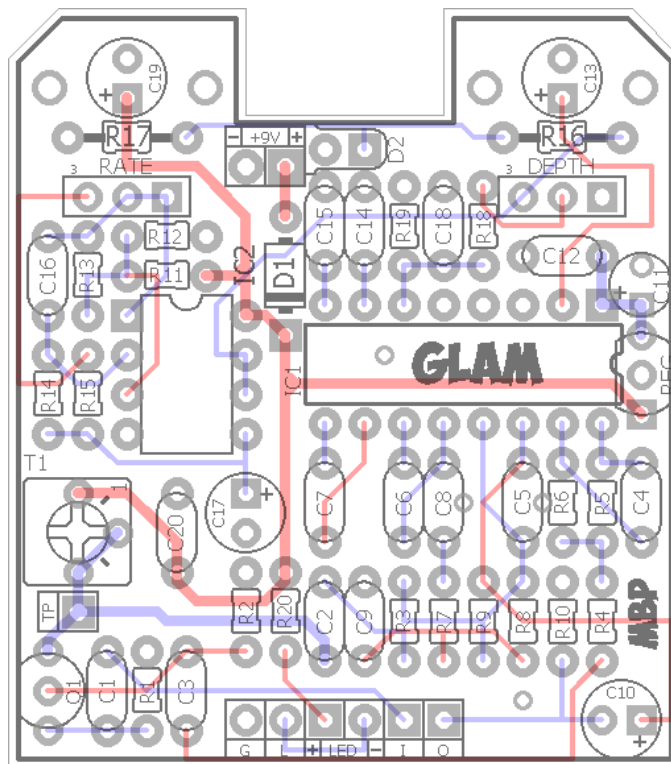
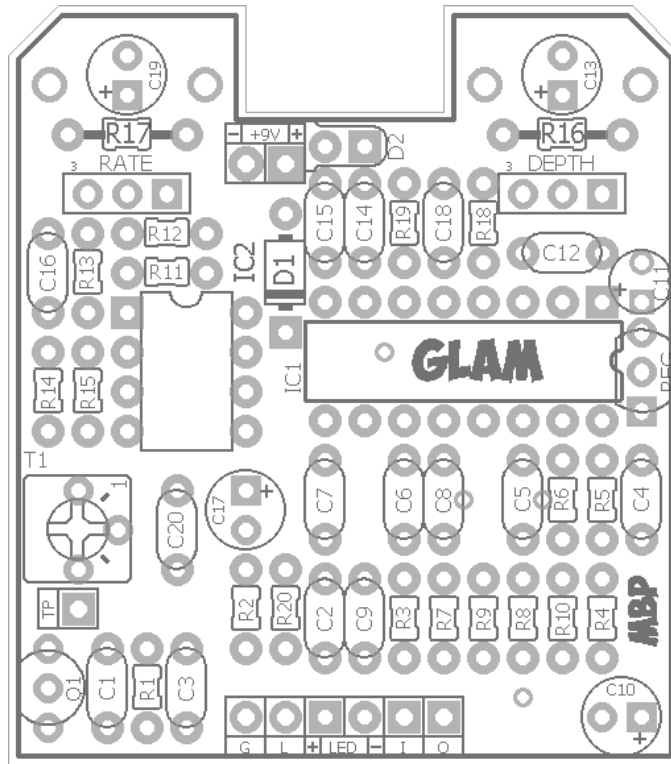


