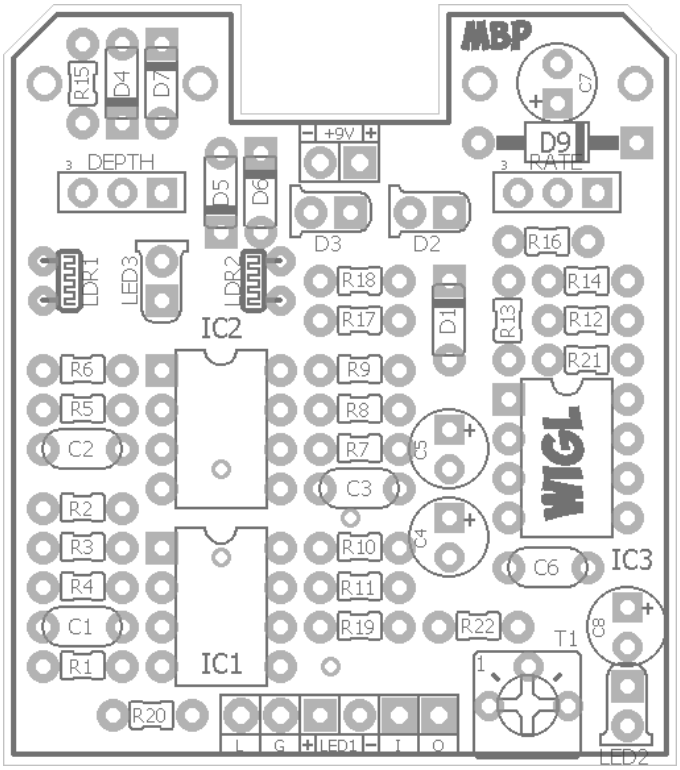
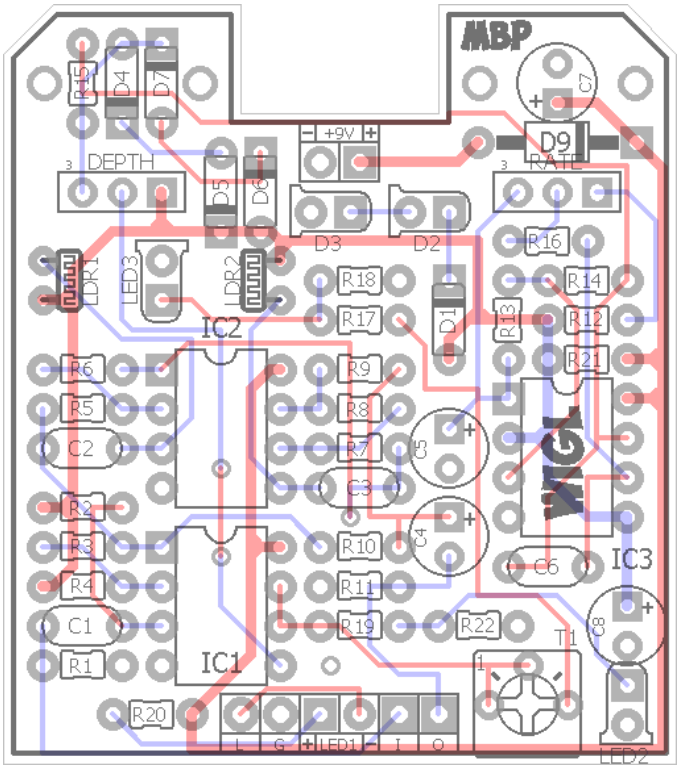
WIGL

FX TYPE: Univibe-ish

1.7” W x 1.925” H





B.O.M.

