



Texas School for the Blind and Visually Impaired Outreach Programs

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Braille Music: an Overview May 22, 2014

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TSBVI Visually Impaired Outreach Programs

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Developed for Texas School for the Blind and Visually Impaired
Outreach Programs

Why Braille Music

- What is Unique to Braille Music
- What is Lost with Audio Recording
- Basic Braille Music Samples
- Braille Music Production (Teacher)
- Braille Music Production (Student)

Why Braille Music

- Literacy
- [Watch the new Braille Music video](#) from NFB.org

With Braille Music you Can:

- continually go back and practice particular measures and entire scores
- refer to specific musical attributes in the braille music
- interpret the musical notation not the sound of someone else interpreting that notation

What Audio Lacks

- exact rhythms, articulations, etc. as the composer wrote it
- notes and note values
- rests
- dynamics
- fingerings
- words (rehearsal marks)
- pedal markings
- lyrics and their positioning in the music

Representation of Braille Music

- Linear
- Information is presented before the note
 - Key Signatures
 - Tempo
 - Octaves
 - Sharps and Flats
 - Other (Forte, Stacatto)

Solfège

The first system of functional names for the musical notes was the beginning syllables of the first six musical lines of the Latin hymn *Ut queant laxis*.

- The original sequence was Ut Re Mi Fa Sol La
- Today we know them as: Do Re Mi Fa Sol La Ti Do

TETN # 20444 Braille Music: an Overview

[illegible]

Note Names

Note names are shown in the upper four dots of the cell. Do not let yourself think of the literary equivalents of these note names. Louis Braille did not call notes by letter names. He called them ut, re, mi, fa, sol, la, si , and it wasn't important to him that the same signs , in another context, stood for letters of the alphabet.

C d

D e

E f

F g

G h

A i

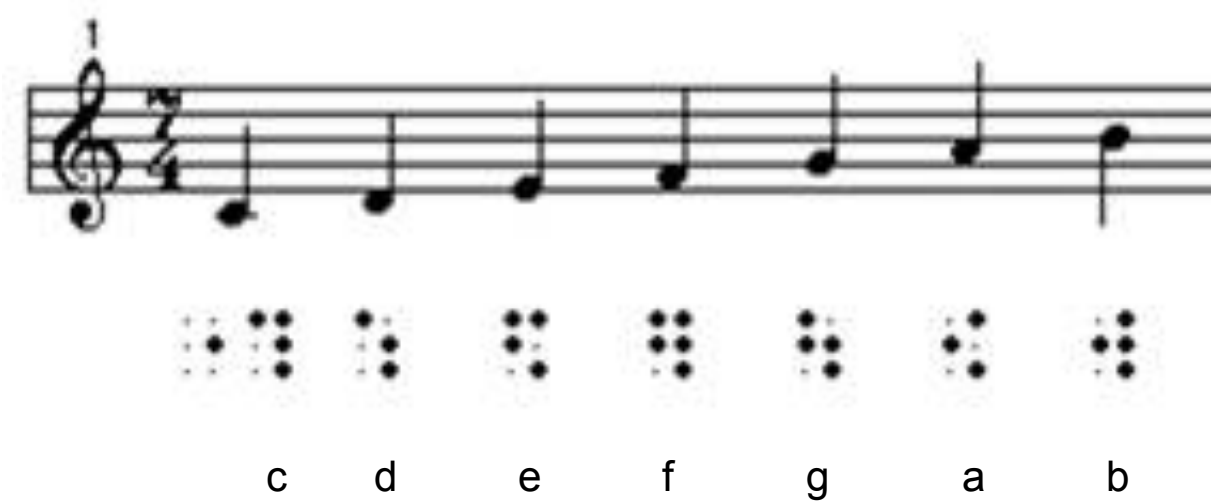
B j

Note Time Values

		Pitches						
		DO	RE	MI	FA	SOL	LA	TI
RHYTHMS	WHOLE	⠠⠠⠠⠠⠠⠠	⠠⠠⠠⠠⠠	⠠⠠⠠⠠⠠	⠠⠠⠠⠠⠠⠠	⠠⠠⠠⠠	⠠⠠⠠⠠	⠠⠠⠠⠠⠠
	HALF	⠠⠠⠠⠠⠠	⠠⠠⠠⠠⠠	⠠⠠⠠⠠⠠	⠠⠠⠠⠠⠠⠠	⠠⠠⠠⠠	⠠⠠⠠⠠	⠠⠠⠠⠠⠠
	QUARTER	⠠⠠⠠⠠⠠	⠠⠠⠠⠠⠠	⠠⠠⠠⠠⠠	⠠⠠⠠⠠⠠⠠	⠠⠠⠠⠠	⠠⠠⠠⠠	⠠⠠⠠⠠⠠
	EIGHTH	⠠⠠⠠⠠⠠	⠠⠠⠠⠠⠠	⠠⠠⠠⠠⠠	⠠⠠⠠⠠⠠⠠	⠠⠠⠠⠠	⠠⠠⠠⠠	⠠⠠⠠⠠⠠

