



# Mplay – A Python MIDI Mixer / Player with an OpenGL based GUI

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# Some History

- 1997: Borland C implementation (for MS-DOS) → stage proofed (Roland SC-88) – controlled by just one finger
- 1998: first Linux version (console based)
- 2002: GUI version (X11, GDI)
- 2010: SDL version (Simple direct media layer)
- December 2012: pure Python version

*“I was very impressed when I saw that you can implement real time applications with pure Python - I would have never considered that possible ...”*

# Highlights

- Full functional MIDI player
- Mixer with mute and solo options
- Ability to change channel parameters (delay, reverb, pan)
- Volume sliders
- Pull-Down menus for GM instrument sounds
- MIDI VU meter
- Show note, chord and lyrics information
- Change key, tempo
- Transport controls
- Keyboard shortcuts

# Demo

The screenshot shows a MIDI Player application window with a 16-track mixer. The mixer has columns for Mute, Solo, Sens, Del, Cho, Rev, and Pan for each track. Below the mixer is a track list on the right, a transport control section, and a piano roll at the bottom. The piano roll shows a sequence of notes for the Eb instrument.

Track	Mute	Solo	Sens	Del	Cho	Rev	Pan
1	0	0	64	0	0	0	0
2	0	0	64	0	0	30	0
3	0	0	64	0	0	0	0
4	0	0	64	0	0	0	0
5	0	0	64	0	0	0	0
6	0	0	64	0	0	0	0
7	0	0	64	0	0	0	0
8	0	0	64	0	0	0	0
9	0	0	64	0	0	0	0
10	0	0	64	0	0	0	0
11	0	0	64	0	0	0	0
12	0	0	64	0	0	0	0
13	0	0	64	0	0	0	0
14	0	0	64	0	0	0	0
15	0	0	64	0	0	0	0
16	0	0	64	0	0	0	0

Track List:

- Piano 1
- Fretless Bs
- Piano 1
- Jazz Gt.
- Jazz Gt.
- Alto Sax
- French Horn
- Strings
- Syn.Brass 1
- Drums
- BaritoneSax
- Glockensp
- Harmonica

Transport: [Stop] [Play/Pause] [Next] [Previous]

rainiga.mid Format: 0 Tracks: 1 Playing Time: 04:07.38 Key: \*/ /0  
Clock: 00:19.13 Song Position: 0010:04:541 Tempo: 123 bpm Time: 04/04 24/08  
Oh, it's raining again.  
Eb Eb G 8b

# How does it work?

- “Simple” GLUT application
  - MIDI events are processed in `glutIdleFunc`
  - Sophisticated timing of MIDI events
  - Realistic effects implemented using fast bit block image transfers (BITBLT)
  - Platform-specific (but simple) MIDI back-ends
- Responsive user interface

## ... by the way

- Mplay was / is a “private” project ... but the source code will be made available soon
- The number of lines of code could be reduced to one fifth
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