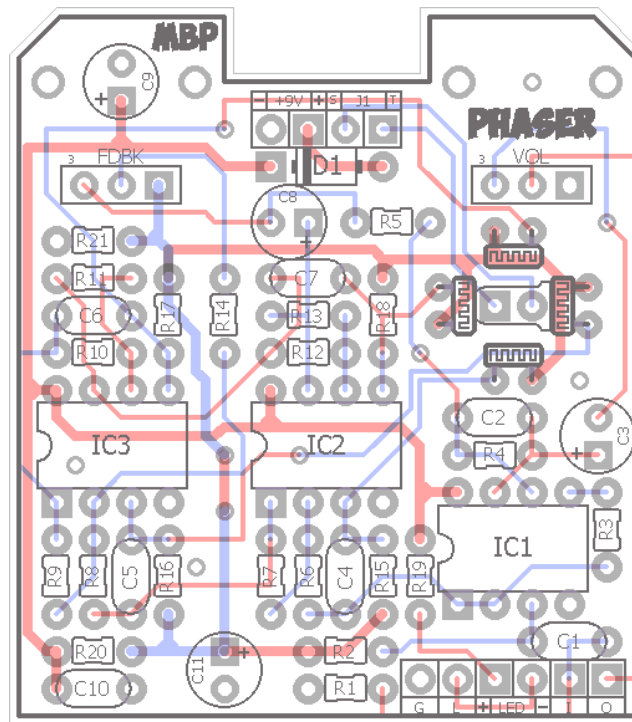
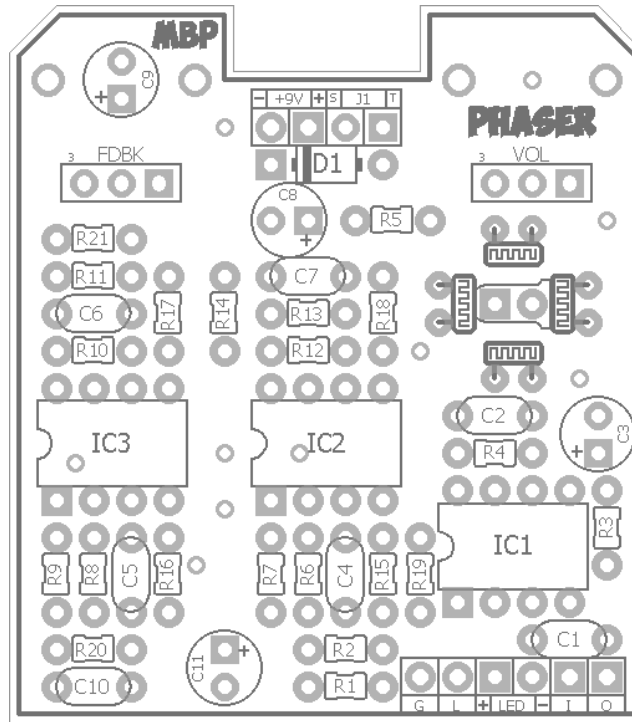


PHASER

FX TYPE: Filter/Modulation

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1.7" W x 1.925" H



Terms of Use: You are free to use purchased circuit boards for both DIY and small commercial operations. You may not offer these PCBs for resale or as part of a "kit" in a commercial fashion. Peer to peer re-sale is, of course, okay.

B.O.M.					
Resistors		Caps		Diodes	
R1	1M	C1	100n	D1	1N5817
R2	1M	C2	33pF	D2	3mm LED
R3	10k	C3	4u7	ICs	
R4	47k	C4	10n	IC1 - IC3	TL072
R5	10k	C5	10n	Photocells	
R6	47k	C6	10n	LDR1-4	9203
R7	47k	C7	10n	Pots	
R8	47k	C8	4u7	FDBK	10kB
R9	47k	C9	47uF	VOL	100kB
R10	47k	C10	100n		
R11	47k	C11	4u7		
R12	47k				
R13	47k				
R14	56k				
R15	220k				
R16	220k				
R17	220k				
R18	220k				
R19	4k7				
R20	10k				
R21	10k				