# GLAM

FX TYPE: Chorus

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1.7" W x 1.925" H



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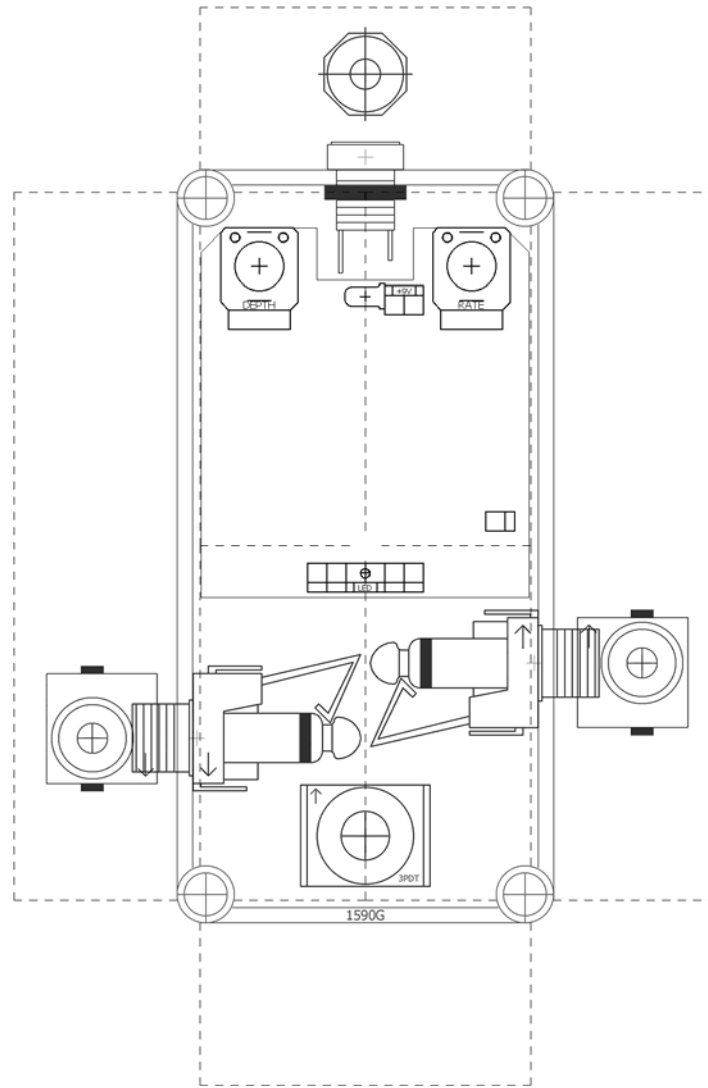
B.O.M.					
Resistors		Caps		Diodes	
R1	4M7	C1	10n	D1	1N5817
R2	10k	C2	22n	D2	LED
R3	20k	C3	220n	Transistor	
R4	10k	C4	2n2	Q1	2N5457
R5	10k	C5	100pF	IC's	
R6	20k	C6	100n	IC1	PT2399
R7	4k7	C7	100n	IC2	TL062
R8	12k	C8	220n	Regulator	
R9	10k	C9	10n	REG	LM78L05
R10	10k	C10	4u7	Trimmer	
R11	100k	C11	10uF	T1	50k
R12	100k	C12	100n	Pots	
R13	220k	C13	10uF	DEPTH	10kB
R14	220k	C14	100n	RATE	100kC
R15	15k	C15	100n		
R16	1k	C16	10n		
R17	omit	C17	10uF		
R18	20k	C18	10n		
R19	2k	C19	47uF		
R20	4k7	C20	100n		

Shopping List			
Value	QTY	Type	Rating
1k	1	Metal / Carbon Film	1/8W
2k	1	Metal / Carbon Film	1/8W
4k7	2	Metal / Carbon Film	1/8W
10k	5	Metal / Carbon Film	1/8W
12k	1	Metal / Carbon Film	1/8W
15k	1	Metal / Carbon Film	1/8W
20k	3	Metal / Carbon Film	1/8W
100k	2	Metal / Carbon Film	1/8W
220k	2	Metal / Carbon Film	1/8W
4M7	1	Metal / Carbon Film	1/8W
100pF	1	Ceramic	16v min.
2n2	1	Film	16v min.
10n	4	Film	16v min.
22n	1	Film	16v min.
100n	6	Film	16v min.
220n	2	Film	16v min.
4u7	1	Electrolytic	16v min.
10uF	1	Tantalum	16v min.
10uF	2	Electrolytic	16v min.
47uF	1	Electrolytic	16v min.
1N5817	1		
LED	1	Red, Diffused	3mm
2N5457	1		
PT2399	1		
TL062	1		
LM78L05	1		
50k	1	Bourns 3362P	
10kB	1	PCB Right Angle, Metal Shaft	9mm
100kC	1	PCB Right Angle, Metal Shaft	9mm