Figure 2 As the "Notes" section of the music braille chart above indicates, a single symbol shows both the pitch and the rhythmic length of a note. For instance, dots 1,4,5 indicate an eighth note C.

Simple Scale with Note Values



The image displays a musical staff in 2/4 time with a treble clef, showing a simple scale with notes C, D, E, F, G, A, and B. Below the staff, the corresponding Braille notation for each note is shown, followed by its letter name in lowercase.

Note	Braille	Letter
C		c
D		d
E		e
F		f
G		g
A		a
B		b

Figure 3 Simple scale in braille with notes values: c d e f g a b.

[illegible]

Dotted Notes

A print dot that increases a note's value by one-half is shown by braille dot 3 in the next cell after the note.

Dotted half:  

Figure 5 Picture of dotted half with code



Dotted quarter:  

Figure 6 Picture of a dotted quarter with code:



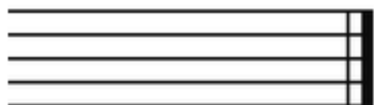
Dotted eighth:  

Figure 7 Picture of dotted eighth with code

Ending Double Bar

The heavy double bar that signals the end of the music in print is represented by the two-cell sign (126, 13)



⠆⠆

Figure 9 Picture of ending double bar with code.

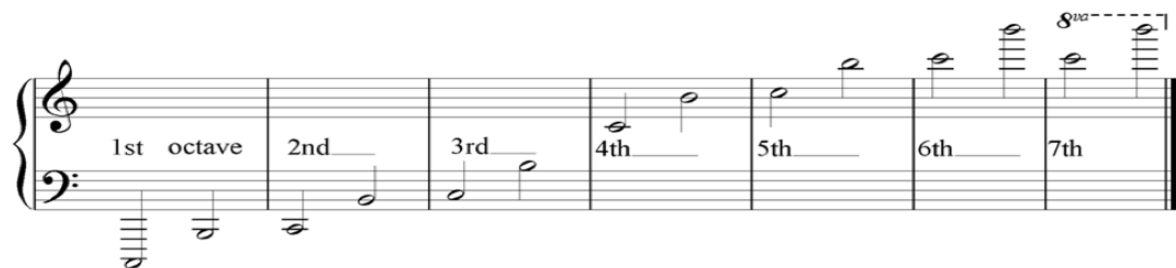
The beginning of a musical score is the

• • • • •

Octaves

Braille music does not include staves (5 lines and 4 spaces) or clef signs as shown below. Print music notation is graphical, in vertical and horizontal space. An octave sign designates the note's specific place in the full range of pitches.

The braille octave marks are all right-cell signs



The image displays a musical staff with seven measures, each representing an octave. The measures are labeled '1st octave', '2nd', '3rd', '4th', '5th', '6th', and '7th'. Each measure contains a single note. Below each measure is a Braille octave mark, which is a right-cell sign followed by a number 1 through 7. The Braille marks are as follows:

Octave	Braille Mark
1st	⠠⠠
2nd	⠠⠠
3rd	⠠⠠
4th	⠠⠠
5th	⠠⠠
6th	⠠⠠
7th	⠠⠠

Figure 11 A picture showing octaves with the codes for 7 octaves.

Rests

The braille signs for rests are as follows:








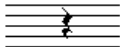


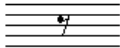





Name	Note	Rest	
Whole Note			
Half Note			
Quarter Note			
Eighth Note			
Sixteenth Note			

Figure 12 Chart showing types of notes and rest symbols with corresponding code: whole note = M, half note =U, quarter note = V, eighth note = X, sixteenth note = m.

Gently

• • • • •

and an accent , by dots (46, 236) \therefore .