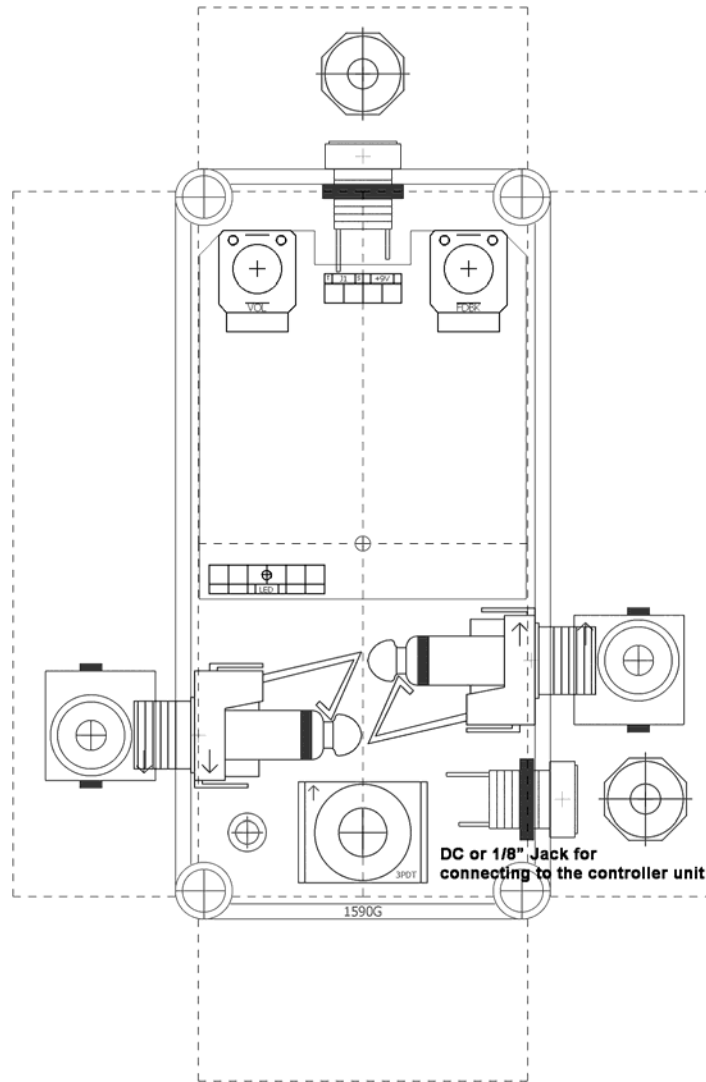
Shopping List			
Value	QTY	Type	Rating
4k7	1	Metal / Carbon Film	1/8W
10k	4	Metal / Carbon Film	1/8W
47k	9	Metal / Carbon Film	1/8W
56k	1	Metal / Carbon Film	1/8W
220k	4	Metal / Carbon Film	1/8W
1M	2	Metal / Carbon Film	1/8W
33pF	1	Ceramic / MLCC	16v min.
10n	4	Film	16v min.
100n	2	Film	16v min.
4u7	3	Electrolytic	16v min.
47uF	1	Electrolytic	16v min.
1N5817	1		
LED	1	Red, Diffused	3mm
LDR	4	9203	
TL072	3		
10kB	1	PCB Right Angle	9mm
100kB	1	PCB Right Angle	9mm

Note – If you are building the Phaser for the 1590G enclosure, you will need to use 1/8W resistors, low profile electrolytics and a low-profile 3PDT switch (see the 1590G [build guide](#) and [component buying guide](#) for more information). If you are building it in a 1590B, you can use 1/4W resistors, regular sized electrolytics and 3PDT switch.

