Glory Drive

Based on:
JHS Morning glory ™

Effect type:
Transport Overdrive

Build difficult:
Average

Number of parts:
Average, total 41 components

Technology:
Dual OpAmp

Power consumption:
9V

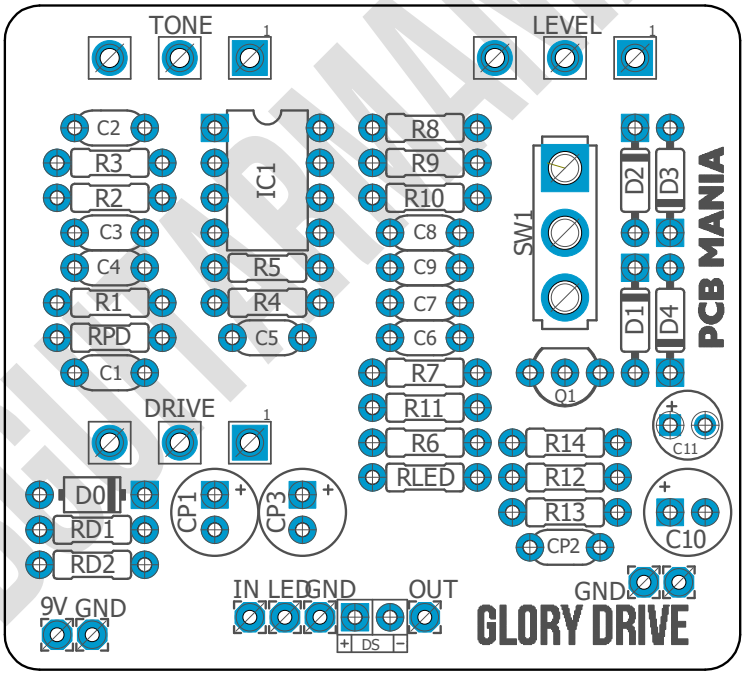
Enclosure type:
125b

Get your board at:
Glory Drive

Get your kit at:
Das Musikding (Europe)

Project overview:
JHS takes on the Classic Marshall Bluesbreaker, addressing some of the classic issues of the original circuit volume by adding a JFET output buffer. It also features a high-cut switch to make this pedal more suitable for Strats and single coils.

This pedal is ideal for everyone who has built the KOT and would like to have a modern version of it.



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Introduction

The Morning glory ™ is still a flagship when talking about Josh Scott and JHS pedals ™. It's his take on the classic Blues Breaker. A low/mid gain drive that works equally well with single coils and humbuckers for everything from blues, country, and classic rock and it's almost impossible not to get a great tone out of it. With a barely open gain knob, your sound will be pretty close to what you used from your amp. From there you dial in the gain till you get the number of overtones you desire but still open.

The pedal produces more treble the further you crank the gain. That's where the high-cut toggle comes in handy depending on your setup. Need to confess for such a simple design it's very well thought out, and I see now why so many people asked for this one

Controls

Potentiometers

- Level
- Tone
- Drive

Switches

- SW1

Bill of materials

Resistors	
Part	**Value**
R1	1M
R2	3K3
R3	4K7
R4	10K
R5	220K
R6	6K8
R7	1K
R8	6K8
R9	100K
R10	68K
R11	1M
R12	12K
R13	22K
R14	12K
RD1	47K
RD2	47K
RLED	4K7
RPD	2M2

Capacitors	
Part	**Value**
C1	47n
C2	47p
C3	10n
C4	10n
C5	100n
C6	470p
C7	10n
C8	10n
C9	100n
CP2	100n

Electrolytics Capacitors	
Part	**Value**
C10	2u2
C11	10u
CP1	100u
CP3	100u

Potentiometers	
Part	**Value**
DRIVE	B100K
LEVEL	A100K
TONE	B25K

Trimpots	
Part	**Value**
IC1	LM833N

Transistors	
Part	Value
Q1	2N5457

Switches	
Part	Value
SW1	Spdt ON-ON

Diodes	
D0	1N5817
D1	1N914
D2	1N914
D3	1N914
D4	1N914

Shopping list

Resistors		
Qty	**Value**	**Part**
1	100K	R9
1	10K	R4
2	12K	R12, R14
1	1K	R7
2	1M	R1, R11
1	220K	R5
1	22K	R13
1	2M2	RPD
1	3K3	R2
2	47K	RD1, RD2
2	4K7	R3, RLED
1	68K	R10
2	6K8	R6, R8
2	47K	RD1, RD2

