

HONEYDRIPPER

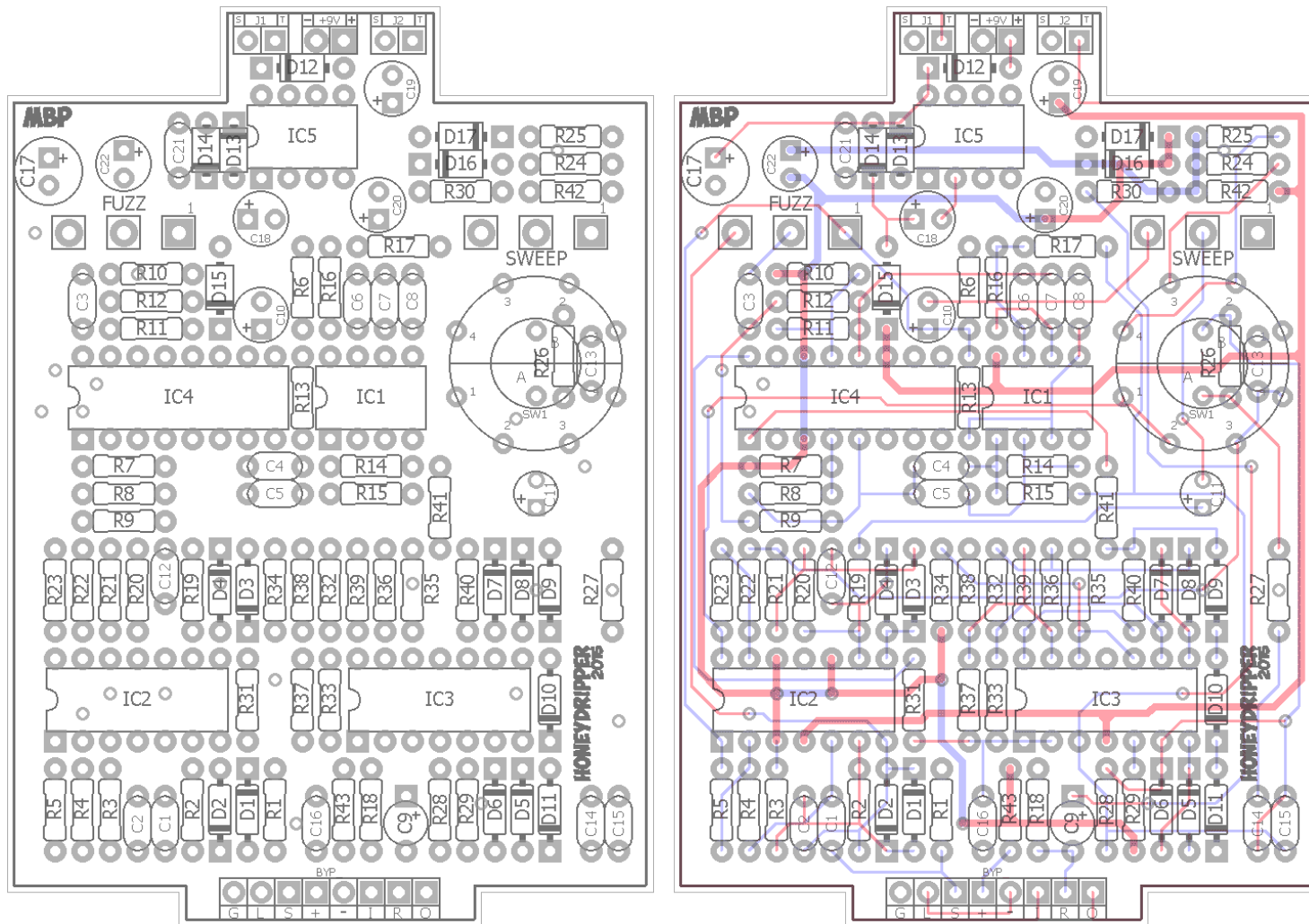
FX Type: Filter

Based on the Colorsound® Diphonizer™

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2015 Version

2.35" W x 3.35" H



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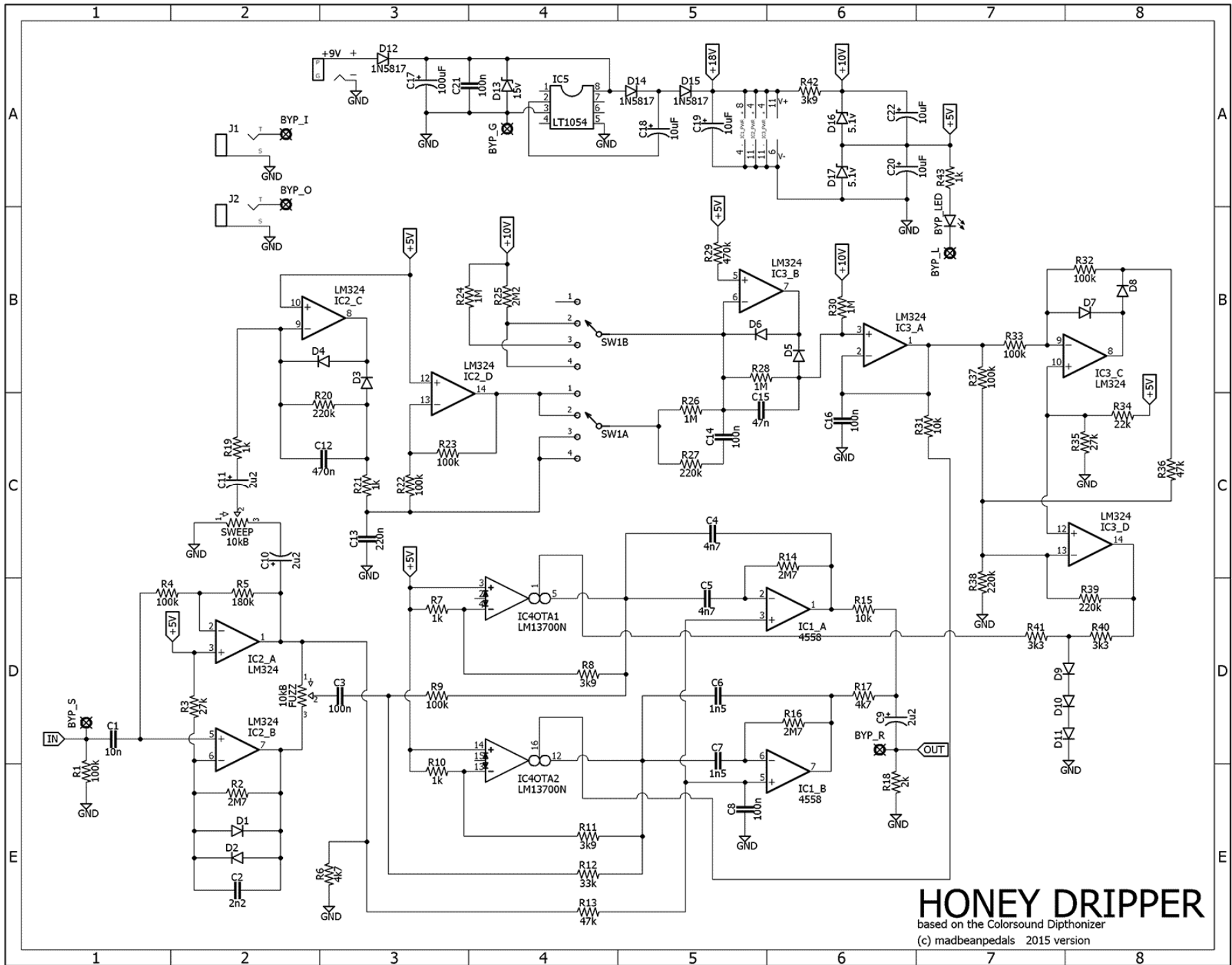
B.O.M.							
Resistors		Resistors		Caps		Diodes	
R1	100k	R23	100k	C1	10n	D1 - D11	1n914
R2	2M7	R24	1M	C2	2n2	D12	1N5817
R3	27k	R25	2M2	C3	100n	D13	15v Zener
R4	100k	R26	1M	C4	4n7	D14, D15	1N5817
R5	180k	R27	220k	C5	4n7	D16, D17	5.1v Zener
R6	4k7	R28	1M	C6	1n5	IC	
R7	1k	R29	470k	C7	1n5	IC1	4558
R8	3k9	R30	1M	C8	100n	IC2	LM324
R9	100k	R31	10k	C9	2u2	IC3	LM324
R10	1k	R32	100k	C10	2u2	IC4	LM13700
R11	3k9	R33	100k	C11	2u2	IC5	LT1054
R12	33k	R34	22k	C12	470n	Switch	
R13	47k	R35	27k	C13	220n	SW1	2P4T
R14	2M7	R36	47k	C14	100n	Pots	
R15	10k	R37	100k	C15	47n	SWEEP	10kB
R16	2M7	R38	220k	C16	100n	FUZZ	10kB
R17	4k7	R39	220k	C17	100uF		
R18	2k	R40	3k3	C18	10uF		
R19	1k	R41	3k3	C19	10uF		
R20	220k	R42	3k9	C20	10uF		
R21	1k	R43	1k	C21	100n		
R22	100k			C22	10uF		

