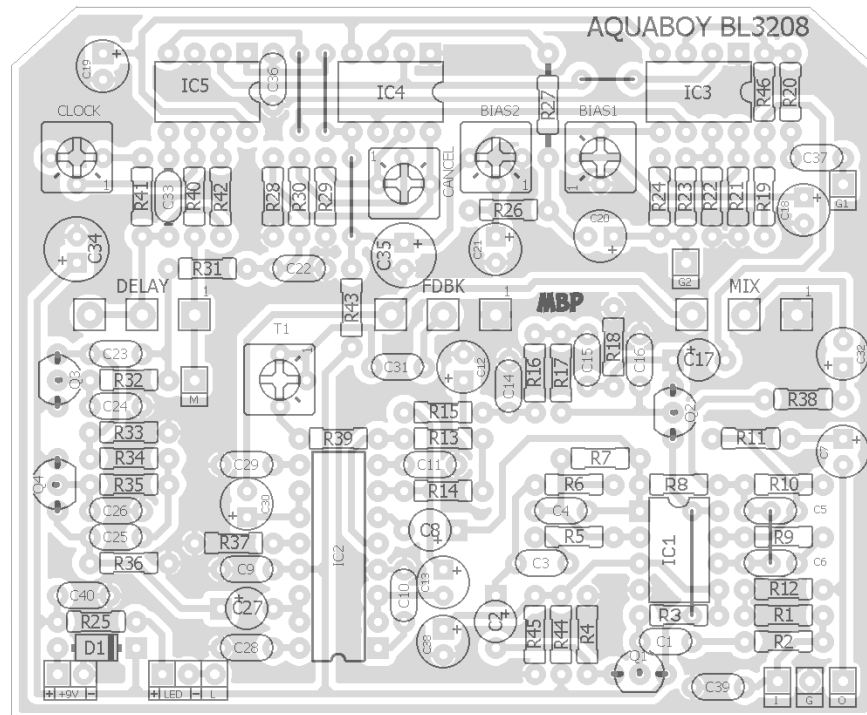


# AQUABOY BL3208

FX TYPE: Delay

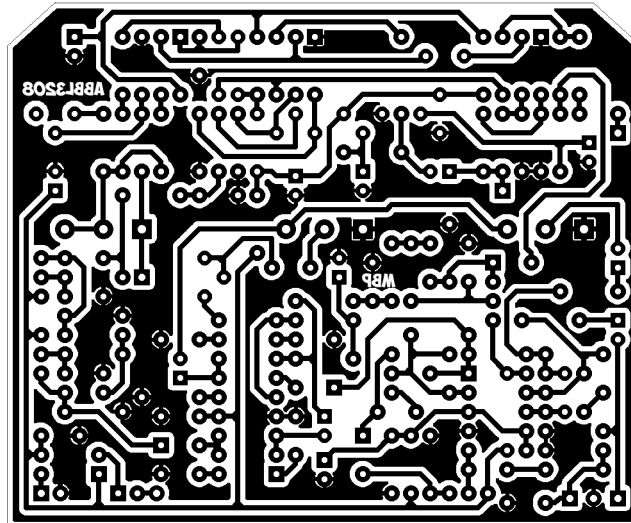
Based on the Boss® DM-2™

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- Note the jumpers -

3.3" W x 2.73" H



*Etcher's Paradise projects are intended for DIY use only! Commercial pedal manufacturing using these materials is strictly forbidden.*

