

User Manual for the Music XML Converter

LE/EECS 2311 - Software Development Project



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1.0 Introduction

As a musician, having MusicXML files of your favourite songs is beneficial, since it is supported by many music apps, such as MuseScore, to precisely denote the music. For instance, you will be able to display the song in an easy-to-read fashion, you can transpose to another key, and you can play the song.

That is why we have created an easy-to-use application for quick tablature-to-MusicXML conversion. The Music XML Converter application allows the user to quickly and easily have access to MusicXML files, which are compatible with many popular music apps, right on your computer. Use this manual to delve deeper into the many unique features the Music XML Converter offers you as a musician.

1.1 Product Name

The name of this product is Music XML Converter.

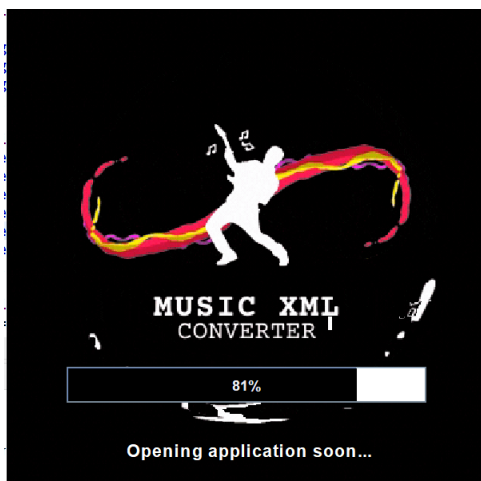


Figure 1. The loading screen for the Music XML Converter.

1.2 Intended Use

The Music XML Converter program is intended for musicians and music enthusiasts to convert music tablature files into MusicXML files that can be read by many different software.

1.3 Features and Capabilities of the Product

- The software is able to accept and identify three types of tablature: Guitar, Bass, and Drums.
- Translates these tablature text files into .musicxml files.
 - **Note:** As of now, the program can only translate bass and guitar tablaturs properly.
 - Also, translation of simple drum tabs have been implemented. Future updates will enhance the application to successfully translate complex drum tablaturs.

- Chords, pull-offs, and hammer-ons have been implemented

1.3.1 Required Format for Text Tablatures

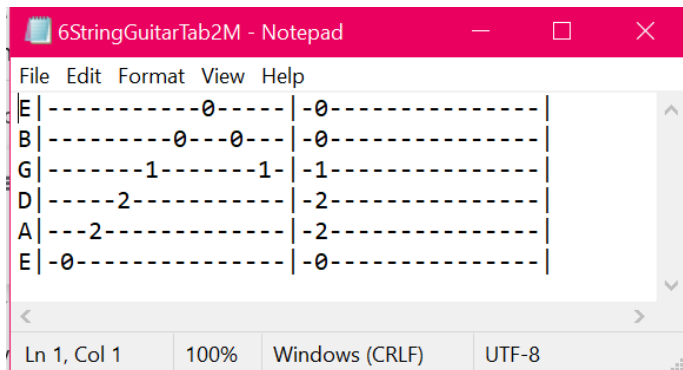


Figure 2. Here is a basic guitar tablature.

Please make sure the text tablatures are properly formatted:

- ☐ Measures must be separated by |
- ☐ Each row must be of same length
- ☐ The tablature should start with tuning information (i.e. the letters at the left side of the tablature).
- ☐ Each row must contain dashes (-) and numbers (from 0 to 9) if it is a guitar or bass tablature
 - ☐ For drum tablatures, each row must contain dashes (-) and these letters:
 - ☐ x or X
 - ☐ o

If the tablatures are not properly formatted, the Converter may produce an invalid MusicXML output. Or, it may result in an error message.

Note: Please refer to the **Tablatures** folder for more examples of tablatures that are acceptable for the MusicXML Converter program.