The ~~rotary switch is included~~ with the purchase of the HoneyDripper 2015 PCB. The switch has a knurled shaft instead of a smooth one like the Alpha in the previous version. Just be sure that you order/use a knob made for knurled shafts or you're going to have a bad time.

2017 Update: The rotary switch is no longer included with this PCB. However, it is now available from Smallbear: <http://smallbear-electronics.mybigcommerce.com/rotary-switch-miniature-2p4t/>

Shopping List

Value	QTY	Type	Rating
1k	5	Metal / Carbon Film	1/4W
2k	1	Metal / Carbon Film	1/4W
3k3	2	Metal / Carbon Film	1/4W
3k9	3	Metal / Carbon Film	1/4W
4k7	2	Metal / Carbon Film	1/4W
10k	2	Metal / Carbon Film	1/4W
22k	1	Metal / Carbon Film	1/4W
27k	2	Metal / Carbon Film	1/4W
33k	1	Metal / Carbon Film	1/4W
47k	2	Metal / Carbon Film	1/4W
100k	8	Metal / Carbon Film	1/4W
180k	1	Metal / Carbon Film	1/4W
220k	4	Metal / Carbon Film	1/4W
470k	1	Metal / Carbon Film	1/4W
1M	4	Metal / Carbon Film	1/4W
2M2	1	Metal / Carbon Film	1/4W
2M7	3	Metal / Carbon Film	1/4W
1n5	2	Film	25v min.
2n2	1	Film	25v min.
4n7	2	Film	25v min.
10n	1	Film	25v min.
47n	1	Film	25v min.
100n	5	Film	25v min.
220n	1	Film	25v min.
470n	1	Film	25v min.
2u2	3	Electrolytic	25v min.
10uF	4	Electrolytic	25v min.
100uF	1	Electrolytic	25v min.
1n914	11		
1N5817	3		
15v Zener	1		1/2 or 1W
5.1v Zener	2		1/2 or 1W
4558	1		
LM324	2		
LM13700	1		
LT1054	1		
2P4T	1	included with PCB	
10kB	2	PCB Right Angle	16mm



