

Installing Musix \TeX on Windows 2000

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This document describes the process of installing MiK \TeX 2.1.8. The installation procedure has been tested on Windows 2000. No guarantees are given about its applicability to any other variant of Windows.

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I. MiKTeX 2.1

1. Where to get it

You can obtain MiKTeX on the WWW either at a CTAN site such as ftp.dante.de, ftp.tex.ac.uk or their mirror sites, or directly from www.miktex.org.

2. Downloading

1. From the download site of your choice, download setup.exe.
2. Run setup.exe and click "Download".
3. Click "Small", "Large" or "Total" to select the size of your MiKTeX installation. The "Small" installation is sufficient for using MusixTeX. The "Total" installation is **STRONGLY DISCOURAGED** (see below).
4. Follow the prompts to finish downloading the install files.

3. Installing

1. Run setup.exe again and choose "Install".
2. Select the size of your installation (recommended: "Small") and enter the path to the directory where you saved the install files during download.

Note: In MiKTeX 2.1.8, the "Total" option will automatically install a copy of MusixTeX. Allowing this to happen is strongly discouraged for three reasons:

- This version of MusixTeX won't work as desired, since it does not contain musixflx.exe
- It may be an outdated version
- It will be installed in the texmf tree where any customisations you choose to undertake may be overwritten if you decide to upgrade to a more recent version of MiKTeX later.

To end up with a working MusixTeX installation, your best bet is to install a "Small" MiKTeX and then add MusixTeX manually according to the procedure described in this document. If you later find that you need some of the things in the "Total" MiKTeX package, it's easy to add them using the "Packages" tab of the MiKTeX Options dialogue. However, if you allow Setup to install its incomplete MusixTeX version in texmf, you will have to remove it manually – or manually replace it with a working installation and run the risk of having it overwritten during a subsequent MiKTeX upgrade.

3. Accept the option to install a shared MiKTeX environment. (This is the default setting.)
4. Accept c:\texmf as the installation folder unless you have a good reason to put your MiKTeX installation somewhere else. Ditto in the next screen for the shortcut folder name.
5. If you are installing a TeX package for the first time, you must create a localtexmf tree. Accept the default path and directory name for the localtexmf tree unless you have a good reason to put it somewhere else.
6. Accept the default option not to incorporate existing texmf folder trees. You don't have any if you're installing a TeX package for the first time.
7. Click "Next" to start the installation process.

4. Making a local binaries directory

Musix \TeX and related preprocessors come with their own .exe files, which must be placed in a directory where your operating system can find them. It's a good idea to create a separate directory to receive these files (as well as any other \TeX -related executables you may find you need) rather than dumping them into `c:\texmf\miktex\bin` where they'll be all mixed up with the basic MiK \TeX binaries and difficult to find again if you need to upgrade them.

To make a local binaries directory:

1. Create a new directory on your hard drive, e.g. `c:\texbin`.
2. Open your `autoexec.bat` and add the line: `SET PATH=%PATH%;C:\TEXBIN`. (This will preserve any pre-existing path statements in your `autoexec.bat`, but will also work if your `autoexec` is empty to start with.) Save the change.
3. Reboot.

II. Musix \TeX

1. Where to get it

You can obtain Musix \TeX on the WWW either at a CTAN site such as `ftp.dante.de`, `ftp.tex.ac.uk` or their mirror sites, or from the Icking Music Archive at `http://icking-music-archive.sunsite.dk/software`. Look for a file called `musixtex.zip`.

2. Installing

1. Use your favourite unzipping tool to unpack `musixtex.zip` into a temporary directory.
2. In your `localtexmf` tree, create a series of subdirectories to receive Musix \TeX files.
 - (a) In `localtexmf`, create a subdirectory called `TEX`. In `TEX`, create a subdirectory called `GENERIC`. In `GENERIC`; create a subdirectory called `MUSIXTEX`. You should now have a directory path that looks like this:

```
c:\localtexmf\tex\generic\musixtex.
```

(Note: Strictly speaking, you can skip the directory "generic" if you like. I put it in for the sake of tradition and symmetry – it reflects both the structure of the local `texmf` tree under previous versions of MiK \TeX and the structure of the `texmf` tree under MiK \TeX 2.1. What is crucial is that the "musixtex" directory MUST be located below the `localtexmf\tex` folder for \TeX to be able to find the Musix \TeX macro files.)

- (b) In `localtexmf\fonts\source`, create a subdirectory called `PUBLIC`. In `PUBLIC`, create a subdirectory called `MUSIXTEX`. You should now have a directory path that looks like this:

```
c:\localtexmf\fonts\source\public\musixtex.
```

- (c) In `localtexmf\fonts\tfm`, create a subdirectory called `PUBLIC`. In `PUBLIC`, create a subdirectory called `MUSIXTEX`. You should now have a directory path that looks like this:

```
c:\localtexmf\fonts\tfm\public\musixtex.
```

- (d) In `localtexmf`, create a subdirectory called `DOC`.

