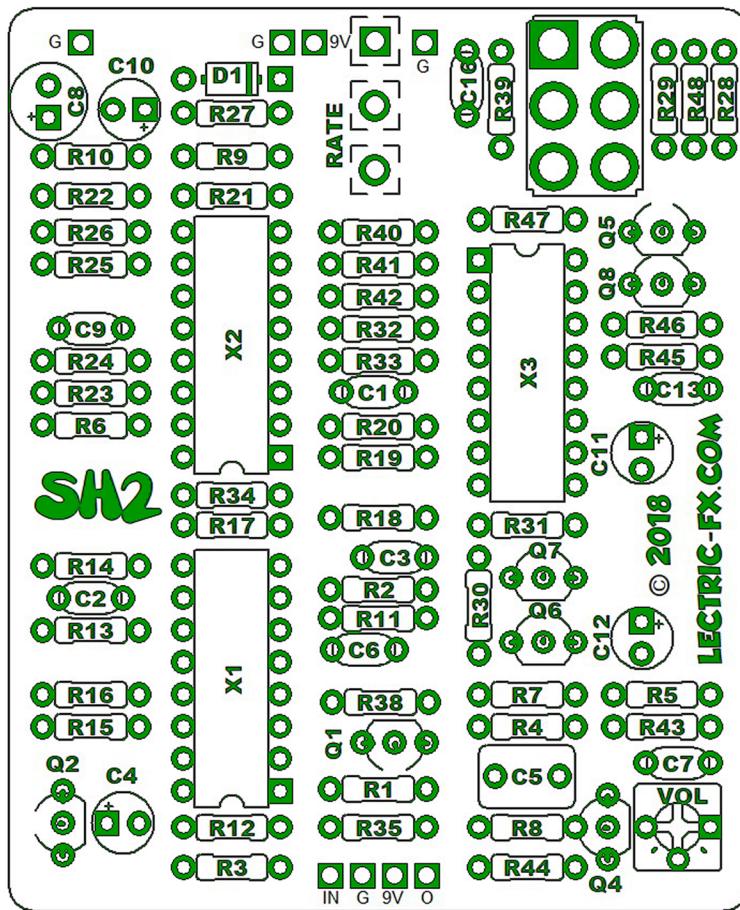


SH2

(SpaceHarp2)
4-Stage Phaser

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The **SH2** is a 4 stage DIY phaser project based on the EHX V2 Small Stone. This is the version that comes to mind when most players think of the classic effect.

Compared to our first Spaceharp project (which was the older V1), this one uses a different input stage, feedback network/color sound, and a different LFO section. It features an output boost with internal trimmer for set-and-forget makeup volume to overcome the original's volume drop. Here, we utilize 3 x Dual OTA's rather than the 5x out-of-production (and hard-to-source) single OTA CA3094 (or the 5x CA3080 and a pair of transistors for each filter stage of similar DIY projects), while retaining the same sounds and functionality of the original.

There is a difference in volume between the 2 sides of the COLOR switch, just as the original had. Three alternate part values are mentioned in the BOM which could help even things out somewhat. These values are the very ones EHX uses in the reissue of the effect.

BOM

Part #	Value						
R1	100k	R24	27k	C1	6n8	D1	1n4001
R2	470k	R25	27k	C2	6n8	Q1	2n5088
R3	10k	R26	10k	C3	6n8	Q2	2n5087
R4	4k7	R27	10k	C4	10uF	Q4	2n5088
R5	470k	R28	4k7	C5	1uF	Q5	2n5087
R6	27k	R29	22k	C6	6n8	Q6	2n5088
R7	30k	R30	47k	C7	100n	Q7	2n5088
R8	47k	R31	2k	C8	220u	Q8	2n5087
R9	47R	R32	7k5	C9	6n8		
R10	15k	R33	27k	C10	33uF		
R11	1k	R34	100R	C11	10uF	X1	LM13700
R12	30k	R35	2M2	C12	33uF	X2	LM13700
R13	27k	R38	4k7	C13	100n	X3	LM13700
R14	10k	R39	270K	C16	100n		
R15	1k	R40	27k			COLOR	DPDT
R16	27k	R41	4k7				
R17	27k	R42	3k3			RATE	1MC
R18	10k	R43	10k			VOL	100k
R19	1k	R44	470R				
R20	27k	R45	27k				
R21	27k	R46	1k8				
R22	10k	R47	1k				
R23	1k	R48	15k				

