

# Fall 2014 CS580 MIDI Command Controller Interface

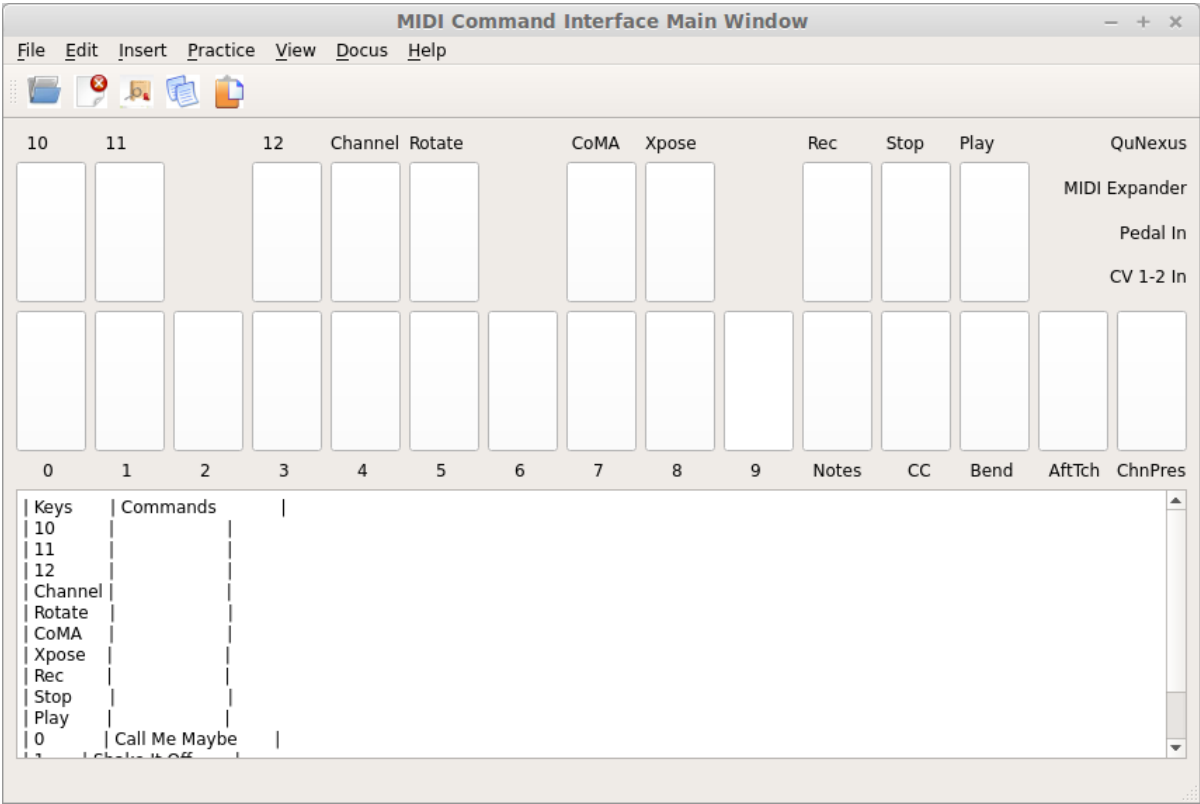
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## 1 11/21/2014 Update



## 2 main functionality

### 2.1 Read data from MIDI

- Use the MIDI Controller as a speical Controller that can be operated to play specific songs sequence, or do some specific work.
- play specific sequence may be the work for keys 0-9, and 10-12, how about other 20 keys? Do they require specific work to be done?

### 2.2 Write data back to MIDI

- When a key was pushed, the specific Controller key's LED is supposed to be on to indicate the operation.
- Trick about the LED to be continuously on is that when a key is pressed, that is 1 byte that indicates the "Duration" of the key press, I may need to
  - try to set this byte to be a large value, (1 byte,  $2^8 = 256$ , it has limits!)
  - or continuously reset is to be that large value;
  - or continuously write this key to be pressed data back to MIDI with time intervals

## 3 Programming Language

### 3.1 Qt

- the worries that I have by using Qt is that if Qt has the capability to handle the MIDI-Linux connection problems.
- And also Qt-to-Audio (linux) connection things as well. Should it be Qt, or as far as I can set it to work in Linux, just let it be that way then?

### 3.2 c++

- I believe C++ is the most widely used Language used by those midi sequencer softwares, so I have no better choice than c++ right now.

## 4 Interface Design

## 5 Midi keys and corresponded operations

## 6 Interface Guide

- Give text instructions on how to use the Interface, and what are the corresponded operations by press specific keys.
- Like list the above table in the Interface Guide text area.

Table 1: midi keys and corresponded operations

Keys	Commands
10	
11	
12	
channel	
Rotate	
CoMA	
Xpose	
Rec	
Stop	
Play	
0	Call Me Maybe
1	Shake It Off
2	All About That Bass
3	...
4	
5	
6	
7	
8	
9	
Notes:	
CC	
Bend	
AftTch	
ChnPres	
Togl A	
Velo B	
Preset	
Pres C	
Tilt D	
Bend	
Oct-	
Oct+	