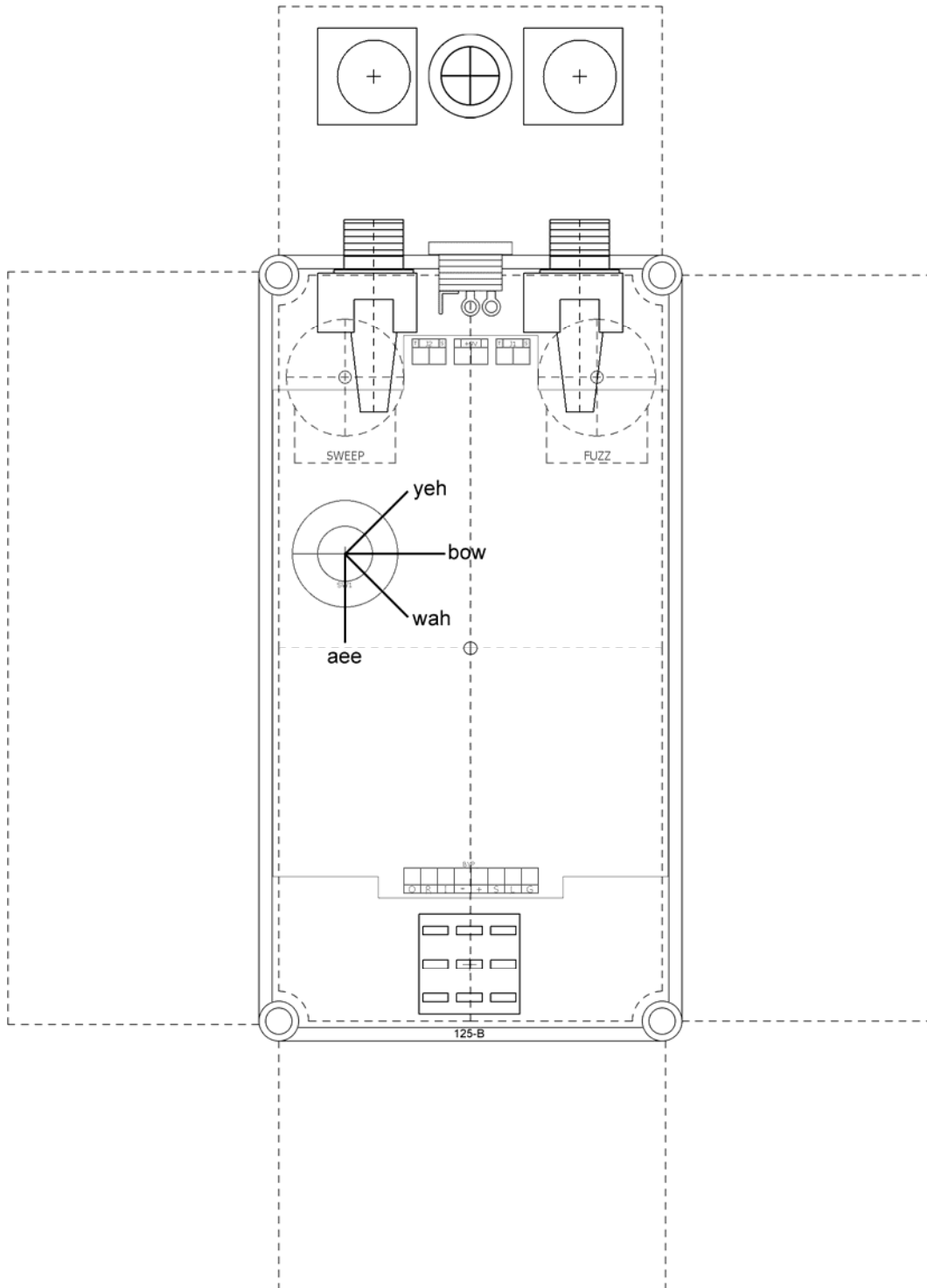
HONEY DRIFTER

based on the Colorsound Diphonizer

(c) madbeanpedals 2015 version

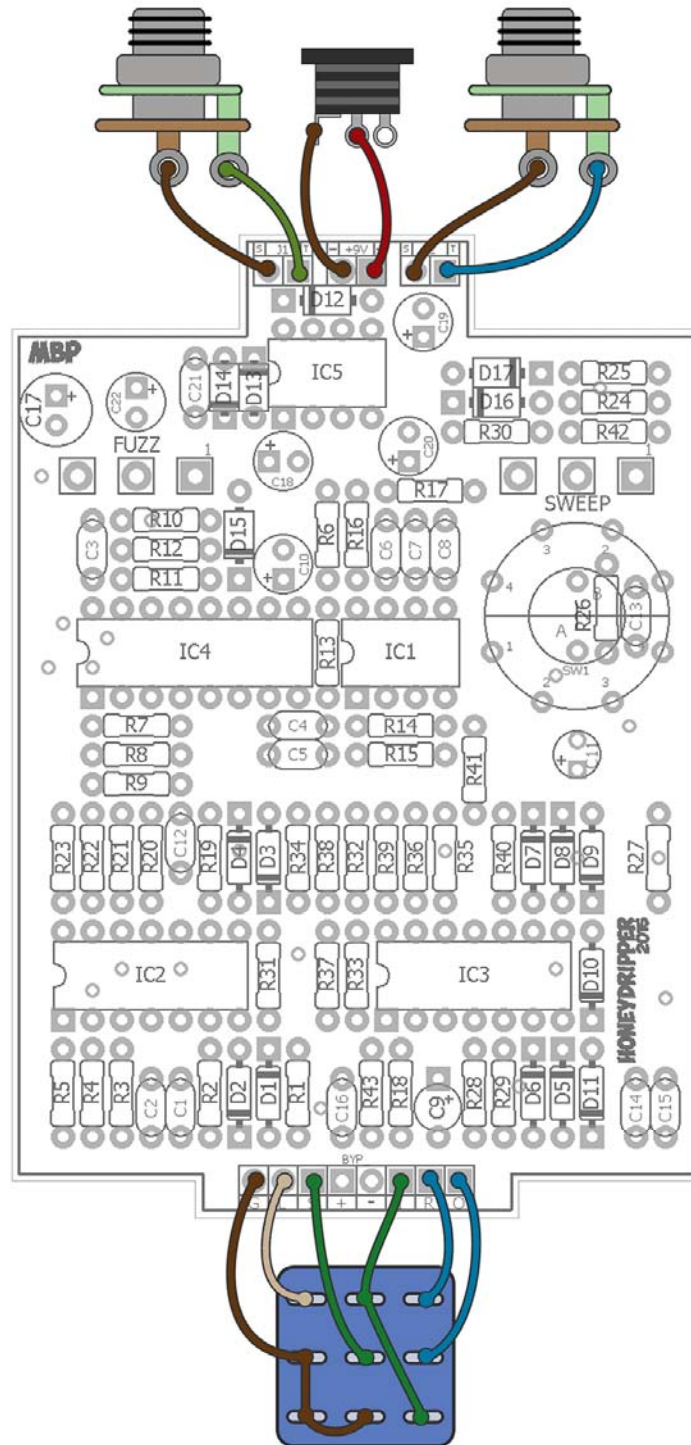
125B Drill Guide

5.52" W x 7.65" H



Tip: When mounting the knob on the rotary switch, turn it to the "bow" setting. This will allow you to mount the knob perpendicular to the enclosure so it will line up with the hash marks shown above.

Wiring Guide



Pots, Switch and indicator LED should be soldered directly to the PCB.

The **Honey Dripper** is based on the Colorsound Diphonizer™, a very unusual and short lived auto-wah type effect. The Diphonizer™ was only made for a couple of years in the late 70's and thus quite rare. Current eBay offerings price these somewhere close to \$1000. The effect itself is constructed from two parallel multiple feedback filters whose intensity is controlled by an envelope filter. Additionally, there is a four way rotary switch which changes the overall "vowel" driver produced by the envelope.

2015 version

- The HoneyDripper has been re-designed to utilize the LM137000 instead of the stock CA3080 (which are becoming increasingly rare and ever-more expensive).
- The Alpha rotary switch has been replaced with a much smaller 2P4T (this was necessary to make the new layout fit in a 125B). **The rotary switch is included with the PCB.**
- The Fuzz pot operation has been switched to clean (full-off) to max fuzz (full-on). This was done as matter of personal preference - it has no impact on the effect other than to make the control more logical.

Controls

Fuzz – Controls the amount of fuzz blended in with the clean input signal. Note that the "fuzz" here is not really all that fuzzy. It's more of a gentle overdrive.

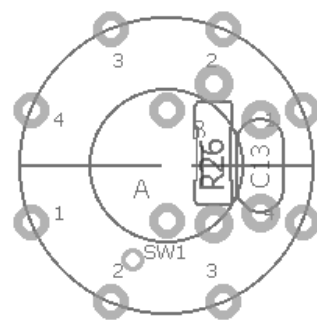
Sweep – Sets the intensity of the envelope that drives the two filters. The best settings tend to be 1/2 to full up.

SW1 – This is a 2-pole, 4-terminal rotary switch which changes the vowel type (labeled Yeh, Bow, Wah, Aae).