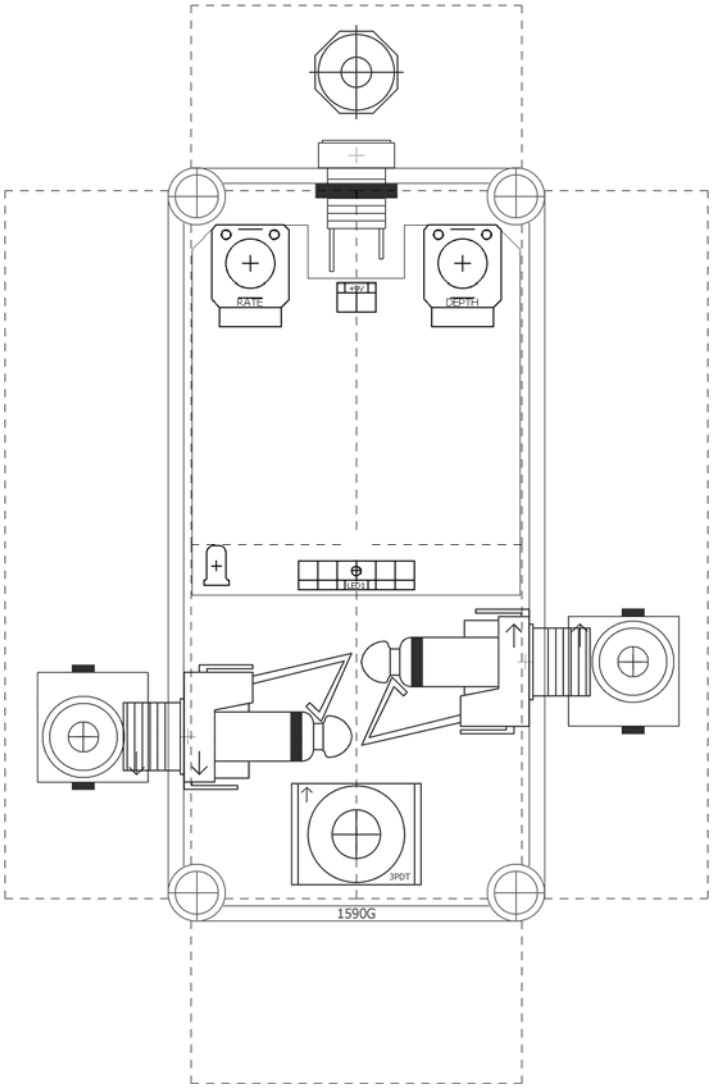
Resistors		Caps		Diodes	
R1	10M	C1	1n	D1	1n914
R2	10M	C2	10n	D2, D3	Red LED
R3	47k	C3	100n	D4 - D7	1n914
R4	47k	C4	1uF	D9	1N5817
R5	10k	C5	10uF	LED2	Red LED
R6	10k	C6	100n	LED3	Red LED
R7	10k	C7	47uF	**Photocells**	
R8	10k	C8	10uF	LDR1, 2	*notes
R9	10k			**IC's**	
R10	10k			IC1	TL072
R11	100k			IC2	TL072
R12	1k			IC3	TL062
R13	100k			**Trimmer**	
R14	47k			T1	1k
R15	22k			**Pots**	
R16	470k			DEPTH	100kB
R17	330R			RATE	100kB
R18	1k				
R19	1k				
R20	4k7				
R21	10k				
R22	1k				

Shopping List

Value	QTY	Type	Rating
330R	1	Metal / Carbon Film	1/8W
1k	4	Metal / Carbon Film	1/8W
4k7	1	Metal / Carbon Film	1/8W
10k	7	Metal / Carbon Film	1/8W
22k	1	Metal / Carbon Film	1/8W
47k	3	Metal / Carbon Film	1/8W
100k	2	Metal / Carbon Film	1/8W
470k	1	Metal / Carbon Film	1/8W
10M	2	Metal / Carbon Film	1/8W
1n	1	Film	16v min.
10n	1	Film	16v min.
100n	2	Film	16v min.
1uF	1	Electroltyic	16v min.
10uF	2	Electroltyic	16v min.
47uF	1	Electroltyic	16v min.
1n914	5		
Red LED	3	Diffused	3mm
1N5817	1		
LDR	2	*see notes	
TL072	2		
TL062	1		
1k	1	Bourns 3362P	
100kB	2	PCB Right Angle	9mm

1590G Drill Guide

3.66”W x 5.63”H



LED1 can be mounted directly to the PCB. Drill spot is directly above the “LED” text.
LED2 (optional) drill spot is on the left side.

Overview

The Wigl is a truncated version of the John Hollis Easyvibe. The Easyvibe is, itself, a very clever approximation of a Univibe circuit using op-amps instead of transistors. The Wigl takes it one step further and removes two of the four phase-changing stages for a two-stage vibe. The good news is that even this half-circuit of an approximated circuit cops a pretty decent Univibe feel. It's not a replacement for the real thing, but it definitely has much of the feel and sound of a Univibe in an incredibly small package. And, it will be much easier to build!

