

# Running $\text{T}\text{E}\text{X}muse$

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## Installation

Place the files `texmuse.tex`, `texmuse.mf`, and `txmfont.mf` where  $\text{T}\text{E}\text{X}$  and METAFONT can find them. (The document's own folder is such a place, if you don't know of a better option.)

## Running

A run of  $\text{T}\text{E}\text{X}muse$  (with  $\text{L}\text{A}\text{T}\text{E}\text{X}$ ) will eventually typeset the musical material using a *new* font. Previous to the (first) run, the font *does not exist*. And this can mean some problems, because, in principle,  $\text{T}\text{E}\text{X}$  won't find the `tfm` file(s) that it needs—and, later, the previewer won't find the `pk`'s. So, in principle, error messages stemming from that are normal, and do not mean the program is not running.

## Automatic font generation

In any case, with today's implementations of  $\text{T}\text{E}\text{X}$ , error messages are unlikely to occur (unless of course there's a mistake in the input, or a genuine bug in the program). Most implementations (I'm basing this on my experience with Windows Mik $\text{T}\text{E}\text{X}$ ) today will generate the fonts automatically. So, if everything goes well, the first run will be a success. (If you don't have an implementation that handles fonts automatically, see below.)

But there is a problem later on. The first time the file was typeset, the fonts did not exist, and *that's why* there was font generation in the first place. But the second time the font files (created in the first run) will be there, and the program will *not* regenerate them. That means that any changes to the input file will not be reflected in the output. You need to *delete* the automatically-generated files before the second run.

Those files are usually put in the local branch of the  $\text{T}\text{E}\text{X}$  Directory Structure: folder `\localtexmf`. Usually, in `\localtex\fonts`. But beyond that, the placement of the new files depends on circumstances. So, you have to search `\localtex\fonts` for the files and delete them. For a document called `foo.tex`, the files to find and delete will be `foo1.tfm` and `foo1.pk`, `foo2.tfm` and `foo2.pk`, etc.

So, if there were changes to the music of `foo.tex`, you should find and delete all these files before typesetting. Since the files will usually be put in the same subdirectory every time, you can automate the procedure into a batch file that looks something like

```
del c:\localtexmf\fonts\pk\ljfour\monotype\abadi\dpi600\%1*.pk
del c:\localtexmf\fonts\tfm\monotype\abadi\%1*.tfm
texify %1.tex
pause
yap -1 %1.dvi
```

(where `texify` and `yap` are L<sup>A</sup>T<sub>E</sub>X's and the previewers executables).

It is the portion `'\monotype\abadi'` that changes from document to document, and it is the same for both `tfm` and `pk`'s (the latter, of course, adding `'\dpi600'` or equivalent). So it's a good idea to make a note of this portion in the input file. Thus, when you come back to it after worked on other T<sub>E</sub>X*muse* files, you can change the batch accordingly.

### Manual font generation

If your implementation does not generate the fonts by itself, you will have to do it manually. The first run will give an error message: `tfm` file not found. Just press enter, letting the run end. There will be `mf` files anyway. Run METAFONT on them:

```
mf foo1.mf
```

(and the same for the rest of the files). You might have to try things like

```
mf \mode:=cx; input foo1.mf
```

where `cx` can be changed into `ljfour`, for example. This depends on your local settings (and I assume if your implementation doesn't do this automatically, it's because you know all about this kind of procedures).

That creates `gf` files. From them you have to create the `pk` files:

```
gftopk foo1.1200gf,
```

or whatever is appropriate.

After getting the `tfm`'s and `pk`'s, you can run L<sup>A</sup>T<sub>E</sub>X again, and it will produce the document.

For any changes to the music to actually show up, you have to make sure that the `tfm`'s and `pk`'s were produced from *the last* `mf`'s (those that were created in the last L<sup>A</sup>T<sub>E</sub>X run).

### Syntax conventions

You use T<sub>E</sub>X*muse* in a L<sup>A</sup>T<sub>E</sub>X document by saying

```
\input texmuse.tex
```

in the preamble. Follow the samples to learn the (pretty easy) syntax.

Before declaring the existence of a bug in the program, please make sure your input follows all conventions. I know they are pretty uncomfortable right

now—making recovery from errors a friendly activity with `TEXmuse` is something to do yet.

One thing you need to know is that `TEXmuse` needs `\makeatletter` to be on at all times. Make sure to type `\makeatletter` *after* `\begin{document}`.