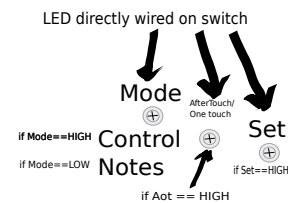


Count time between button 1 release and button 2 press to determine velocity

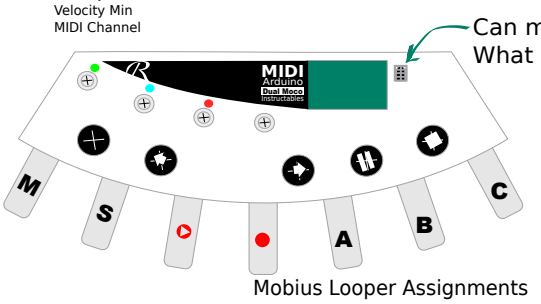
24 digital inputs  
or Charlie plex 4x6 grid = 10  
4x3 top row and 4x3 bottom row = 14

14 Analog inputs?  
12 buttons, 2 pedals  
If the buttons are pressure sensitive,  
are the pedals needed?

1 Analog input  
12 buttons  
2 pedals  
button to select which key  
Analog sets velocity for all keys



When Set is on,  
Keys select values within  
differing modes. ie. To Transpose,  
click set, select Transpose using set select  
push the note you want C to be.  
Click set again to leave set mode.



### Midi Note numbers

All notes

C	C#	D	D#	E	F	F#	G	G#	A	A#	B
0	1	2	3	4	5	6	7	8	9	10	11
12	13	14	15	16	17	18	19	20	21	22	23
24	25	26	27	28	29	30	31	32	33	34	35
36	37	38	39	40	41	42	43	44	45	46	47
48	49	50	51	52	53	54	55	56	57	58	59
60	61	62	63	64	65	66	67	68	69	70	71
72	73	74	75	76	77	78	79	80	81	82	83
84	85	86	87	88	89	90	91	92	93	94	95
96	97	98	99	100	101	102	103	104	105	106	107
108	109	110	111	112	113	114	115	116	117	118	119
120	121	122	123	124	125	126	127				

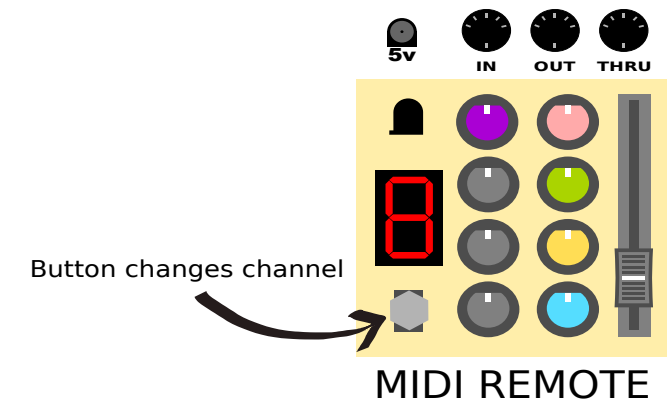
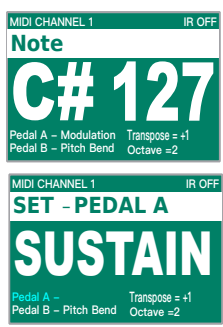
Key of C

C	D	E	F	G	A	B
0	2	4	5	7	9	11
12	14	16	17	19	21	23
24	26	28	29	31	33	35
36	38	40	41	43	45	47
48	50	52	53	55	57	59
60	62	64	65	67	69	71
72	74	76	77	79	81	83
84	86	88	89	91	93	95
96	98	100	101	103	105	107
108	110	112	113	115	117	119
120	122	124	125	127		

- General Midi Drum Numbers
- 35 Bass Drum 2
  - 36 Bass Drum 1
  - 37 Side Stick
  - 38 Snare Drum 1
  - 39 Hand Clap
  - 40 Snare Drum 2
  - 41 Low Tom 2
  - 42 Closed Hi-hat
  - 43 Low Tom 1
  - 44 Pedal Hi-hat
  - 45 Mid Tom 2
  - 46 Open Hi-hat
  - 47 Mid Tom 1
  - 48 High Tom 2
  - 49 Crash Cymbal 1
  - 50 High Tom 1
  - 51 Ride Cymbal 1
  - 52 Chinese Cymbal
  - 53 Ride Bell
  - 54 Tambourine
  - 55 Splash Cymbal
  - 56 Cowbell
  - 57 Crash Cymbal 2
  - 58 Vibra Slap
  - 59 Ride Cymbal 2
  - 60 High Bongo
  - 61 Low Bongo
  - 62 Mute High Conga
  - 63 Open High Conga
  - 64 Low Conga
  - 65 High Timbale
  - 66 Low Timbale
  - 67 High Agogo
  - 68 Low Agogo
  - 69 Cabassa
  - 70 Maracas
  - 71 Short Whistle
  - 72 Long Whistle
  - 73 Short Guiro
  - 74 Long Guiro
  - 75 Claves
  - 76 High Wood Block
  - 77 Low Wood Block
  - 78 Mute Cuica
  - 79 Open Cuica
  - 80 Mute Triangle
  - 81 Open Triangle

## Components

- IR receiver
- IR LED
- LED
- MIDI Jacks
- Audio Jacks
- Potentiometer
- Slide potentiometer
- Power Supply
- Piezo transducer
- Switches
- LED display
- Flex Sensor
- Pressure Sensor
- Light Sensor
- Rotary Encoder
- Resistors
- Buttons



Can midi be sent via IR into MIDI IN or THRU?  
What would happen if it receives a non MIDI signal?