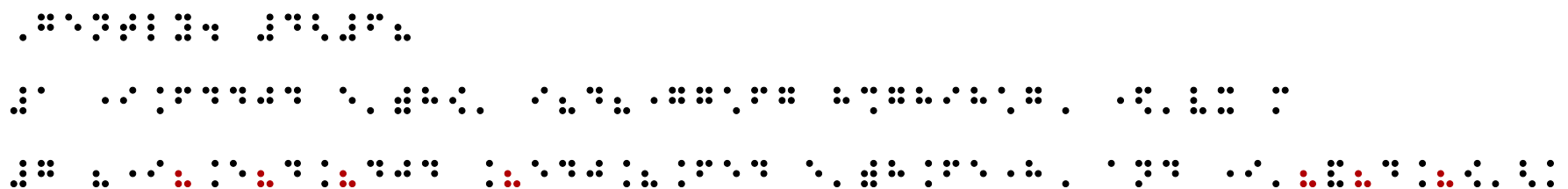


Figure 14 Picture of 10 bars of music with 5 lines of code:

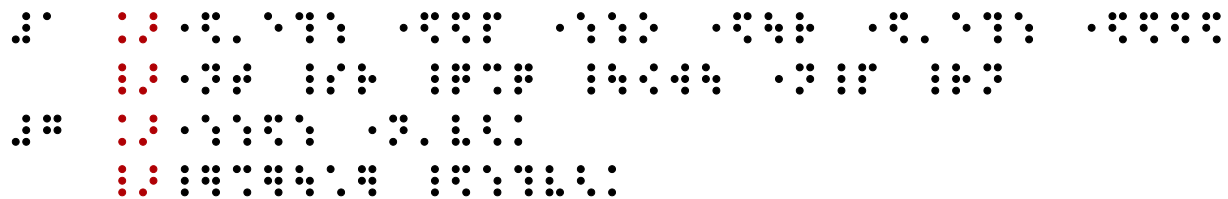




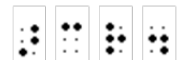



Figure 15 Picture of 8 bars of music for piano showing treble and bass clef lines followed by 5 lines of code:

Dynamics

Name of dynamic	Common symbol	Braille notation
Crescendo or cresc.		
Decrescendo (diminuendo)		
Cresc. (abbreviated crescendo)	cresc.	
Decresc. (abbreviated decrescendo)	decresc.	





Mezzo-forte	<i>mf</i>	
Mezzo-piano	<i>mp</i>	
Piano	<i>p</i>	
Pianissimo	<i>pp</i>	

Figure 16 Two tables showing the name of the dynamic, common symbol, and braille notation. Includes crescendo, descrcscendo, abbreviated crescendo, abbreviated decrescendo, messo-forte, messo-piano, piano, and pianissimo.

Example with Expression Markings



Figure 17 Picture of music with expression markings and corresponding braille.

Example with Slurs

[illegible]

Figure 18 Picture of music with slurs and corresponding braille.

Example with Repeats and Brackets

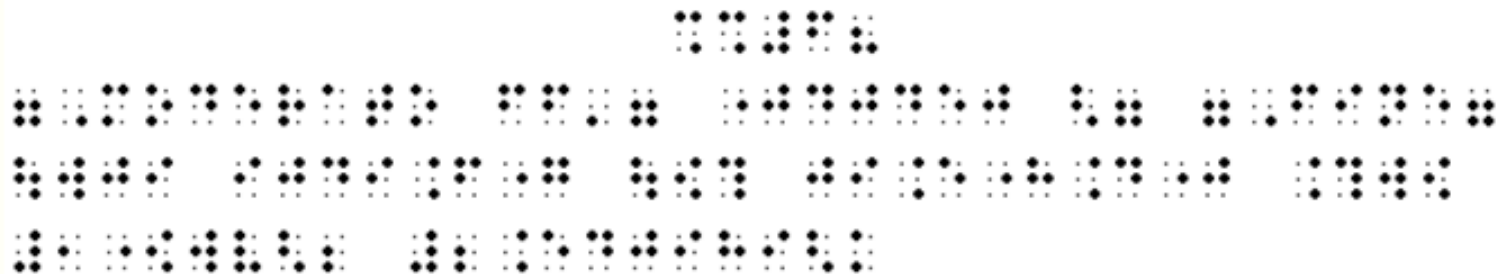


Figure 19 Picture of music showing repeats and brackets with corresponding braille.