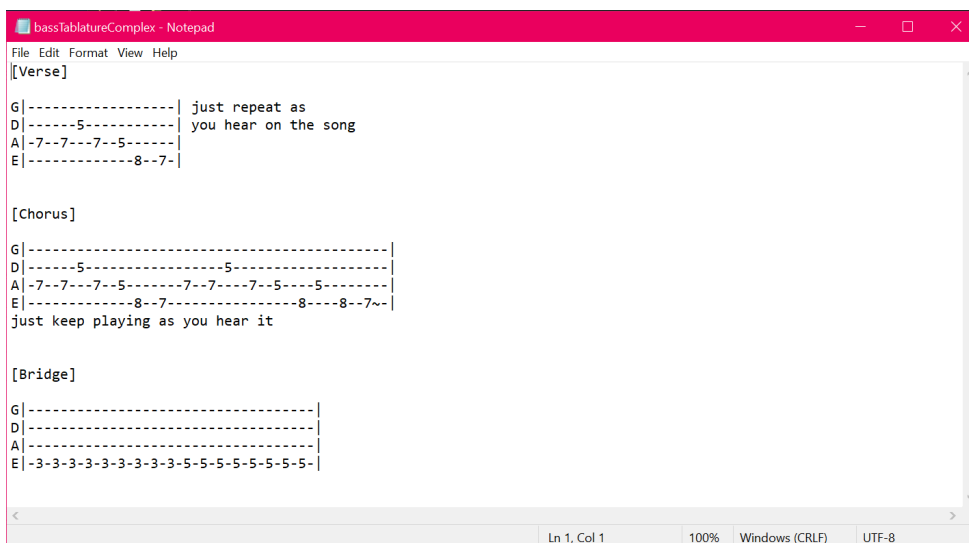


Figure 3. Here is an example of a bass tablature that is acceptable for the Music XML Converter.

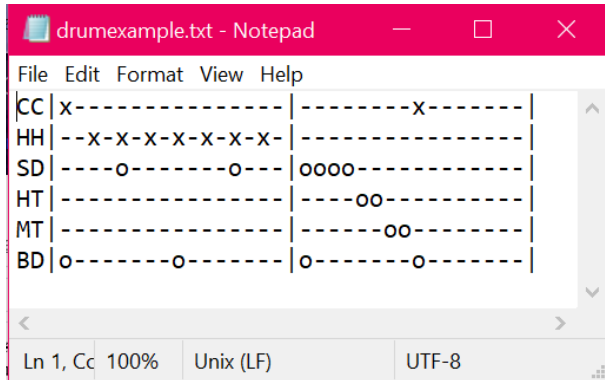


Figure 4. Here is an example of a drum tablature that is acceptable for the Music XML Converter.

2.0 Installation Instructions

Watch the installation instruction video or follow the instructions below:

Video: <https://drive.google.com/file/d/1od-uFQz56az2wgBGw4dp7sMfGSxWE1tr/view?usp=sharing>

How to Run MusicXML Converter Program on Eclipse:

****Note:** The name of the java file for the Music XML Converter is called TAB2MXL.

1. Import the TAB2MXL program into Eclipse:
 - a. If Eclipse is not installed on the system, please install the latest version found in the link below.
<https://www.eclipse.org/downloads/packages/installer>
 - b. If Eclipse is installed already, check for any new updates before starting.
 - c. Import as a project from Git:
 - i. In the Eclipse *File* menu, choose *Import*, then under *Git* folder, choose *Projects from Git* and click *Next*.
 - ii. Click on *Clone URI*.
 - iii. Copy and paste the URL of the repository from github.com into the URI field and click *Next*.
 - iv. Only select the *master* branch.
 - v. Keep clicking *Next* and finally *Finish*.
 - vi. You now have a copy of the program.
2. In Eclipse, open *Gradle Tasks* window
 - a. Go to *Window* → *Show View* → *Other...* Then Select *Gradle Tasks*.
3. In *Gradle Tasks*, under *application* folder, double click on *run*.
4. A window will pop-up. This is the user interface for the Music XML Converter application.
5. Music XML Converter application is now running.
6. Open your tablature using the app then click on *Translate* to see it in MusicXML format, you can also save the file by clicking *SaveAs*.

How to Run the Music XML Converter Executable:

1. If you do not have Java Runtime Environment installed, please install the latest version.
<https://www.java.com/en/download/>
2. Make sure you have to have the latest version of Java.
3. Download the Music XML Converter executable.
4. Run the executable.

2.1 How to Get Started

This is a guideline for every function supported by the Music Xml Converter in a step-by-step manner:

Getting Started with the User Interface:

1. Once you run the Music XML Converter program, a window will pop up on the screen (refer to **Figure 5**). This is the user interface for the Music XML Converter program.