Mod

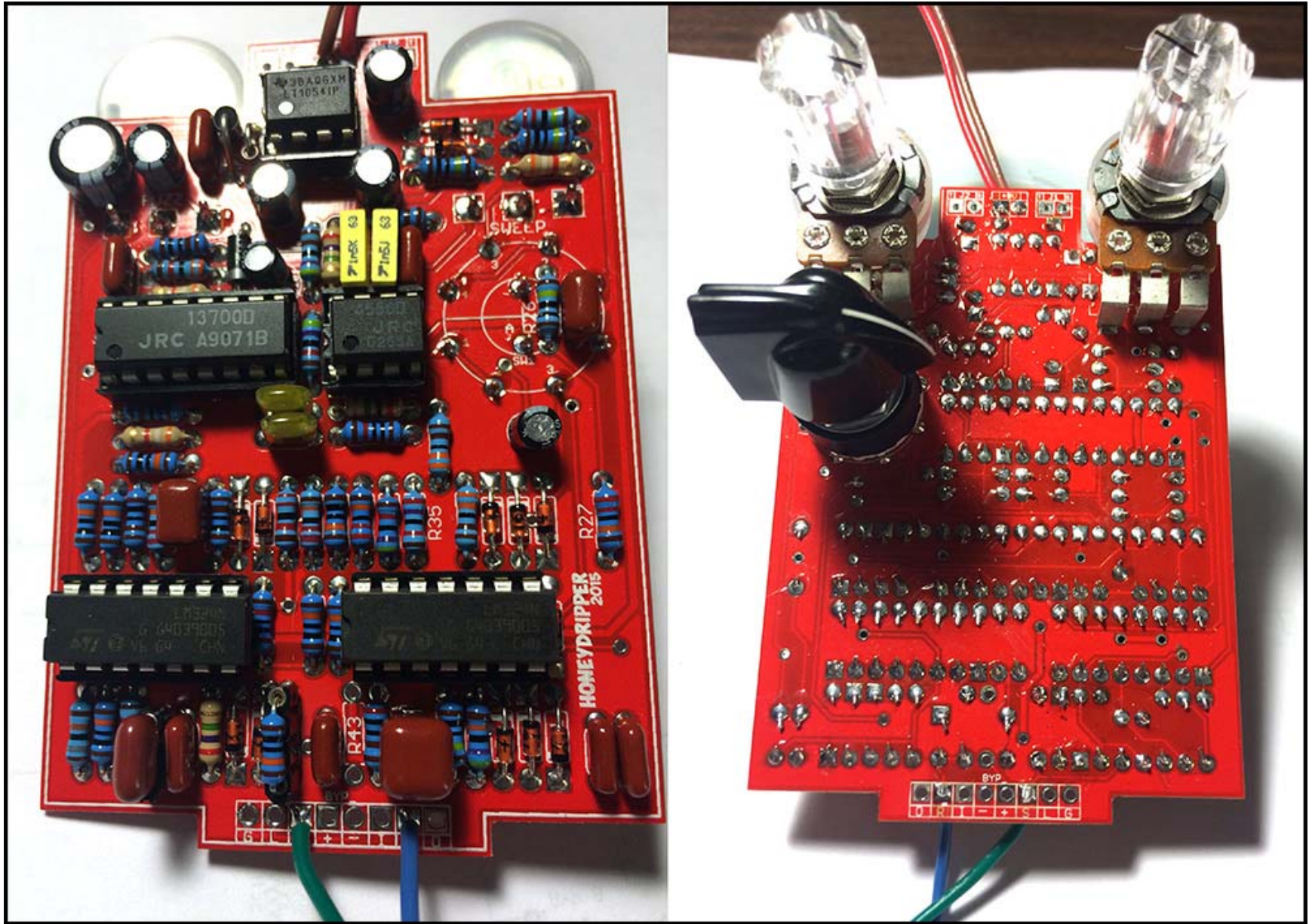
- Change **C2** from 2n2 to a smaller value for a brighter sound. My preference here is a 560pF or 680pF. I would not go lower than that (too much noise).

There were a couple other mods listed in the previous version, but overall I think the stock version (plus the mod listed above) is the one to build. I've tested out a lot of possible mods and I keep coming back to mostly stock.



Note: R26 label on the silkscreen was moved off-center. This pic shows the exact location for R26.

Voltages - 9.42 supply									
IC1	4558	IC2	LM324	IC3	LM324	IC4	LM13700	IC5	LT1054
1	4.73	1	4.74	1	0.45	1	35mV	1	1.44
2	4.74	2	4.75	2	0.45	2	varies	2	4.93
3	4.71	3	4.74	3	0.45	3	4.73	3	0
4	0	4	17.42	4	17.51	4	4.73	4	28mV
5	4.72	5	4.69	5	4.54	5	4.73	5	0
6	4.74	6	4.74	6	4.74	6	0	6	2.43
7	4.68	7	4.88	7	38mV	7	ignore	7	1.36
8	17.49	8	4.56	8	5.25	8	ignore	8	9.18
		9	4.74	9	2.62	9	ignore		
		10	4.74	10	2.61	10	ignore		
		11	0	11	0	11	17.52		
		12	4.74	12	2.61	12	4.73		
		13	4.74	13	2.63	13	4.73		
		14	4.74	14	35mV	14	4.73		
						15	varies		
						16	0.44		



This unit was built stock except for a 680pF cap in C2 and a 1uF film cap instead of the 2u2 electrolytic for C9. R1 was also socketed to try higher values but did not seem to make much of an impact when tested with both single coils and humbuckers.