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# Music Filter

Revision 8.3.5

Revision History  
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The *AsciiDoc* distribution includes a Music Block filter that translates music in LilyPond [<http://lilypond.org/>] or ABC [<http://abcnotation.org.uk/>] notation to standard classical notation in the form of a trimmed PNG image which is automatically inserted into the *AsciiDoc* output document (see the examples below).

Actually the filter (`./filters/music2png.py`) can be used outside *AsciiDoc* to convert LilyPond or ABC music files to PNG images. Execute the following command to see how to use it:

```
$ ./filters/music2png.py --help
```

The Music Filter can be used as a model for filters that convert a block of text into a file that is linked or embedded into the *AsciiDoc* output document.

## Example 1. Music Block containing ABC notation

This Music Block:

```
[ "music", "music1.png", scaledwidth="100%" ]
-----
T:The Butterfly
R:slip jig
C:Tommy Potts
H:Fiddle player Tommy Potts made this tune from two older slip jigs,
H:one of which is called "Skin the Peelers" in Roche's collection.
H:This version by Peter Cooper.
D:Bothy Band: 1975.
M:9/8
K:Em
vB2(E G2)(E F3)|B2(E G2)(E F)ED|vB2(E G2)(E F3)|((B2d) d2(uB A)FD:|
|:(vB2c) (e2f) g3|(uB2d) (g2e) (dBA)|((B2c) (e2f) g2(ua|b2a) (g2e) (dBA):|
|:~B3 (B2A) G2A|~B3 BA(uB d)BA|~B3 (B2A) G2(A|B2d) (g2e) (dBA):|
-----
```

Renders:

### The Butterfly

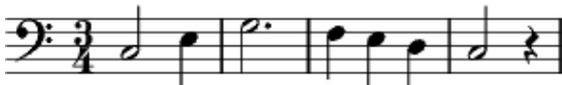
Tommy Potts

## Example 2. Music Block containing LilyPond notation

This example contains LilyPond musical markup, it uses the *link* attribute so you can click on the music image to display the source notation. The `music2.ly` source file is automatically created and retained by the `music2png.py` filter when the `-m` option is used.

```
[ "music", "music2.png", "ly", link="music2.ly" ]
-----
\version "2.10.0"
\paper {
  ragged-right = ##t
}
{
  \time 3/4
  \clef bass
  c2 e4 g2. f4 e d c2 r4
}
-----
```

Renders:



If you get an error processing the above example it may be that it is not compatible with your version of LilyPond. Use the LilyPond `convert-ly(1)` utility to update the source to the version that you are using.

## 1. Using the Filter

Insert a delimited Music Block containing valid ABC notation into your *AsciiDoc* document:

- The Music Block delimiter is the word `music` followed by four or more tilde characters.
- The Music Block attribute list must contain a file name for the PNG output image file followed by the input format (either *abc* for ABC or *ly* for LilyPond). If the format is omitted ABC notation is assumed.
- The filter invokes `music2png` with the `-m` option so that music images will only be regenerated if the block content has changed.
- The optional named block attributes *link*, *width* and *height* are also available (see Image macro attributes [userguide.html#X55] in the *AsciiDoc* User Guide).

## 2. Limitations

- The `asciidoc(1)` output file cannot be `-` (stdout), you must output to a named file.
- If the music image file is linked to the output document then the image file name in the Music Block attribute list should be a relative path name relative to the *AsciiDoc* output file.

## 3. Installation

In addition to *AsciiDoc* you will need to have installed:

- LilyPond [<http://lilypond.org/web/>] (most Linux distributions include this package).
- ImageMagick [<http://www.imagemagick.org>] (most Linux distributions include this package).

Test the music filter it by converting the test file to HTML with *AsciiDoc*:

```
$ asciidoc -v ./filters/music-filter-test.txt
$ firefox ./filters/music-filter-test.html &
```

The filter was developed and tested on Xubuntu Linux using LilyPond 2.10.5 and ImageMagick 6.2.4.



The filter does not work with LilyPond 2.2.6 because it did not generate the requested output file name correctly (2.6.3 does not have a problem).