Figure 5. The pop-up window after running the Music XML Converter program.

2. The window has a bar at the top of the window containing *File*, *Edit*, *Format* and *Color* drop down menus.
 - a. If you click on *File*, you are presented with these options:
 - i. *New*, *Open*, *Save*, *Save As*, and *Exit*
 - ii. Clicking on *New* provides a new blank page.
 - iii. Clicking on *Open* will open up a File Explorer window. You can search for and select the text file that you want to convert to MusicXML format.

1. Once the file is selected, the Music XML Converter program will open that file, and you will be able to see the contents of the text file in the white box area in the window (refer to **Figure 5**).
2. You can also copy and paste the tablature in the blank window
- iv. Clicking on *Save/Save As* will save the converted file.
- v. *Exit* would quit the application.
- b. *Edit* offers the following options:
 - i. *Undo*: undo any edit you made to the tab in the text box.
 - ii. *Redo*: redo any edit you made to the tab in the text box.
- c. *Format*, offers the following:
 - i. *Word Wrap*, *Font*, and *Font Size*
 1. *Font* list provides options to change the font of the text in the white text box.
 2. *Font Size* list to choose the size of the text size.
3. On the left side of the window, there are three buttons.
 - a. The first one is *Open*. Clicking on it will open up a File Explorer window, to choose a file to be translated (refer to **Figure 6**).
 - i. Make sure that the text file is a properly formatted bass, guitar, or drum tablature (refer to **Section 1.3.1** for more information about formatting)

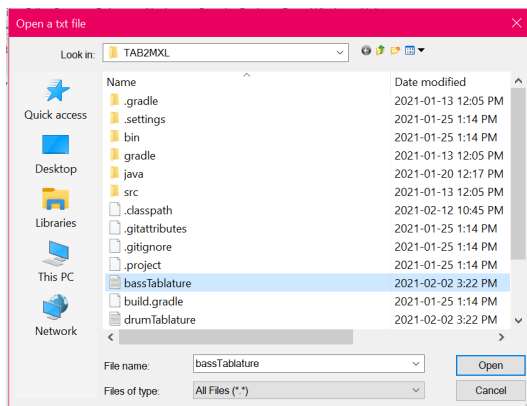


Figure 6. The File Explorer window.

- b. Once the file is selected, the program will display the contents of the text file in the black box area in the window
- c. A guitar tablature (called guitarTablatureComplex.txt) is selected from the **Tablatures** folder for this example, the result should be similar to the content shown in **Figure 7**.
 - i. The user can type any edits to the tab in the text box.
 - ii. **Note:** As of now, the program can translate bass and guitar tablatures as well as simple drum tablatures. Future updates will enhance the Music XML

Converter to translate more complex drum tablatures as well as improve the MusicXML output.