If You're Happy and You Know It



Teacher Creation of Braille Music

- Perkins Braille Writer
- Mountbatten Braille Writer
- Braille Translation Software (6 key entry)
- Goodfeel Suite from Dancing Dots Software
 - www.dancingdots.com

Goodfeel Suite

- SharpEye – Music OCR software
- LimeAloud – Accessible Music Notation software
- Goodfeel – Print Notation to Braille software

SharpEye Picture Scan



Figure 21 Screenshot of 4 bars of the song, Jack and Jill, as seen via SharpEye Picture Scan.

SharpEye OCR

The image shows a screenshot of the SharpEye OCR software interface. The top window, titled 'jackandjill2 * - SharpEye2', displays a musical score for 'Jack And Jill'. The score is in 3/4 time and consists of two staves. The first staff contains measures 1 through 4, and the second staff contains measures 5 through 11. The lyrics are: 'Jack and Jill went up the hill to fetch a pail of water. Jack fell down and'. The interface includes a menu bar (File, Edit Image, Read, Edit Music, View, Options, Help) and a toolbar with various icons. A status bar at the bottom of the window indicates '0 rhythm warnings'. The bottom window, titled 'jackandjill2 at 50%', shows a zoomed-in view of the first staff of the musical score. The lyrics 'Jack and Jill went up the hill to' are visible below the staff. The name 'Brian Sobeck' is printed in the top right corner of this window. The bottom of the image shows a Windows taskbar with the 'Office Theme' and 'AVG AntiVirus Business Edition' icons.

Figure 22 Screenshot of the music notation for Jack and Jill as seen via SharpEye OCR

Export to Lime Aloud

The screenshot displays the Lime software interface, which is used for creating and editing musical scores. The title bar at the top reads "Lime". Below it is a menu bar with options: File, Edit, Context, Page, Voice, Note, Stem, Hear, Symbol, Annotation, and Window. The main window shows a new piece titled "New Piece, page 1 of 1". The title of the piece, "Jack And Jill", is centered at the top of the score area. The score is written in 3/4 time and consists of three staves of music. The lyrics are: "Jack and Jill went up the hill to fetch a pail of water. Jack fell down and broke his crown and Jill came tumbling after." The score is displayed in a standard musical notation with a treble clef and a key signature of one flat. The first staff contains measures 1 through 4, the second staff contains measures 5 through 8, and the third staff contains measures 9 through 12. The lyrics are aligned with the notes. At the bottom of the interface, there is a piano keyboard graphic and a set of musical symbols including a tie, a slur, a grace note, and various note values.

Figure 23 Screenshot of the song, Jack and Jill, exporting to Lime Aloud.

