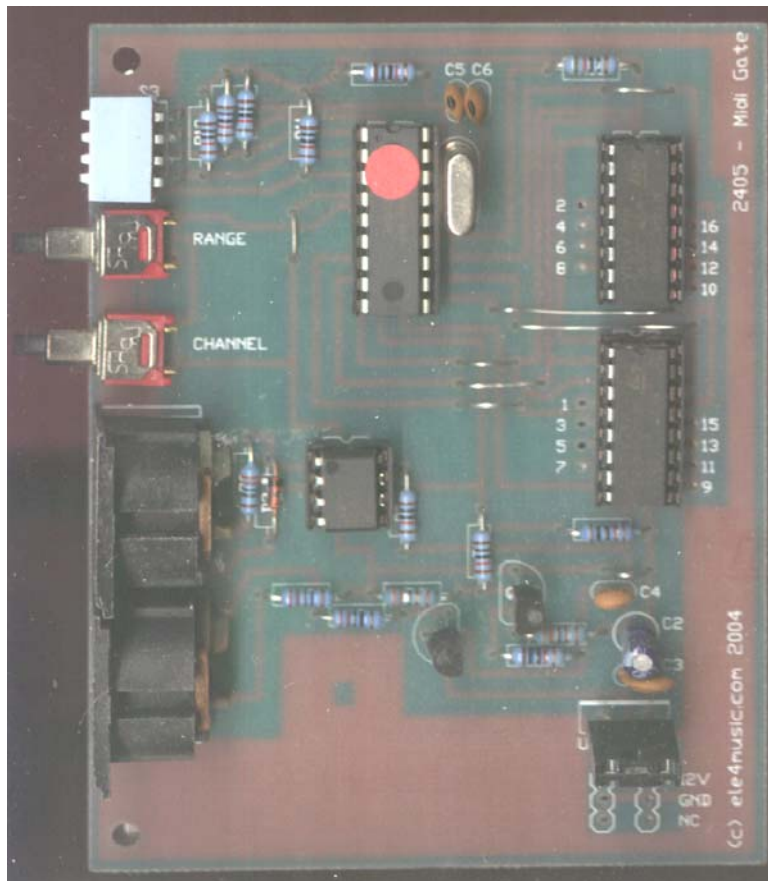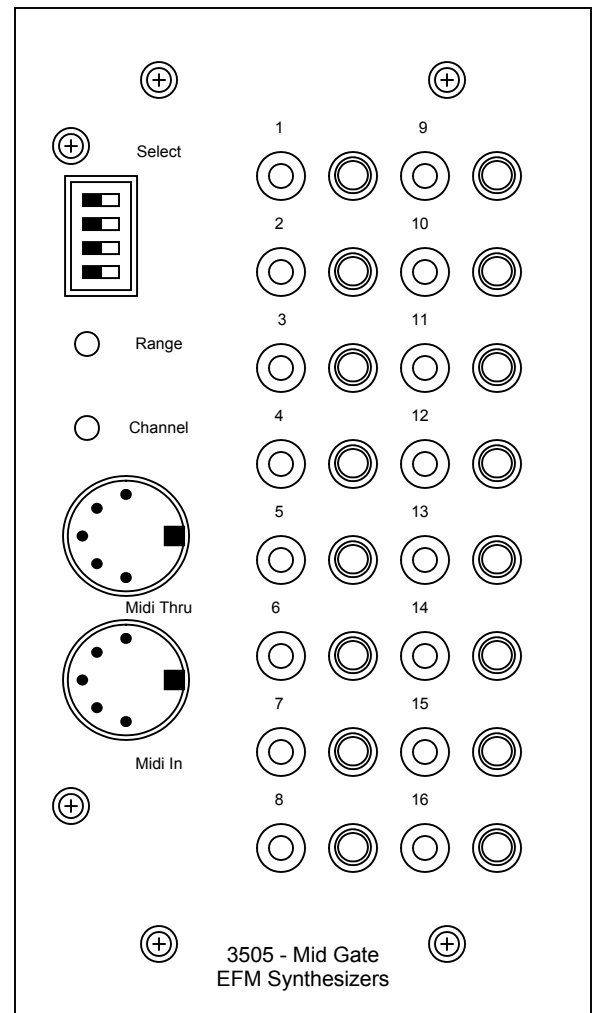### 3505 Midi to control gate converter

Features...
- 16 +5V gates
- May all be on at the same time
- Envelope, Waveform Generation
- Used as an Midi controlled Analog sequencer
- Control lights, curtains, motors your entire set with midi tracks
- Selectable keyboard range
- May be stacked on a singlechannel.
- Selectable midi channel (1-16)
- +/-12 or +/- 15V

The Midi-Gate is fairly complex as these things go and should not be considered as a first project.