Controls

Rate: Speed of the vibe from slow to fast.
Depth: Vibe intensity from least to most-est.
T1: Adjusts the overall brightness of LED3 (set for 2/3rd – full up)

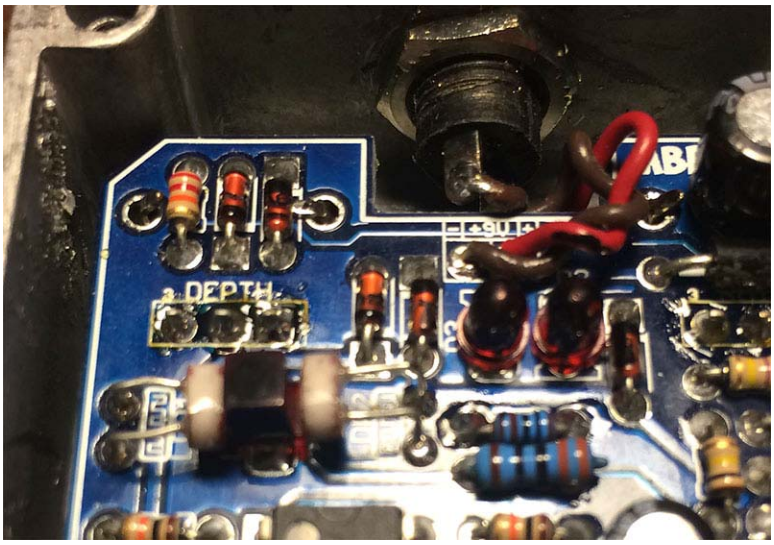
Notes

9203 photocell (What I used in my build): http://smallbear-electronics.mybigcommerce.com/photocells-cds-5mm-diameter/

NSL-7532 (more expensive but meant for a Univibe): http://smallbear-electronics.mybigcommerce.com/photocell-silonex-advanced-photonix-hi-dark-nsl-7532/

There are a lot of LEDs on the PCB. Here's what they do.