Lime Aloud to Goodfeel Braille Editor

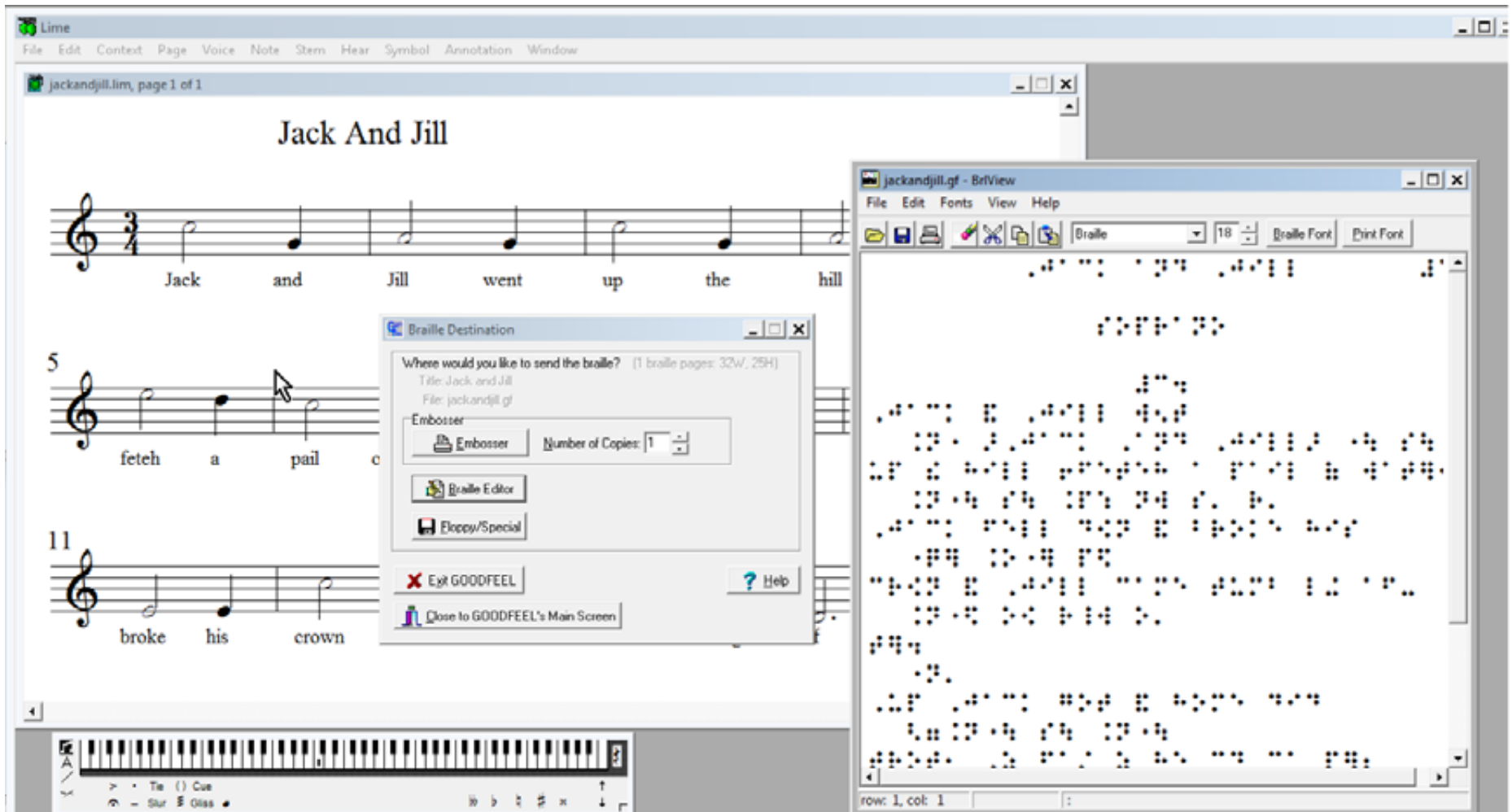


Figure 24 Screenshot showing Lime Aloud exporting to Braille Editor.