This is the 2400 version. The 3500 versionis the identical except it has a standard power connector.

The Midi-Gate may function as, or used to control a wide number of devices.
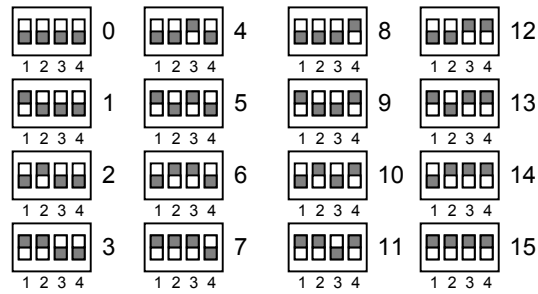
- Drum Machines
- Modular Synthesizers
- Light Shows
- Midi Piano / Xylophone
- Analog Sequencer
- Envelope Generators
- Waveform Generators

Special Thanks:

This product would not be possible without John Cutter's midi code. Thanks John.

Small Parts

PCB	PC Board	1
C1,2	0.1uF Ceramic	2
C3,4	22pF Ceramic	2
R1,8,9	220 Ohm	3
R3	1K	1
R2,4,6,10-15	10K	9
R5,7	3.3K	2
D1	1N4148	1
Q1	2N3906	1
Q2	2N3904	1
U1	6N138	1
U2	PIC16F84	1
U3,4	74HC259	2
X1	8 MHz Crystal	1

Full Parts

R16-31	2K2	16
LED1-16	LED	17
L Bracket w/hardware		2
Header		1
J1,2	5-pin DIN	2
J3-18	1/8"	16
S1	4 Pos DIP	1
S2,3	Momentary	2
Panel		1
Overlay		1

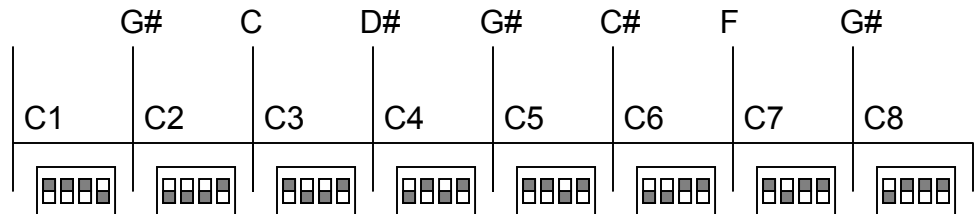The midi channel is selected by setting the dip switch to the desired channel then pressing the "Channel" button on the front panel.

These settings are saved into on-chip memory that has a 40+ year lifespan. There is no need to reset the device at every power up.

The keyboard range is selected by setting the dip switch to the desired range then pressing the "Range" button on the front panel.

The Midi-Gate is a synthesizer control device that can output sixteen midi-controlled concurrent 0 to +5V control gates.These outputs can be set to respond to midi channels 1through 16 then set to a group of 16 consecutive keys on amidi controller.Multiple

Midi-Gates can be used on the same midi channel and set to consecutive groups of keys on the controller. The Midi-Gate is designed to control analog drum machines and synthesizers for musical applications. With a little additional stuff the Midi-Gate can control anything that can be turned on. The possibilities are endless.

Midi Channel Select

0	4	8	12
1234	1234	1234	1234
1	5	9	13
1234	1234	1234	1234
2	6	10	14
1234	1234	1234	1234
3	7	11	15
1234	1234	1234	1234

Midi Range Select

	G#	C	D#	G#	C#	F	G#
C1	C2	C3	C4	C5	C6	C7	C8