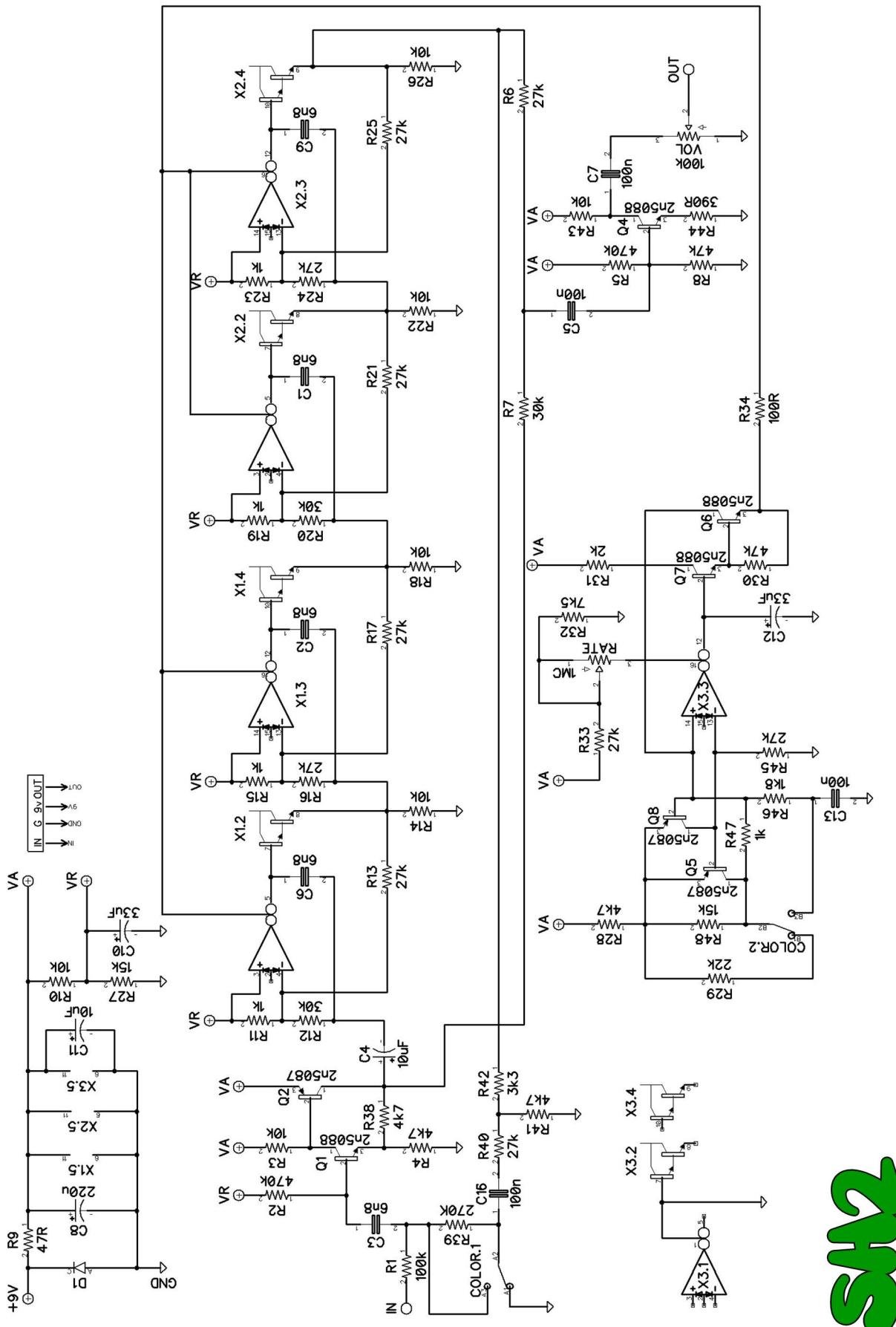
QTY

Part	Value	QTY	Part	Value	QTY
47R	1		6n8	5	
100R	1		100n	1	
470R	1		1uF (film)		
1k	5		10uF	2	
1k8	1		33uF	2	
2k	1		220uF	1	
3k3	1				
4k7	4		1n4001	1	
7k5	1				
10k	7		2n5088	4	
15k	2		2n5087	3	
22k	1		LM13700	3	
27k	11				
30k	2				
47k	2		DPDT On On	1	
100k	1				
270k	1		1MC	1	
470k	2				
2M2	1		100k tr	1	