Copied from Goodfeel Braille Editor to Duxbury

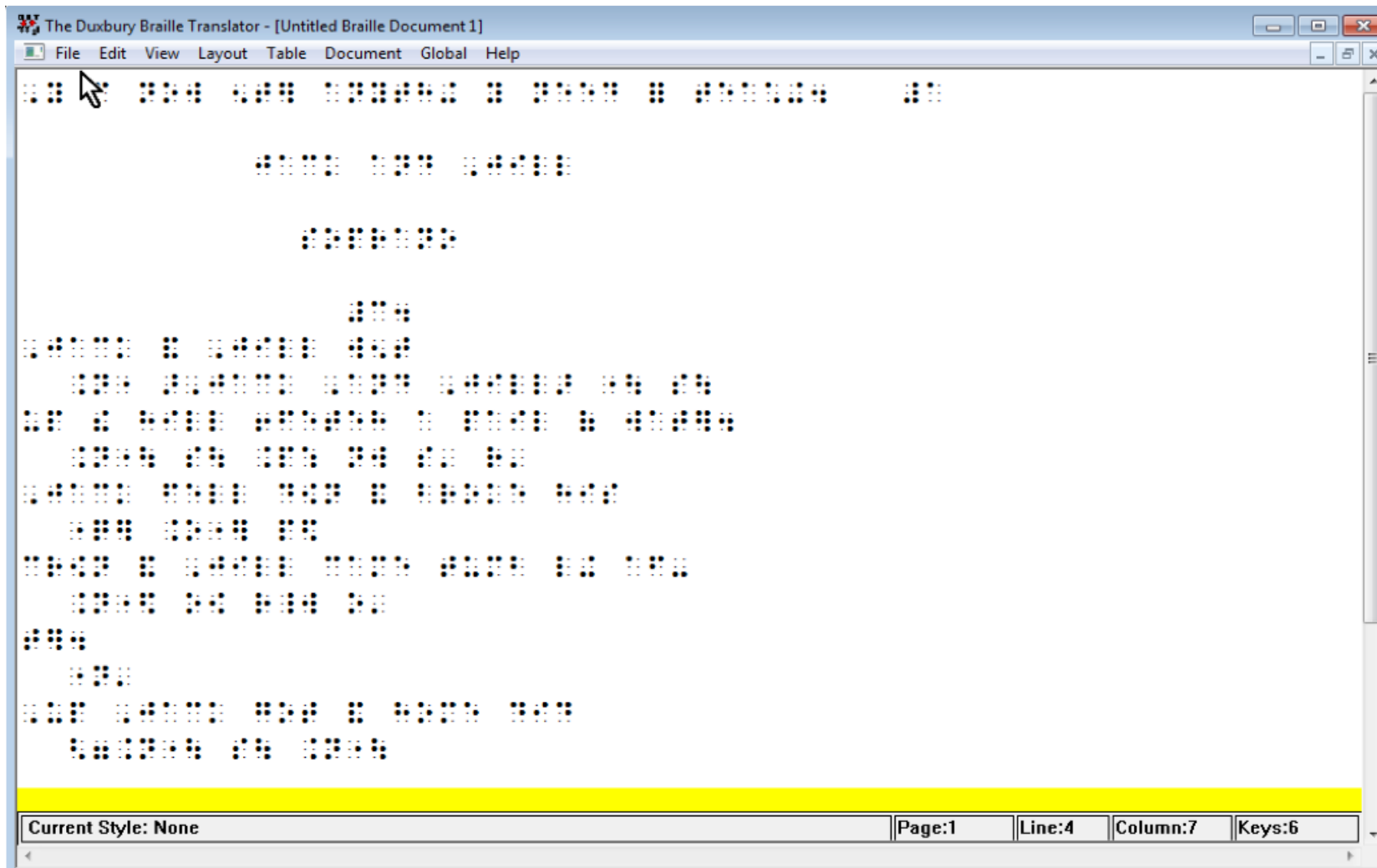


Figure 25 Screenshot showing result of export from Goodfeel Braille Editor to Duxbury.

Student Creation of Music

- Lime Aloud with JAWS
- Print or Braille
- Braille Display
- PC Keyboard
- MIDI Keyboard
- <http://www.dancingdots.com/prodesc/limealoud.htm>

Braille Music Resources

NLS

The special music collection consists of more than 30,000 braille and large-print music scores, texts, and instructional recordings about music and musicians on cassette. Some items are purchased from national and international commercial sources. Other materials are selected and produced in braille and audio formats by NLS, with permission of composers, authors, and publishers. Also, some titles are originally developed for the NLS program. The collection includes materials from elementary to advanced levels. <http://nlscatalog.loc.gov>

A growing number of braille music scores is available in an electronic format via the Internet. The music files can be browsed online or downloaded for later reading or embossing. A list of available titles is on the web www.loc.gov/nls/braille/musiclst.html, and there is a link to each music file from its record in the online catalog.

BARD: Braille and Audio Reading Download

National Library Service for the Blind and Physically Handicapped Downloadable Books and Magazines, in audio format. <https://nlsbard.loc.gov/cgi-bin/nlsbardprod/index.cgi>

Hadley School for the Blind

Learn the fundamentals of the braille music code. For beginning musicians as well as accomplished professionals, being able to read music in braille expands their ability to learn and appreciate music independently. After completing this course, students will be able to read single-line music.

Prerequisites: Strong contracted braille reading and writing skills, some musical background, and access to an acoustic or digital piano.

Course: MUS-101, Media: B with an audio component, Lessons:14

<http://www.hadley.edu/ShowCourseDetail.asp?courseid=MUS-101>

Braille Music Course

Course for teachers of Braille music at UMASS Boston.

<http://www.nercve.umb.edu/index.php?page=080326>

National Federation of the Blind

National Federation of the Blind Musicians Listserv

<http://www.nfbnet.org/mailman/listinfo/musictlk>

Music Education Network for the Visually Impaired (MENVI)

MENVI is a coalition of parents, educators and students. Operated by blind musicians and teachers for blind musicians and their teachers, MENVI is an information network and resource. Music Education Network for the Visually Impaired (MENVI)

Southern California Conservatory of Music MENVI Headquarters 8711 Sunland Boulevard Sun Valley, CA 91352

Phone: (818) 767-6554 Fax: (818) 768-6242 Website: <http://www.menvi.org/>

National Resource Center for Blind Musicians

Articles, lists of resources, and information about summer training in Braille music and technology for blind music students Website: <http://www.blindmusicstudent.org>

National Braille Association, Inc.

