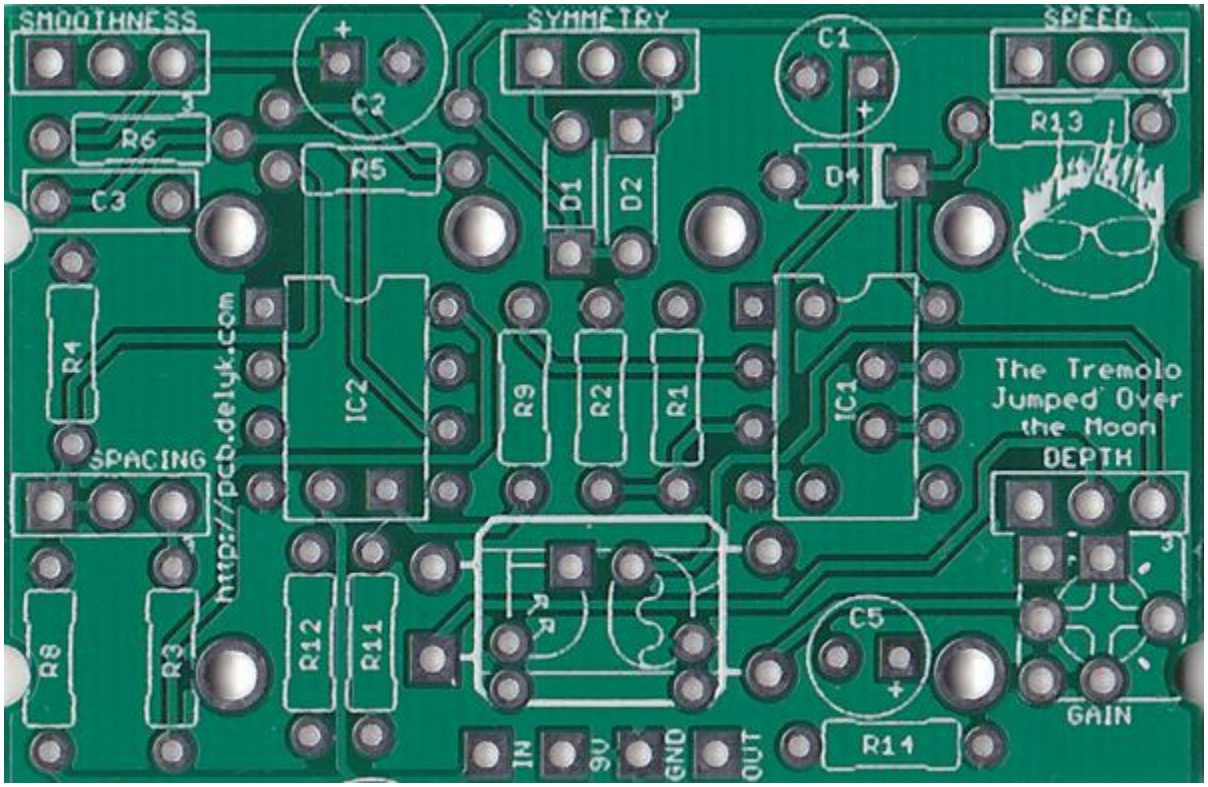


The Tremolo Jumped Over the Moon

Build Document

Introduction

I originally thought tremolos were pointless. Then I heard this effect. I ***had*** to have it. I didn't see many options for good boards, so I gave it a shot.

You guys know I like effects in the smallest enclosure possible. So, this effect gives you 5 external pots and an internal trim; it also gives a pretty flashing LFO LED.

This is a pretty easy build, just **take it slow.** Plan out your soldering carefully since a specific order is pretty important.

This fired up the first time for me. I was a pleasantly surprised.

Bill of Materials

Capacitors

I obtained all of my caps from Tayda. That's what the layout was setup for.

P/N	Value	Type	Notes
C1	10uF	Aluminum Electrolytic	
C2	10uF	Aluminum Electrolytic	
C3	10nF	Film Box	
C4	1uF	Aluminum Electrolytic	Lay it down.
C5	1uF	Aluminum Electrolytic	
C6	330pF	Ceramic	

Diodes

I obtained all of my diodes from Tayda. That's what the layout was setup for.

P/N	Value	Notes
D1	1N4148	
D2	1N4148	
D4	1N400x	Polarity protection.
LFO_LED	3mm LED	Pick a color! You don't need this is you don't want it. If you do keep add this, it will flash even if the 3PDT is in bypass mode. In other words: if it has power, it'll flash.

Integrated Circuits

I obtained all of my integrated circuits from Tayda. That's what the layout was setup for.

P/N	Value	Notes
IC1	TL072	
IC2	JRC4558	It's called NJM4558 on Tayda.

Resistors

P/N	Value
R1	100k
R2	100k
R3	220k
R4	470k
R5	220k
R6	220k
R7	2k7
R8	1M
R9	220k
R10	220k
R11	1k
R12	1k
R13	330R
R14	1M
R15	1k
R16	1k

Potentiometers

I obtained all of my potentiometers from Tayda. That's what the layout was setup for.