The alternate "reissue" values are as follows:

R40 to 68k
R42 to 2k2
C16 to 3n3

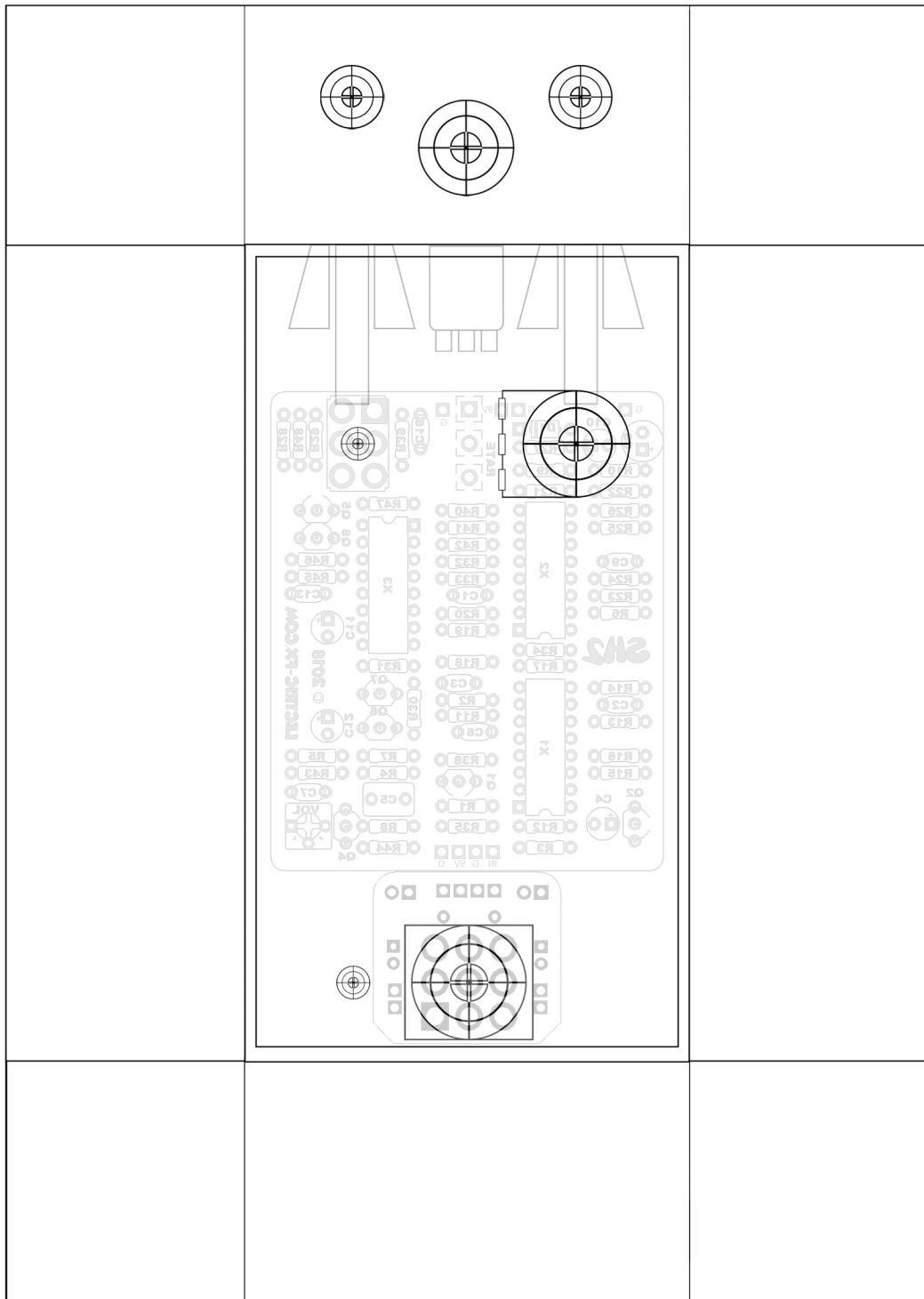
As mentioned previously, these parts values *may* help to even out the change in volume between the 2 COLOR switch settings.



SH2

Drill Guide Suggestion (Top Mount)

125b- Untested!



Stomp switch shown with optional 3pdt "Thripidity" pcb from lectric-fx