NBA maintains a collection of braille music in addition to their other services. See their website for pricing information or to order a free catalogue. National Braille Association, Inc. Three Townline Circle

Rochester, NY 14623-2513 Phone: (716) 427-8660 Fax: (716) 427-0263 Website: <http://www.nationalbraille.org/>

Braille through Remote Learning (BRL)

They have the 1997 braille music code online <http://www.brl.org/music>

BrailleM electronic mailing list

BrailleM is a place for discussing and learning about all aspects of braille music code. The list is designed to help beginners in Braille music and give them a place where they can ask questions of more experienced braille music users. <http://brenthugh.com/braillem/>

Music and Arts Center for the Handicapped (MACH)

This organization holds an annual Summer Institute for Blind College-bound Musicians. They also have a National Resource Center that you can contact with questions about braille music or music technology and they provide workshops and basic music technology training to teachers and college students throughout New England.

Music and Arts Center for the Handicapped (MACH) National Resource Center for Blind Musicians 600 University Avenue Bridgeport, CT 06601

Phone: (203) 366-3300 Fax: (203) 368-2847

Dancing Dots

Software company that has developed "Goodfeel," a program that transcribes certain types of music notation files, including midi files, into braille music.

Dancing Dots 1754 Quarry Lane P.O. Box 927 Valley Forge, PA 19482-0927 Phone: 610 783-6692 Fax: 610 783-6732 Website: <http://www.dancingdots.com>

LIME AID: A Study Guide to the Lime Music Editor and the Lime Aloud Scripts for JAWS By David Simpson

In his LIME AID, David Simpson provides a simple, step-by-step introduction to how to use the Lime music notation editor with the Lime Aloud JAWS scripts to produce scores in both standard print music notation and in braille music notation. The book guides students through the basics of creating and reviewing scores using the accessible Lime notation software and producing braille editions of their work with the GOODFEEL Braille Music Translator. Available from dancingdots.com

Dictionary of Braille Music Signs, Bettye Krolick. 1979

Music Section, National Library Service for the Blind and Physically Handicapped Library of Congress Washington, DC 20542 Phone: (202) 707-5100 and (800) 424-8567

Fax: (202) 707-0712 TTY/TTD: (710) 822-1969 E-mail: nlsm@loc.gov

Print Music Symbols and Tactile Graphics By Lois Krantz

Published by The National Braille Association In one braille volume, 13 braille pages Blind musicians read music braille. However, it is important that blind musicians understand how printed music appears. This book is a valuable resource for blind musicians who need to understand how printed music symbols appear to sighted teachers, colleagues or students. Although it is not intended as a comprehensive list of all conventional music symbols, it contains raised line graphics of common clef signs, notes of varying rhythms, stem signs and rests.

You can call NBA toll-free to order: 1-800-244-5797 \$5 for individuals, \$10.75 for organizations Visa & MasterCard accepted

National Braille Association 3 Townline Circle, Rochester, NY 14623-2513 Tel: 585-427-8260 FAX 585-427-0263 Web Site: www.nationalbraille.org

Braille Music Transcriptionsfor Guitarist

The files listed below are available for FREE download and use. The music is from publications in the Public Domain, my own arrangements, or arrangements by others with their permission. The source for each is identified. <http://www.ctdcreations.com/braille/transcriptions.html>

Online Braille Music Code 1997

This is a parked website in that it is no longer updated but it has excellent information.

<http://www.brl.org/music/index.html>

BMC Tutorial

A basic introduction to braille music code with examples in braille, visual notation and as sound files. You can touch, view, and hear them. <http://bmc.branchable.com/tutorial/>

Braille Sheet Music

The Braille Sheet Music is a non-profit project to provide opportunity for visually impaired musicians around the world to read and study music, rather than learning by ears. Here, musicians can download various Braille sheet music for FREE and/or request a printed copy to be sent worldwide. <http://braillesheetmusic.com/index.php>

Tack-tiles

An interesting system for learning braille, they have a music code set available Tack-Tiles P.O. Box 475 Plaistow, NH 03865-0475

Tel. (603) 382-1904 Fax (603) 382-1748 Website: <http://www.tack-tiles.com>

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This project is supported by the U.S. Department of Education, Special Education Program (OSEP). Opinions expressed here are the authors and do not necessarily represent the position of the Department of Education.

Figure 2: TSBVI logo.

Figure 3: IDEAs that Work logo and disclaimer