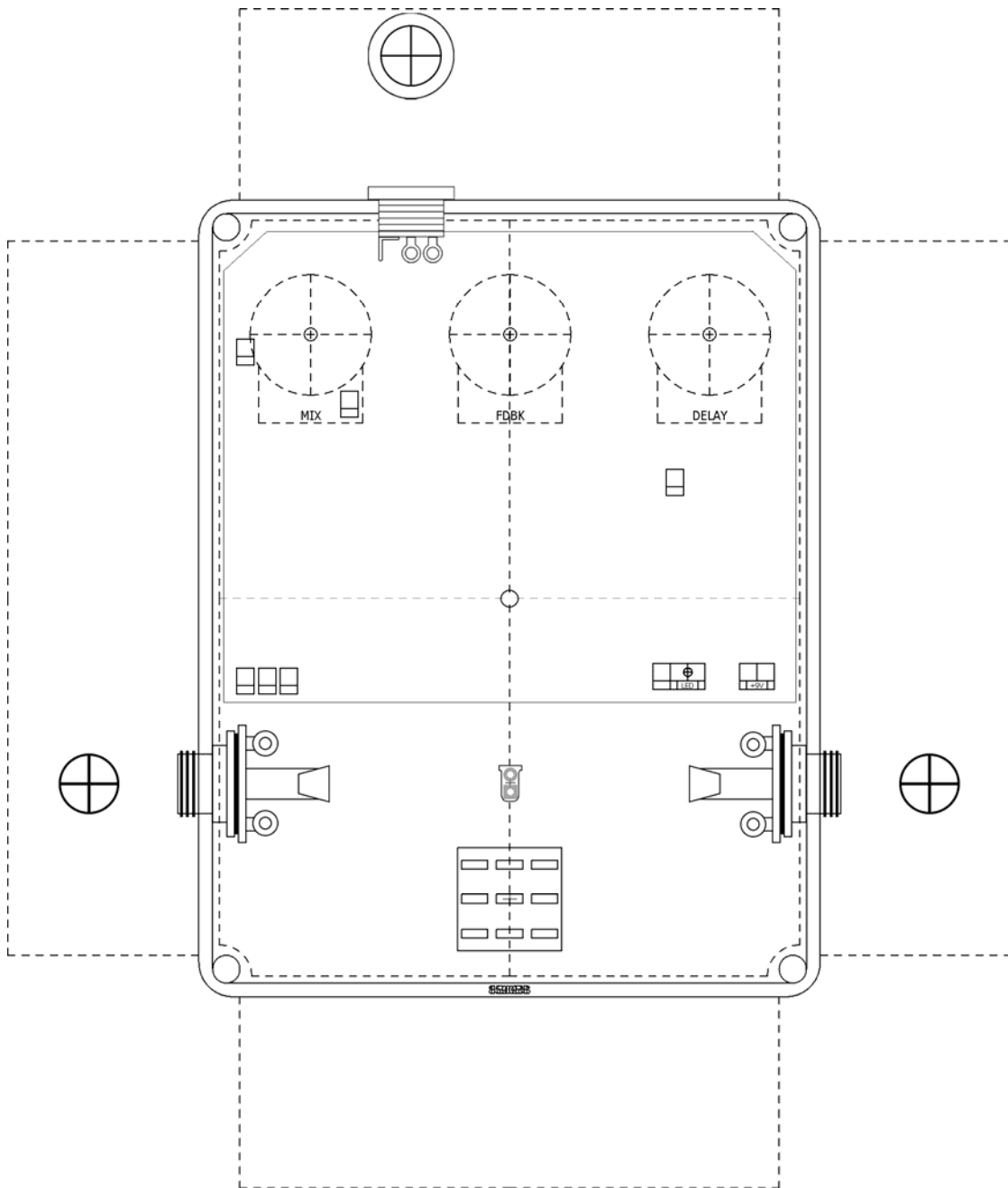
B.O.M.					
Resistors		Caps		Diodes	
R1	1M	C1	47n	D1	1N5817
R2	10k	C2	1uF	Transistors	
R3	470k	C3	6n8	Q1 - Q4	MPSA18
R4	10k	C4	100pF	IC's	
R5	10k	C5	100pF	IC1	TL072
R6	47k	C6	6n8	IC2	NE571
R7	47k	C7	1uF	IC3	BL3208
R8	47k	C8	1uF	IC4	BL3208
R9	10k	C9	100n	IC5	BL3102
R10	47k	C10	220n	Timers	
R11	150R	C11	100pF	T1	50k
R12	100k	C12	10uF	CANCEL	10k
R13	10k	C13	10uF	CLOCK	1M
R14	10k	C14	6n8	BIAS1	10k
R15	10k	C15	100n	BIAS2	10k
R16	10k	C16	330pF	Pots	
R17	10k	C17	1uF	DELAY	1MB
R18	10k	C18	10uF	FDBK	50kB
R19	100k	C19	10uF	MIX	50kB
R20	100k	C20	1uF		
R21	100k	C21	10uF		
R22	100k	C22	2n2		
R23	5k6	C23	33n		
R24	5k6	C24	1n		
R25	4k7	C25	39n		
R26	100k	C26	330pF		
R27	1k	C27	1uF		
R28	100k	C28	220n		
R29	100k	C29	100pF		
R30	10k	C30	1uF		
R31	10k	C31	220n		
R32	10k	C32	1uF		
R33	10k	C33	100pF		
R34	10k	C34	100uF		
R35	10k	C35	100uF		
R36	10k	C36	100n		
R37	20k	C37	22n		
R38	47k	C38	10uF		
R39	5k1	C39	470pF		
R40	18k	C40	100n		
R41	10k				
R42	22k				
R43	22R				
R44	10k				
R45	10k				
R46	1k				