9203 photocell: <http://smallbear-electronics.mybigcommerce.com/photocells-cds-5mm-diameter/>

1590G Drill Guide

3.65"W x 5.6"H

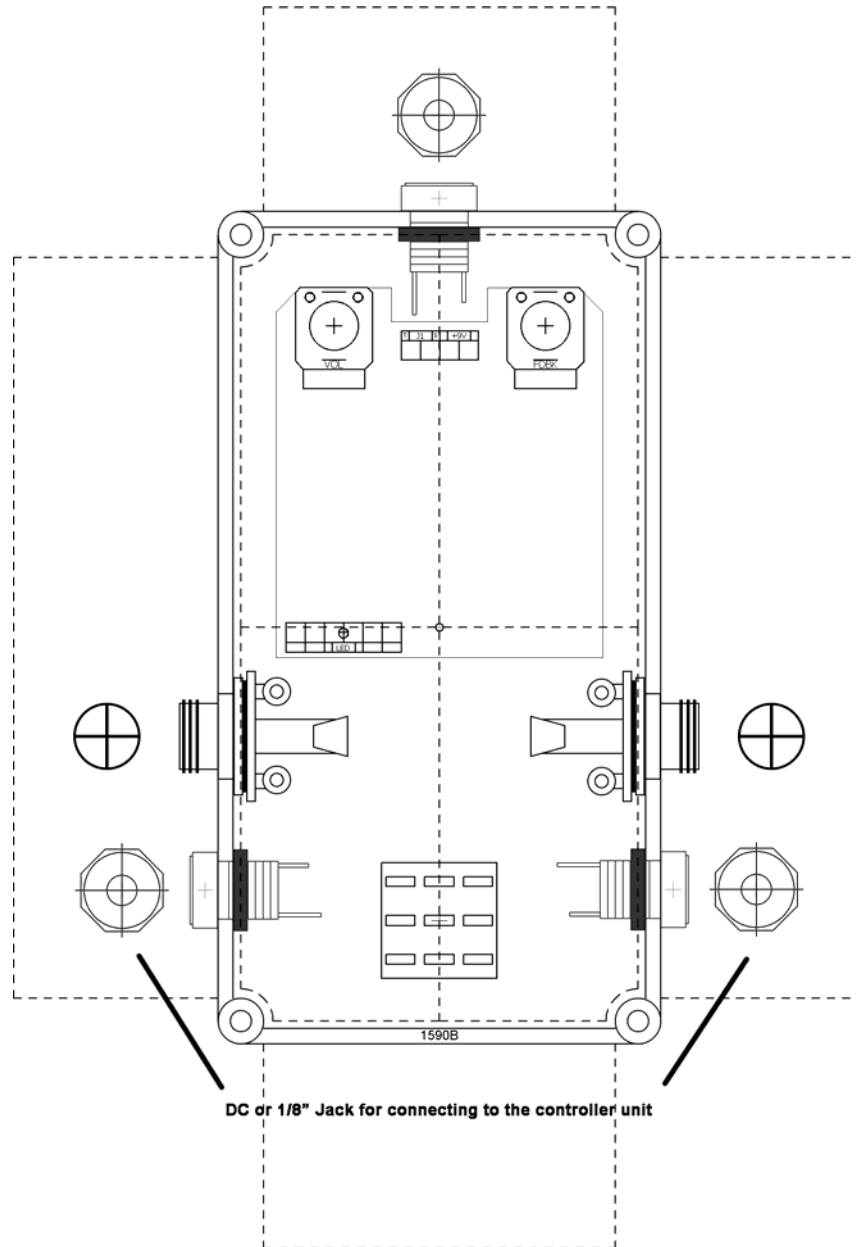


Download the Photoshop drill template :

http://www.madbeanpedals.com/projects/Tapanatorator/Tapanator_DRILL.zip

1590B Drill Guide

4.43"W x 6.46"H



Download the Photoshop drill template [here](#).

Overview

The Phaser project is designed exclusively for the Tapanatorator controller. It is (very loosely) based on a Phase 90 with an optical implementation. The controls are simple; a volume output and a feedback control to increase the intensity of the phaser effect.

Much like a Univibe, the photocells are arranged in a circle around the illuminator (in this case an LED instead of the bulb used in a Univibe) to vary the bias of the associated phase shifter.

You can build the Phaser in a 1590G or 1590B enclosure and the requirements for each are listed on page 2 of this document. Personally, I built mine in a 1590B to make it easier!

Bonus – If you have built the Dig Dug2, this phaser will work with the sequencer output jack on the DD2 without any modification. The sequence pots on the DD2 then act as the LED brightness trimmer used on the Tapanatorator (T1-T3).

