

# Governator

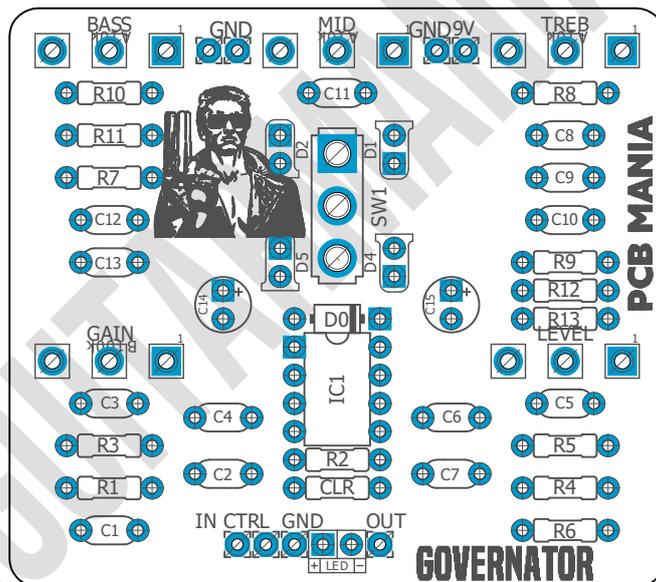
**Based on:**  
Marshall Guv'nor  
**Effect type:**  
Overdrive – Amp in Box  
**Build difficult:**  
Average

**Amount of parts:**  
Average, total 39 components  
**Technology:**  
Dual OpAmp  
**Power consumption:**  
9V

**Enclosure type:**  
125b  
**Get your board at:**  
[Governator](#)  
**Get your kit at:**  
[Das Musikding \(Europe\)](#)

## Project overview:

The Guv'nor was the first pedal ever released by Marshall with the intention of emulating the tone of their amplifiers, beginning the era of the Amp in a box pedals we still seeing today.



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## Introduction

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The Marshall Gov'nor™ started the „amp in a box era when it was first released in 1988 and there are rumors that the guitar player who tested the prototype said „that pedal is just the gov'nor“ so that could explain the name.

1991 Guv'nor was replaced by the Drivemaster that's basically the same pedal.

1998 V2 in the shiny mirror-like enclosure was released and is out till today.

So what makes this pedal special? It was one of the first pedals to used LEDs in a hard-clipping configuration that leads to less compression and a higher threshold. Plus it has a 3 Band EQ that helps with it overall more amp-like behavior. We added a clipping option via toggle switch. For a more open sound with minor tonal changes, I suggest blue LEDs. For more drastic results germanium diodes. - but you not up to make this fuzz like, are you? If using any other diodes just put the anode in the square pad. You could also use an on/off/on toggle to lift the diodes for more volume and less drive and compression.

## Controls

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- Volume
- Gain
- Bass
- Treble
- Mids
- Diode Switch

# Bill of materials

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Resistors	
Part	Value
CLR	4k7
R1	2M2
R2	1M
R3	2k2
R4	10k
R5	680k
R6	1k
R7	1k5
R8	100R
R9	22k
R10	680R
R11	680R
R12	47k
R13	47k

Capacitors	
Part	Value
C1	10nf
C2	100nf
C3	120pf
C4	220nf
C5	100nf
C6	220pf
C7	220nf
C8	3n9
C9	10nf
C10	470pf
C11	220nf
C12	100nf
C13	68nf

Potentiometers	
Part	Value
BASS	A10k
GAIN	B100k
LEVEL	B100k
MID	A10k
TREB	A10k

Trim pots	
Part	Value
IC1	JRC4558

Transistors	
Part	Value
SW1	SPDT ON-OFF-ON

Diodes	
Part	Value
D0	1N4001
D1	3mm RED LED
D2	3mm RED LED
D4	Your choice
D5	Your choice

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# Shopping list

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Resistors		
Qty	Value	Parts
1	100R	R8
1	10k	R4
1	1M	R2
1	1k	R6
1	1k5	R7
1	22k	R9
1	2M2	R1
1	2k2	R3
2	47k	R12, R13
1	4k7	CLR
2	680R	R10, R11
1	680k	R5

Capacitors		
Qty	Value	Parts
3	100nf	C2, C5, C12
2	10nf	C1, C9
1	120pf	C3
3	220nf	C4, C7, C11
1	220pf	C6
1	3n9	C8
1	470pf	C10
1	68nf	C13

Diodes		
Qty	Value	Parts
1	1N4001	D0
2	Your choice	D4, D5
2	3mm RED LED	D1, D2

Potentiometers		
Qty	Value	Parts
3	A10k	BASS, MID, TREB
2	B100k	GAIN, LEVEL

IC		
Qty	Value	Parts
1	JRC4558	IC1

Switches		
Qty	Value	Parts
1	SPDT ON-OFF-ON	SW1



# Components Recommendations

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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

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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

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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

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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

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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.

Follow us on [Instagram](#) and [Facebook](#) to stay in tune with the latest projects!