**Also, add a 1M resistor for pull-down (see Notes below)**

# 1590G Drill Guide

3.66"W x 5.63"H



Indicator LED can be mounted directly to the PCB. Drill spot is directly above the “LED” text.  
Drill point for D2 is also shown (right next to the +9v pads).

## Overview

The Glam is a PT2399-based chorus. The chorus effect is achieved by modulating the delay time created with the PT2399 and mixing it with the clean guitar signal much like a “regular” BBD-based design. PT2399 choruses are a bit different in that they typically cannot achieve the very short delay times that a BBD-based chorus can. However, they are a very good approximation and quite musical in their own right.

## Controls

- Rate: The chorus speed from slow to fast.
- Depth: The modulation intensity from least to greatest.

## Notes

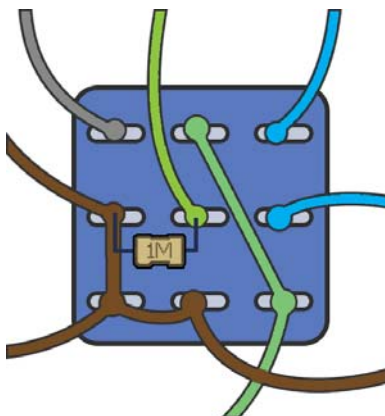
The Glam needs to be biased to operate. Using your multi-meter, attach the black lead to ground and touch the red lead to the “TP” (test point) pad on the Glam PCB. Adjust the T1 trimmer until your multi-meter reads about 6vDC. This is the bias point for the drain of the 2n5457.

The 10uF tantalum capacitor should be soldered in the C11 spot.

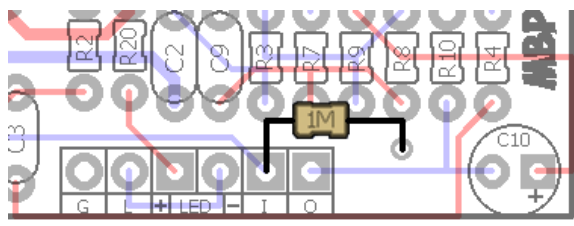
The chorus effect is most prominent when the Depth is 1/2 up and above and the Rate 1/3<sup>rd</sup> up and above. However, at low Rate and Depth settings you get a nice coloration of the signal that adds a bit of “bloom”!

D2 is an external speed indicator. If you do not wish to use it, omit D2 and R16. In all cases, omit R17...it is not needed.

Unfortunately, *I forgot to add a pulldown resistor* on the board before sending it to be manufactured. I do recommend adding one in to prevent switch popping when the effect is turned on. The easiest way to do this is to solder it between the effect input and ground on your 3PDT switch. Use the illustration below as a guide (this follows the [standard wiring](#) I use):



Or, add it to the bottom of the PCB between the input pad and the ground via shown below.



## Mods

To increase the maximum Rate, lower the value of R15.

Bias points and gain can vary from device to device with JFETS. You may experience a small volume boost even with the proper bias. If this bothers you, lower R9 to 8k2 or 7k5.

### Voltages

IC1	V	IC2	V
1	varies	1	5.03
2	varies	2	2.51
3	varies	3	0
4	0	4	0
5	varies	5	2.64
6	varies	6	2.44
7	varies	7	ignore
8	9.13	8	ignore
REG	V	9	2.51
I	9.13	10	2.51
G	0	11	2.51
O	5.03	12	2.51
Q1	V	13	2.51
D	5.94	14	2.51
S	2.9	15	2.51
G	0	16	2.51

# GLAM

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