Capacitors		
Qty	**Value**	**Part**
3	100n	C5, C9, CP2
4	10n	C3, C4, C7, C8
1	470p	C6
1	47n	C1
1	47p	C2

Electrolytic Capacitors		
Qty	**Value**	**Part**
2	100u	CP1, CP3
1	10u	C11
1	2u2	C10

Potentiometers		
Qty	**Value**	**Part**
1	A100K	LEVEL
1	B100K	DRIVE
1	B25K	TONE

IC		
Qty	**Value**	**Part**
1	LM833N	IC1

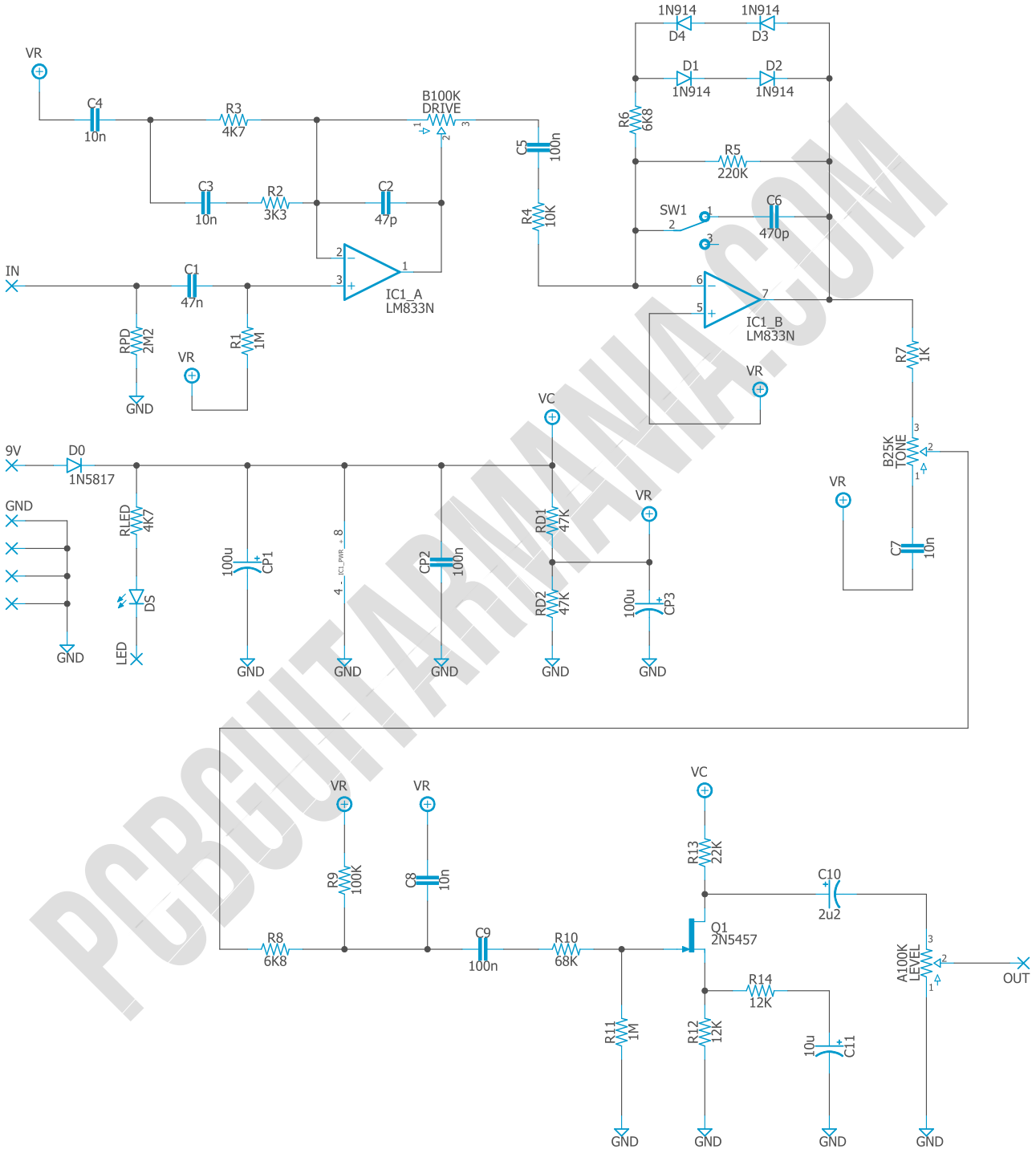
Transistors		
Qty	**Value**	**Part**
1	2N5457	Q1