3. Move the Musix \TeX files from your temporary directory to their destined locations.
 - (a) Move all *.exe files to your local binaries directory if you created one while installing MiK \TeX . If you prefer not to use a local binaries directory, move the *.exe files to `c:\texmf\miktex\bin`.
 - (b) Move all *.tex and *.sty files to `c:\localtexmf\tex\generic\musixtex`.
 - (c) Move all *.mf files to `c:\localtexmf\fonts\source\public\musixtex`.
 - (d) Move all *.tfm files to `c:\localtexmf\fonts\tfm\public\musixtex`.
 - (e) Move musixdoc.pdf and glossary.eps to `c:\localtexmf\doc`.
4. Go to the MiK \TeX Options dialogue and refresh the File Name Database to tell MiK \TeX about all its beautiful new files.
5. Read the documentation.

Musix \TeX is now installed. There will be some files left over in your temporary directory, but you don't need any of them for running Musix \TeX on a Windows platform.

III. Musixlyr and Musixser

To typeset vocal music, you will need to use the `musixlyr` add-on. Also available is the `musixser` package for entering music one voice at a time.

1. Where to get them

You can find both these packages on the software page of the Icking Music Archive.

2. Installing

1. Download the latest version of `musixlyr.zip` and/or `musixser.zip` and unzip to a temporary directory.
2. Move `musixlyr.tex` to `c:\localtexmf\tex\generic\musixtex`. Alternatively, create a directory `c:\localtexmf\tex\generic\musixlyr` and move `musixlyr.tex` there.
3. Move the documentation files (`mxlyrdoc.*`) to `c:\localtexmf\doc`.
4. Refresh the MiK \TeX File Name Database.
5. Read the documentation.

Go through an analogous procedure to install `Musixser`.

IV. Musix \TeX Preprocessors: PMX and M-Tx

Two preprocessors are available for Musix \TeX . Depending on the nature of the music you want to produce, these preprocessors can simplify and speed up the typesetting process as well as flatten the learning curve.

1. Where to get them

You can download the latest release of PMX (for instrumental music) or M-Tx (for vocal music) from the software page of the Icking Music Archive.

2. Installing

1. Unzip the PMX zip file into a temporary directory.
2. Move the *.exe files to your local binaries directory if you created one while installing MiK \TeX . If you prefer not to use a local binaries directory, move the *.exe files to `c:\texmf\miktex\bin`.
3. Move the documentation files to `c:\localtexmf\doc`.
4. Move all other *.tex files to `c:\localtexmf\tex\generic\musixtex`. Alternatively, create a directory `c:\localtexmf\tex\generic\pmx` and put the *.tex files there.
5. Refresh the MiK \TeX File Name Database.
6. Read the documentation.

Go through an analogous procedure to install M-Tx.

V. Type 1 Fonts for Musix \TeX

For creating PDF and Postscript versions of Musix \TeX output, Type1 fonts frequently provide better results (and smaller output files) than the bitmapped fonts which are part of the regular Musix \TeX package.

1. Where to get them

Musix \TeX Type1 fonts are available from the software page of the Icking Music Archive in the file `musixps.zip`. (Note: *The file size is 4.5MB!*)

2. Installing

1. Unzip `musixps.zip` into a temporary directory. Make sure the directory structure remains intact when unzipping (check "Use folder names" in WinZip, type "unzip -a `musixps.zip`" if running `pkzip`).

When correctly unpacked, the Zip archive will yield three subdirectories: `dvipdfm`, `dvips`, and `pfb`. The first two directories will each contain a file called `musix.map`. The `pfb` directory will contain the Type1 font files. Of the files in the top-level directory, you should read the files `readme.txt` and `readme_mik.txt`. The batch files can be used to automate the installation process if you edit the settings for `texmf`, `localtexmf` and your local binaries directory to reflect the location of these directories on your system. You can also install the fonts by hand as follows.

2. Make sure that your texmf and localtexmf trees contain the following directories (if they don't exist, create them):
 - (a) `c:\localtexmf\fonts\type1\musixtex`
 - (b) `c:\texmf\dvips\config`
 - (c) `c:\texmf\dvipdfm\config`
3. Move the files from your temporary directory to their destined locations.
 - (a) Move all *.pfb files to `c:\localtexmf\fonts\type1\musixtex`.
 - (b) Move the file `musix.map` which is in the "dvips" subdirectory of your temporary directory to `c:\texmf\dvips\config`.
 - (c) Move the file `musix.map` which is in the "dvipdfm" subdirectory of your temporary directory to `c:\texmf\dvipdfm\config`.
4. Edit the config files.
 - (a) In `c:\texmf\dvips\config`, open `config.ps` in a text editor and add the line:


```
p +musix.map
```
 - (b) In `c:\texmf\dvips\config`, open `config.pdf` in a text editor and add the line:


```
p +musix.map
```
 - (c) In `c:\texmf\dvipdfm\config`, open the file `config` in a text editor and add the line:


```
f musix.map
```
5. Refresh the MiKTeX File Name Database.

VI. Writing MusixTeX source files

To create input files, all you really need is a text editor; even Notepad and a DOS command line to launch the executables will do in a pinch. However, there are many TeX editors (a.k.a. TeX shells) available that make the job a bit easier by providing syntax highlighting, toolbar buttons for easy access to TeX executables, etc. Many of these are preconfigured for MiKTeX by default. Some of them are even freeware...

Browse the links at <http://www.miktex.com/links.html> as a starting point to find a TeX editor you like. Some of the more popular ones are WinEdt (many bells and whistles; nagware after 30 days), TeXnicCenter (many bells and whistles; freeware) and WinTeX2000 (not quite as many bells and whistles, but more than enough for MusixTeX; easier to customise than WinEdt; timeware: locks up after 30 days' free trial).