Shopping List			
Value	QTY	Type	Rating
22R	1	Metal/Carbon Film	1/4W
150R	1	Metal/Carbon Film	1/4W
1k	2	Metal/Carbon Film	1/4W
4k7	1	Metal/Carbon Film	1/4W
5k1	1	Metal/Carbon Film	1/4W
5k6	2	Metal/Carbon Film	1/4W
10k	20	Metal/Carbon Film	1/4W
18k	1	Metal/Carbon Film	1/4W
20k	1	Metal/Carbon Film	1/4W
22k	1	Metal/Carbon Film	1/4W
47k	5	Metal/Carbon Film	1/4W
100k	8	Metal/Carbon Film	1/4W
470k	1	Metal/Carbon Film	1/4W
1M	1	Metal/Carbon Film	1/4W
100pF	5	Ceramic	16v min.
330pF	2	Ceramic	16v min.
470pF	1	Ceramic	16v min.
1n	1	Film	16v min.
2n2	1	Film	16v min.
6n8	3	Film	16v min.
22n	1	Film	16v min.
33n	1	Film	16v min.
39n	1	Film	16v min.
47n	1	Film	16v min.
100n	4	Film	16v min.
220n	3	Film	16v min.
1uF	8	Electrolytic	16v min.
10uF	6	Electrolytic	16v min.
100uF	2	Electrolytic	16v min.
1N5817	1		
MPSA18	4	or, 2N5088, 2N3904	
TL072	1		
NE571	1		
BL3208	2	DIP-8 size	
BL3102	1	DIP-8 size	
50k	1	Bourns 3362P	
10k	3	Bourns 3362P	
1M	1	Bourns 3362P	
1MB	1	PCB Right Angle	16mm
50kB	2	PCB Right Angle	16mm

If possible, use MLCC or Mica for C33 (+/- 5% tolerance) instead of ceramic for best delay results.

# 1590BB Drill Guide

5.79"W x 6.82"H



### Notes

- G1, G2 pads are for adding an optional SPST/SPDT switch for additional feedback (similar to the “Ghost” option on the MBP Deathclaw PT2399 delay). This mod is untested. If you don’t want to include it, simply leave the G1 and G2 pads unconnected and omit R20 and C37.
- The “M” pad is for adding optional modulation (requires separate LFO board).
- The T1 trimmer will allow you to tweak exactly where the FDBK pot goes into self-oscillation.

### Biasing Procedure

- Temporarily remove IC4
- Set FDBK to about 1/3<sup>rd</sup> up.
- Set DELAY, MIX and all trimmers ½ up.
- Audio probe pin3 of IC3 to verify the audio signal is going into the first BBD.
- Audio probe pin7 or 8 of IC3. Adjust BIAS1 until you get the strongest/cleanest delay signal.
- Re-insert IC4.
- Audio probe pin7 or 8 on IC4. Adjust BIAS2 until you get the strongest/cleanest delay signal.
- Set DELAY all the way up.
- Adjust the CLOCK trimmer for maximum delay possible without clock noise (audio whine).
- Test the range of the DELAY pot. You should have slapback up to about 300ms of delay.
- In most cases, the CANCEL trimmer should be left in the middle position.
- Adjust T1 and the FDBK control to set the point where the delay goes into self-oscillation.

# AQUABOY BL3208

Based on the Boss DM-2(tm)  
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