

PocketMiku PlayerG

1. Outline

This is a MIDI player for Pocket Miku with Raspberry Pi & Game controller.

Main functions are MIDI file play, bpm change and some MIDI controls (pitch, modulation, expression).

2. Hardware

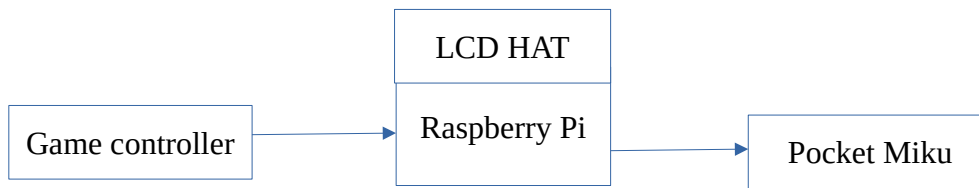


Figure 1

- Game controller : HORI Pad mini for NINTENDO SWITCH [HORI] as Xbox controller
- LCD HAT : 3.2inch RPi LCD (B) [Waveshare]
- Raspberry Pi : Raspberry Pi 2 Model B
- Pocket Miku : nsx-39 [GAKKEN]

3. Software

3.1 Setting

- Raspberry Pi setting by GUI through VNC
- LCD HAT setting refer to [https://www.waveshare.com/wiki/3.2inch_RPi_LCD_\(B\)](https://www.waveshare.com/wiki/3.2inch_RPi_LCD_(B))
- Python3
- pip (sudo pip3 install xxx) and other setting (sudo apt-get install, etc)
 - mido, python-rtmidi, python3-tk, tkinter, pygame
- /home/pi/PocketMiku : refer to /PocketMiku
 - pocketmiku_playergXX.py :main
 - pocketmiku_playg.sh : used Main menu of Raspberry Pi
- Make symbolic link of pocketmiku_playerg.py as /PocketMiku/pocketmiku_playergXX.py

- /home/pi/PocketMiku/midi : refer to /PocketMiku/midi

Set *.mid to play.

3.2 Usage

1) Python

```
$cd PocketMiku
```

```
$chmod +x *.py (*.sh) # when only files copy
```

```
$python3 pocketmiku_playergXX.py
```

* When error happened, some pip or apt install executed more.

2) shell script

```
$cd PocketMiku
```

After make symbolic link pocketmiku_player.py from pocketmiku_playerXX.py

```
$/pocketmiku_playg.sh
```

4. Operation

After start pocketmikuplayergXX.py (python3), “PocketMiku Player” Window (300 x 200) appears on LCD HAT. Game controller can operate each item (Song, BPM, Pitch, Mod).

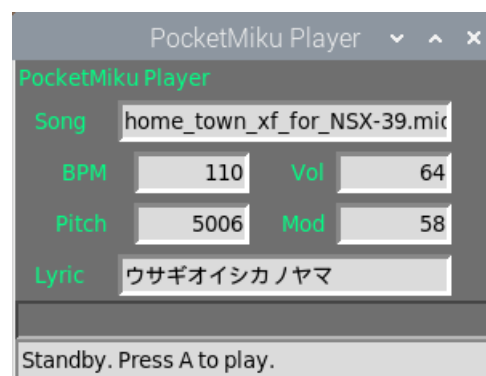


Figure 4

4.1 Song

Choose, play and pause midi song.

- Choose MIDI file to play in /home/pi/PocketMiku/midi with + (Cross button) Up or Down.
- Enable the choice with A button.
- Start playing with A button again.
- Pause playing also with A button.

4.2 BPM

Change tempo playing midi song.

- Increase BPM with X button.
- Decrease BPM with Y button.
- Back to original BPM with B button.

4.3 Vol

Change volume of Miku voice.

- Up volume with Joystick (Right) upward.
- Down volume with Joystick (Right) downward.

4.4 Pitch

Change pitch of Miku voice.

- Up pitch with Joystick (Left) rightward.
- Down pitch with Joystick (Left) leftward.

4.5 Mod

Modulate Miku voice.

- Modulate Miku voice with Joystick (Left) upward or downward.

4.6 Lyric

Display lyric along playing song.

4.7 Status area (Bottom of the window)

Display status.

5. Reference

- DTM ハイパー初心者講座

<https://dtm-hyper.com/>

- DTM Solutions

https://izmi.com/midi/midi_ctrl_no.html

- Domino (MIDI 音楽編集ソフト)

<http://takabosoft.com/domino>

- Free MIDI File Site

- 01 ポケミク 歌詞ツール

<https://sites.google.com/site/himagine201206/home/dtm/nsx39/sysexnsx39>

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