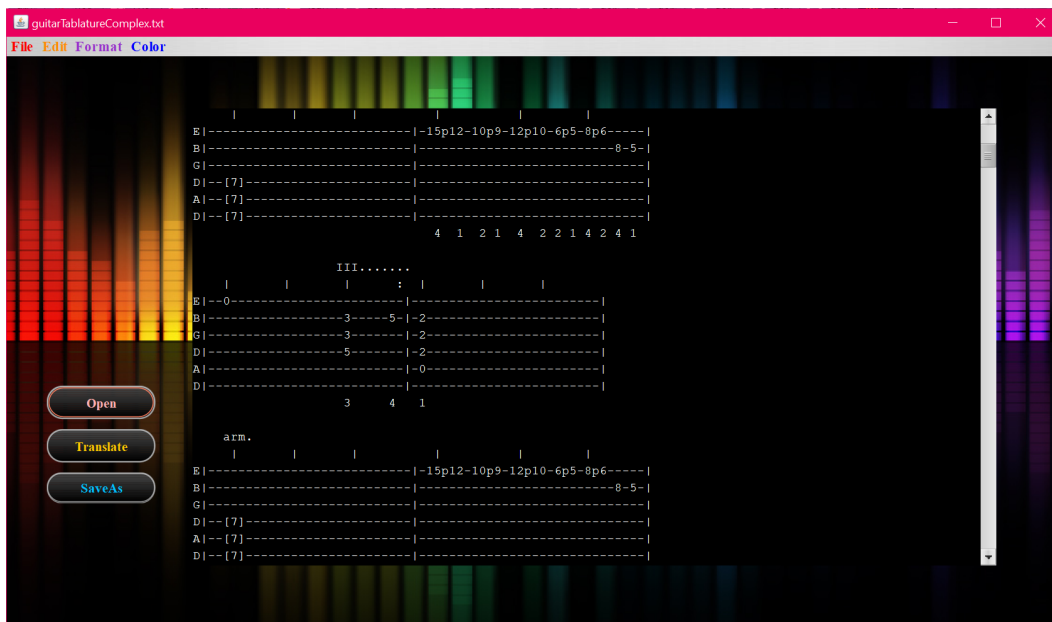


Figure 7. The contents of the guitar tablature text file selected to be converted to .musicxml file.

4. To convert the selected file to .musicxml file, click on *Translate*. Then the translation is displayed in the text box space.
(Refer to **Figure 8**).

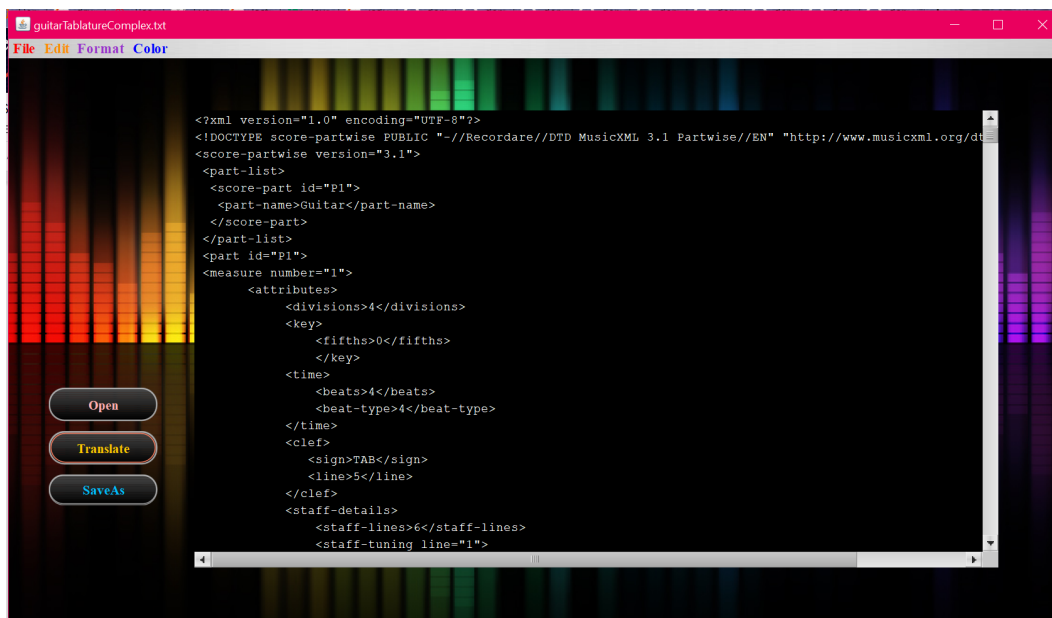


Figure 8. The result after clicking *Translate* in the Music XML Converter program.

5. Now, to save your translation:
 - a. Click *Save As* button on the bottom left side of window
 - b. Name your file and click *Save*

Now that you are familiar with these steps, you are now ready to use the Music XML Converter!

Once you have your .musicxml file, you can upload it into a music software application like the OpenSheetMusicDisplay Demo website (refer to **Figure 9**), or MuseScore.

Untitled Score

Figure 9. This is the music notation in OpenSheetMusicDisplay Demo from the .musicxml file created from guitarTablatureComplex.txt using the Converter.

3.0 Safety Warnings

The following safety statements provide the caution information you need to know, before installing and/or using the product:

- Download the Music XML Converter from the official github repository, and verify the checksum.
- Ensure to have the correct URL from github.
- Security warning on opening/loading files using the Music XML Converter:
 - Do not use files obtained from websites that you do not trust as it may contain viruses.

4.0 Troubleshooting

- In the case of any occurring problem with the system, please refer to this section
- The program will display an error message, if the input is not compatible with the program features.