Switches		
Qty	**Value**	**Part**
1	Spdt On-On	SW1
1	3PDT Stomp foot	-

Diodes		
Qty	**Value**	**Part**
1	1N5817	D0
4	1N914	D1, D2, D3, D4
1	LED	DS

Jacks		
Qty	**Value**	**Part**
1	DC Jack	-
2	Audio Jacks	-

Schematic



Components Recommendations

As many people like to experiment some pedals with higher voltage, always ensure the max tolerance of your **electrolytic capacitors** is over 25v.

This board has been tested using Film box capacitors for most of the values over 1nf, and ceramics discs for the ones under 1nf. However, high quality components such as Wima's Capacitors and Panasonic's electrolytics can deliver a better performance.

All the resistors used for testing this project are 1/4W Metal Film.

The BOM and Shopping list are exclusively regarding this project. It doesn't include all the hardware like the 3PDT bypass switch, audio/dc jacks, enclosure, etc.

IT MIGHT BE A GOOD IDEA TO PLACE A BIT OF TAPE, FOAM, OR ANY KIND OF PLASTIC TO IN BETWEEN THE LEGS OF THE TONE CONTROL AND THE DIODE TOGGLE TO AVOID UNWANTED SHORTS DUE THEM TOUCHING EACH OTHER.

Build Notes

If this is one of your first projects I recommend you to take a look on our Pedal Building Guide

For a successful and tidy build it's recommended the following order:

1. Resistors & diodes
2. Capacitors, starting with the smaller ones and the ceramic ones.
3. Electrolytic capacitors (always check the polarity)
4. Transistors
5. Wires
6. Potentiometers and switches
7. Off board wiring

Wiring Diagram

All our projects include a free 3PDT Board to make the wiring easier and tidier. Also all of our PCBs feature the status LED on board.

The pad named "Ctrl" or "LED" is the one that controls the status of the led, wire it to the "LED"pad on the 3PDT board, or in control slug of your 3PDT.

This board has been designed to match our EZ 3PDT PCB check it here to access to our Pedal Wiring Guide.

Drill Template

This Project has been planned to fit into a 125b enclosure type.

Check the Attached “Drilling templates” to drill the box properly. The files are on Scale 1:1, ready to print in an A4 page.

Licensing and Usage

We really appreciate your trust and support buying this PCB, as well as your will to dive into the DIY electronics world. That’s why for us is really important that you can make this project work properly and to enjoy not only the building process, but also to experiment and play with it on your rig.

We try to reply to every question we receive on our email or in our social media, but we try to encourage all our customers to join our PCB Guitar Mania – Builders Group on Facebook, in order to post all your doubts, issues, suggestions or request, as well to share your builds and have some feedback from us and other fellow builders!

All of our projects have been tested following this same guide on their standard configurations. Although, not all of the variations and mods have necessarily been tested. These are suggestions based on the schematic analysis, and on the experiences and opinions of others. Feel free to share with us your opinions and suggestions regarding the mods your own personal experimentation.

These boards may be used for commercial endeavors in any quantity unless specifically noted. No attribution is necessary, though accreditation or a link back is always greatly appreciated.

If you are a builder planning to make your own run of pedals we also offer the service of custom made boards with your brand and logo, design according your specifications.

The only usage restrictions are that, first, you cannot resell the PCB as part of a kit without prior arrangement with us, and second, you cannot scratch off the silk screen, or other way of trying to hide our logos and the source of the PCBs. Like it’s written above, if you want to have your own designs, with your brand and logo we could certainly reach an agreement.

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