows Braille music readers to use a computer keyboard to create scores in Braille music and export these as MusicXML. Scores written in Braille music can thus be imported into many music notation packages and read by sighted musicians. Conversely, scores can be imported from MusicXML allowing files produced in music notation packages to be accessed in Braille music by blind musicians.

Compatibility

BME is only officially compatible with the JAWS screen reader. However, a plugin for use with NVDA is available from the [website of Gianluca Casalino](http://www.nvda.it/braille-music-editor-2)  (In Italian).

Resources

BME includes brief help documentation. There are videos and tutorials (not all in English) available via the [Music4VIP website](http://www.music4vip.org/) which cover different features of BME.

There is currently no email list for users.

Purchasing and evaluation

A two-month free evaluation is possible before registration.

BME is distributed by [Veia Progetti](http://www.veia.it/en/bme2_product) in Verona.

## Freedots

Freedots, developed by Mario Lang, is a project to develop a free tool to convert MusicXML into braille music. The project is currently not being developed, however it is still possible to use the Freedots tool. Visit the [MusicXML to Braille music converter](http://www.techno-vision.co.uk/), upload a MusicXML file and select the options to convert it into a Braille music file that can be downloaded. Freedots only supports single-line format.

## BrailleMUSE (Braille Music Support Environment)

The [BrailleMUSE project](http://www.techno-vision.co.uk/) is led by Professor Dr. Toshiyuki Gotoh of Yokohama National University in Japan. A free trial of the server is permitted under conditions set out on the website. The server converts MusicXML to Braille music and allows the Braille score to be configured according to the user's preferences.

## Funding

Financial assistance for the purchase of music technology and training and transcription of music may be available. Visit our [Music Awards and Funding page](http://www.rnib.org.uk/information-everyday-living-home-and-leisure-music/music-awards-and-funding) for further details.

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