4.1 How to Deal with Occuring Problems

- You receive an error message after choosing an improperly formatted tablature, as shown in **Figure 10**.

- To avoid this problem, ensure the tablature selected is formatted correctly as shown in **Section 1.3.1**.

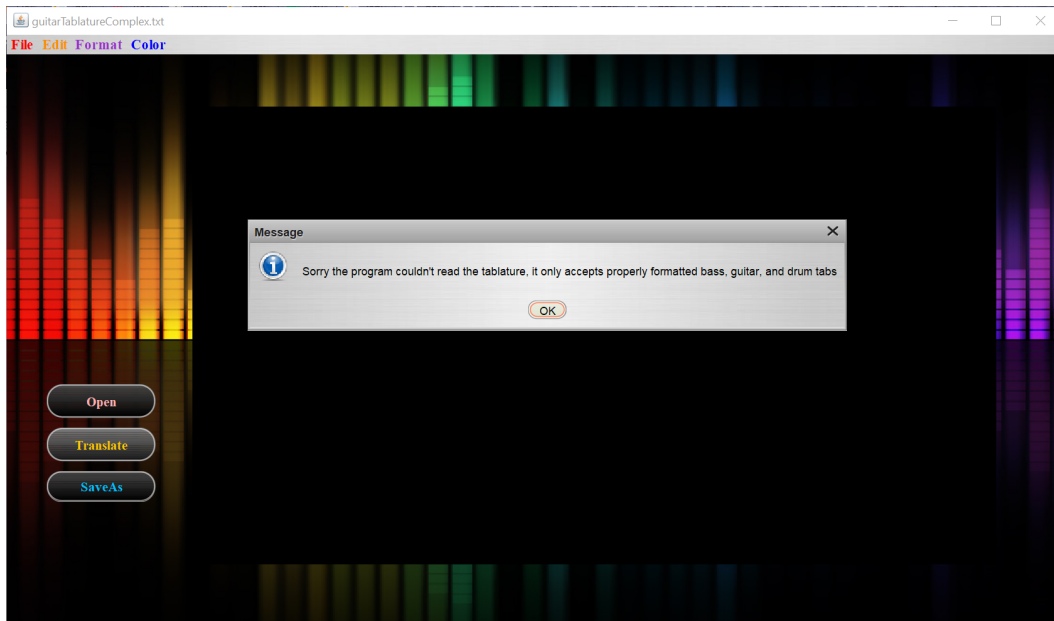


Figure 10. An error message after translating a tablature that is not properly formatted.

5.0 Maintenance information

For software maintenance purposes, the user will be prompted to download software updates for the Music XML Converter program. This is solely to correct faults, fix defects, and to improve performance or other attributes.

- The product is currently in its prototype stage. Expect future updates that will enhance the Music XML Converter so that it can allow more ways for the user to edit the input text tablature.
 - These updates will also allow user to save any edits made to the input text tab by the user, including any metadata edits (e.g. song title, time signature etc.)
- Also, expect future updates that will improve the MusicXML output.

6.0 Repair information

If the Music XML Converter program is not working properly, even after troubleshooting, please delete it, redownload it, verify md5 checksum, and run it again.

7.0 Technical specifications

- Currently, the Music XML Converter only accepts .txt files containing tablature for guitar and bass. It also supports simple drum tablatures (refer to **Figure 4** as an example).

- Note: Future updates will enhance the Music XML converter so that it can successfully translate more complex drum tablatures.
- Do not select/load other types of text files.
- Do not select/load files that are not text files.

8.0 Glossary

Eclipse - is an integrated development environment (IDE) used in computer programming.

OpenSheetMusicDisplay Demo - an online free music composition and notation software.

MuseScore - a free music composition and notation software.

MusicXML - a free file format developed by the music research community that can be used to precisely denote a piece of music.

TAB2MXL - is the Java filename for the Music XML Converter program. It is designed to convert musical text tablatures to MusicXML files.

9.0 Contact Details

Feel free to reach us on xmlconvertor@gmail.com if you have any further questions. We hope that you enjoy our product!

10.0 References

- [1] Kichline, “User Manual”
<http://onsongapp.com/docs/interface/menubar/utilities-menu/getting-started/manual/>
 (accessed February 13, 2021)