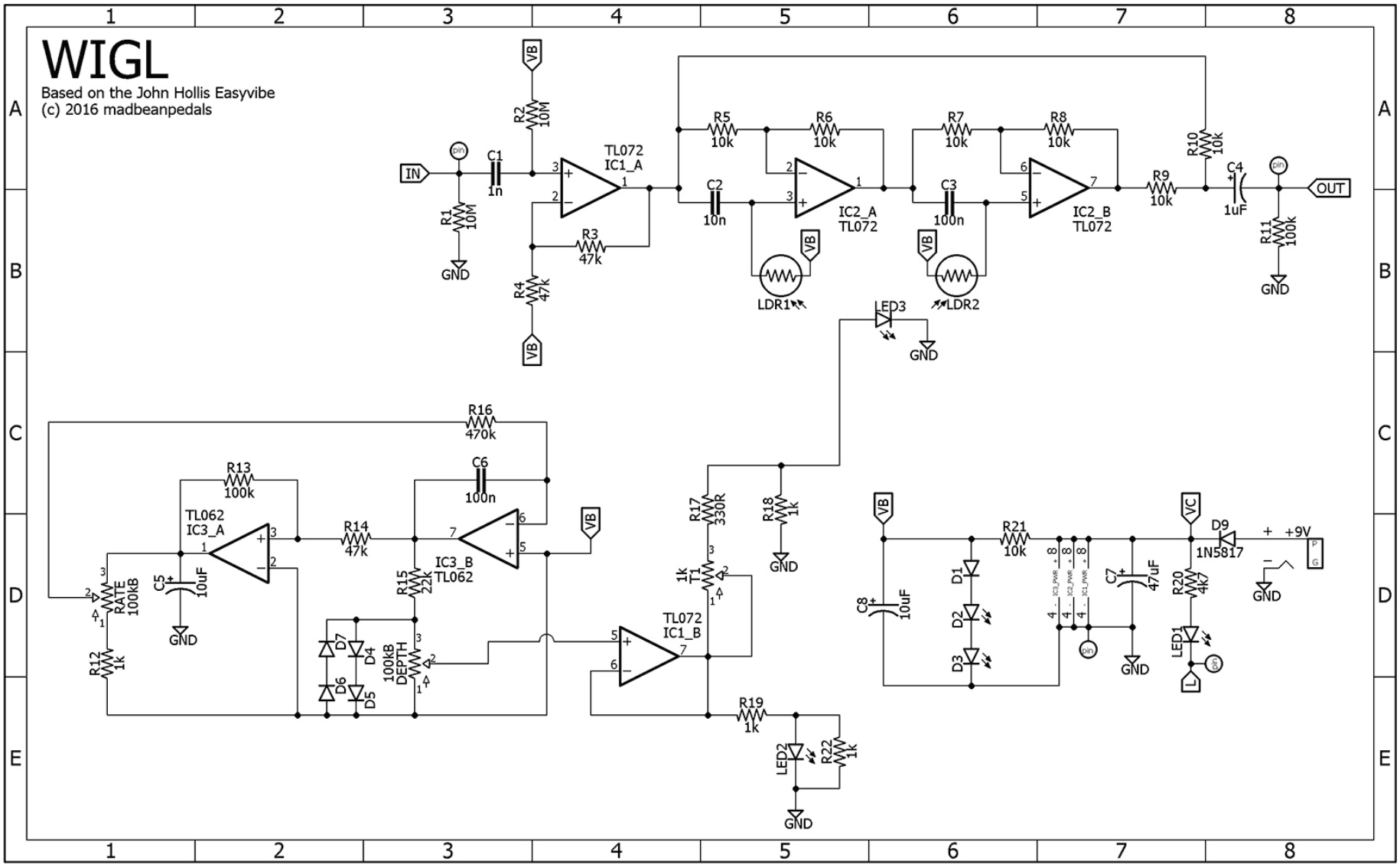
- LED1 is your indicator. This can be whatever LED type you want. All other LED's should be Red, Diffused, 3mm.
- LED2 is an optional Rate indicator. If you don't want to use that, omit LED2, R19 and R22.
- D2 and D3 are for voltage biasing. These will light up and I recommend you use some black Sharpie to block their light. This will prevent them from interacting with the photocells.
- LED3 is what drives the photocells. You should point your photocells towards this LED like the pic below. Notice I used a square body type for LED3 on my build. This is not essential but it does have the advantage of being able to black out the sides and top with a Sharpie so all the light it emits goes to the two photocells.
- Square LED: http://www.mouser.com/ProductDetail/Lumex/SSL-LX3353ID/?qs=sGAEpiMZZMt82OzCyDsLFMNvpIFdGVrLe97dNeIQr%2fM%3d



Last note: The "vibe-ishness" is most prominent when the Rate pot is 1/3rd up and higher. At the lowest Rate setting you will get more of a mild, slow phaser effect which is actually quite nice. It's not very intense since there is no feedback in the circuit.

Voltages

IC1	V		IC2	V		IC3	V
1	4.11		1	4.12		1	varies
2	4.11		2	4.12		2	4.11
3	2.55		3	4.11		3	varies
4	0		4	0		4	0
5	varies		5	4.11		5	4.11
6	varies		6	4.11		6	4.11
7	varies		7	4.1		7	varies
8	9.14		8	9.13		8	9.14


WIGL
Based on the John Hollis Easyvibe
(c) 2016 madbeanpedals
IN
OUT
VB
GND
TL072
IC1_A
IC2_A
TL072
IC2_B
TL072
IC3_A
TL062
IC3_B
TL062
TL072
IC1_B
LDR1
LDR2
LED1
LED2
LED3
D1
D2
D3
D4
D5
D6
D7
D9
1N5817
+9V
VC
R1 10M
R2 10M
R3 47k
R4 47k
R5 10k
R6 10k
R7 10k
R8 10k
R9 10k
R10 10k
R11 100k
R12 1k
R13 100k
R14 47k
R15 22k
R16 470k
R17 330R
R18 1k
R19 1k
R20 4k7
R21 10k
R22 1k
C1 1n
C2 10n
C3 100n
C4 1uF
C5 10uF
C6 100n
C7 47uF
C8 10uF
RATE 100kB
100kB DEPTH