

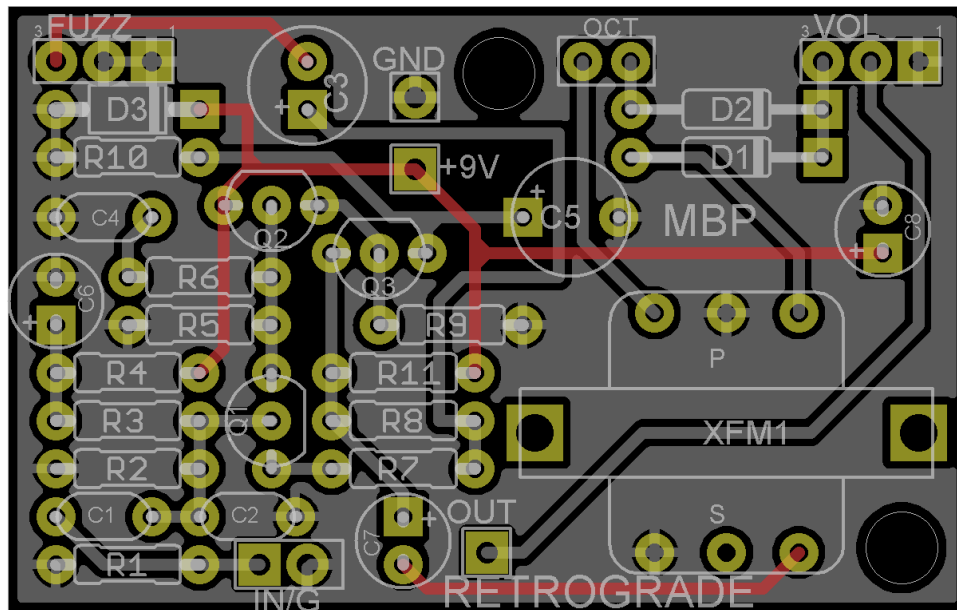
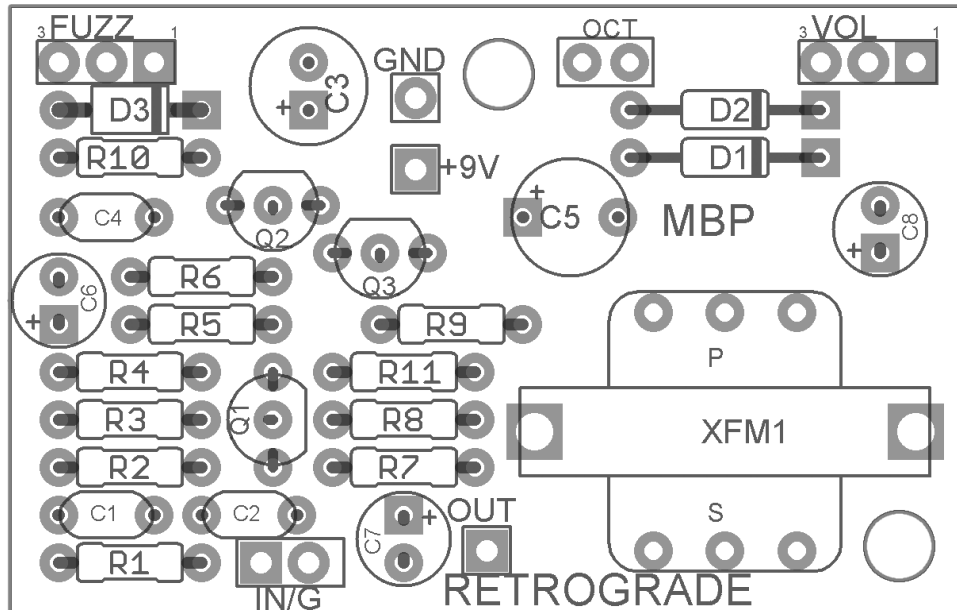
RETROGRADE