P/N	Value	Notes
DEPTH	B1k	I recommend this one.
GAIN	B10k	Trimpot
SMOOTHNESS	B500k	I recommend this one.
SPACING	B500k	I recommend this one.
SPEED	B20k	I recommend this one.
SYMMETRY	B500k	I recommend this one.

Other Parts

Qty	Value	Notes
2	8-pin socket	
1	Optoisolator	You can use a Vactrol® VTL5C3 or an NSL32. However, I simply used the LDR from Tayda and a 3mm diffused red LED, put together with heat shrink.

Build Notes

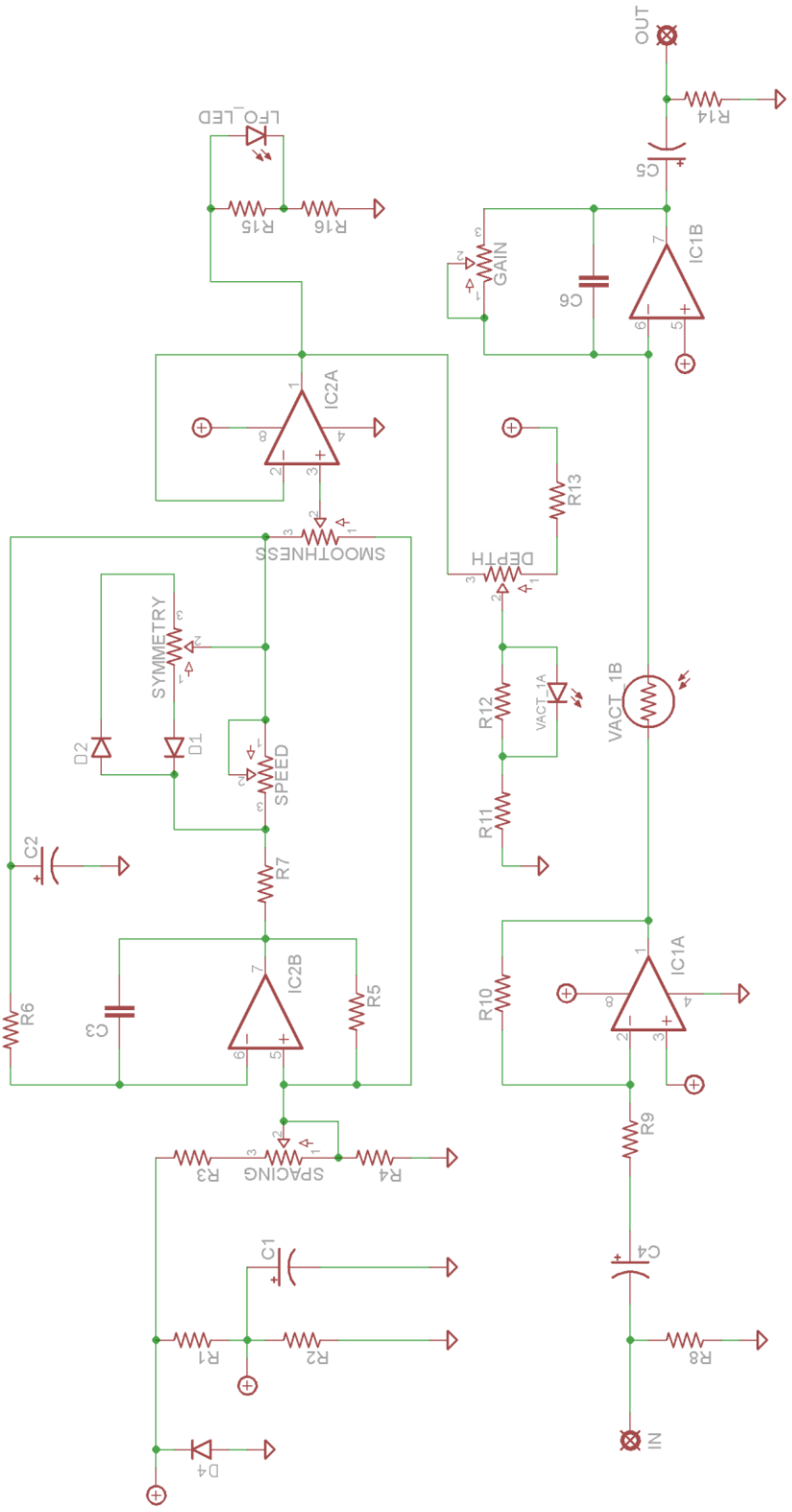
If you use onboard pots, you'll probably need to use 1900H knobs.

Suggested Solder Order

I know this is a tight build, and a bit silly with the use of the double-side. But hey, it fits great in a 1590B!

1. R7, R10, R15, R16
2. C6
3. C4
4. Everything on the bottom side (non-pot side) except the optoisolator.
5. The pots.
6. Drill the enclosure.
7. Place the LFO_LED in the drilled hole.
8. Solder to board.
9. Solder optoisolator.

Schematic



Images

Example Build