FX Type: Fuzz Octave

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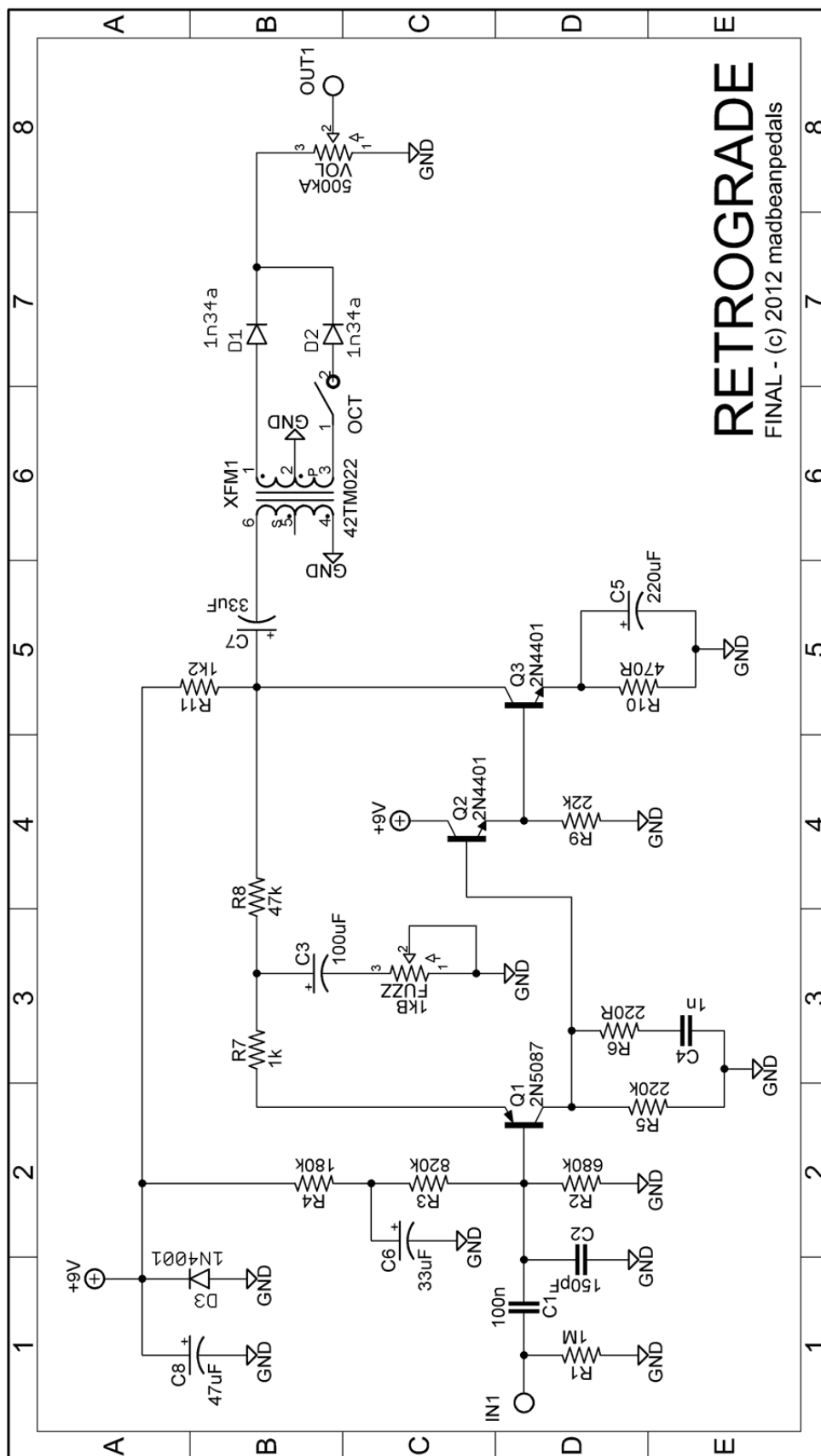
2" W x 1.265" H



Previous version of the Retrograde:

<http://www.madbeanpedals.com/projects/Retrograde/docs/Retrograde.zip>

Schematic



Bill of Materials

Resistors		Caps		Diodes	
R1	1M	C1	100n	D1, D2	1n34a
R2	680k	C2	150pF	D3	1N4001
R3	820k	C3	100uF	Transistors	
R4	180k	C4	1n	Q1	2N5087
R5	220k	C5	220uF	Q2	2N4401
R6	220R	C6	33uF	Q3	2N4401
R7	1k	C7	33uF	Switch	
R8	47k	C8	47uF	OCT	SPST
R9	22k			Transformer	
R10	470R			XF1	42TM022
R11	1k2			Pots	
				FUZZ	1kB
				VOL	500kA

Overview

The **Retrograde** derives from the Tycobrahe Octavia™ which is another one of those mythical and practically unobtainable classic stompboxes. This one is very popular for collectors and it is not rare to see them go for over \$1000 on eBay.

Or, you could build it for \$30. Just sayin'.

This is my favorite octavia by far and the design is super simple and elegant. The **Retrograde** is a wall of nasty fuzz, with a pronounced octave generated by an inexpensive transformer. The **Retrograde** also features the ability to turn the octave off with the flip of a switch, and can be built into a 1590B.

As with almost any analog octave effect, the most pronounced upper octave is achieved by using the guitar's neck pickup, with the tone rolled all the way off and notes played around the 12th fret. You can also get ring modulator type sounds with chords or with the volume knob on your guitar rolled down. Best of all, you get a great "dive-bomb" effect when doing double-stop bends!

You can read up a little more on the circuit here: <http://fuzzcentral.ssguitar.com/octavia.php>

CONTROLS

FUZZ: Overall fuzz amount.

OCT: This switch turns off the octave effect if you want to use fuzz only.

VOL: The output level.

Notes

Mouser:

2N4401 transistors: <http://www.mouser.com/ProductDetail/Fairchild-Semiconductor/2N4401TFR/?qs=sGAEpiMZZMutXGli8Ay4kMNpEp6F%2fk5e7170TNaYA%252bA%3d>

42TM022 transformer: <http://www.mouser.com/ProductDetail/Xicon/42TM022-RC/?qs=sGAEpiMZZMv0lfuNuy2LUaR7iCoLh1pOqvQ%252bUAwdFkk%3d>

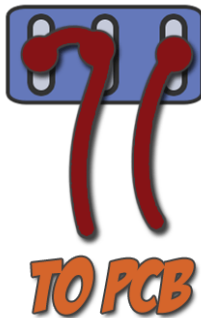
Smallbear:

2N4401 transistors: <http://www.smallbearelec.com/servlet/Detail?no=288>

42TM022 transformer: <http://www.smallbearelec.com/servlet/Detail?no=341>

- You can sub other BJT NPN transistors for the 2N4401. Suggestions are 2n3904 or 2n3565 (for the mojo).
- Please use the Standard Wiring Diagram as a reference for wiring the Retrograde: http://www.madbeanpedals.com/tutorials/downloads/StandardWiring_MBP.pdf
- For the OCT switch, wire two leads from the PCB to the two lugs of the switch. If using an SPDT (On/On), wire one lead to the center lug and tie it to one outside lug. Now wire the other lead to the remaining lug. It does no matter which lead goes to which lug.

SPDT example

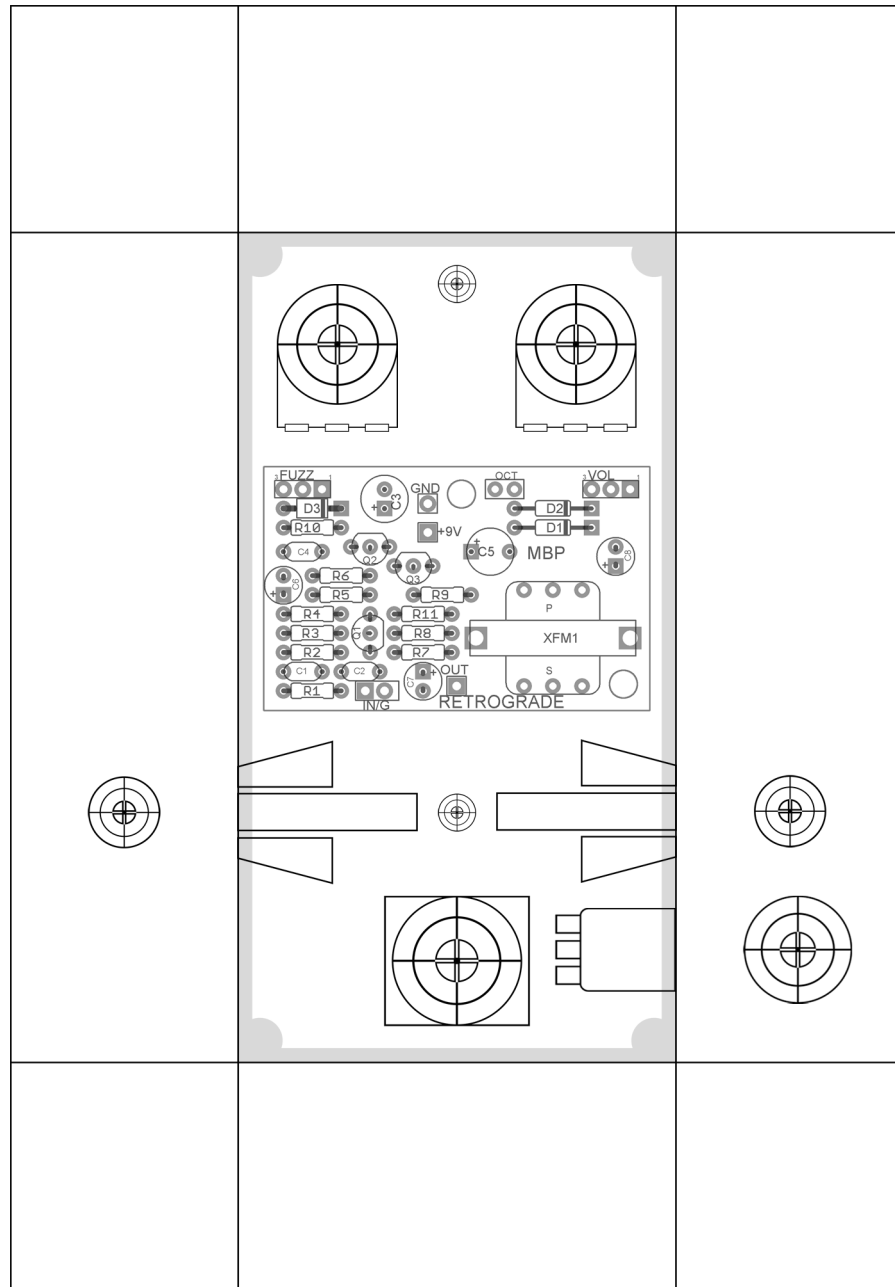


- There are two holes on the fabricated PCB to allow for stand-offs. One is at the top of the board and the other on the lower right. If you are using the standoff on the lower right, clip off part of the base with some sicssors to allow the PCB to be mounted flush to the enclosure (or it will be too wide). Use this type: <http://www.smallbearelec.com/servlet/Detail?no=76>

1590B Drill Template

4.65"W x 6.69" H

This template is approximate. Please check carefully before committing to drill.

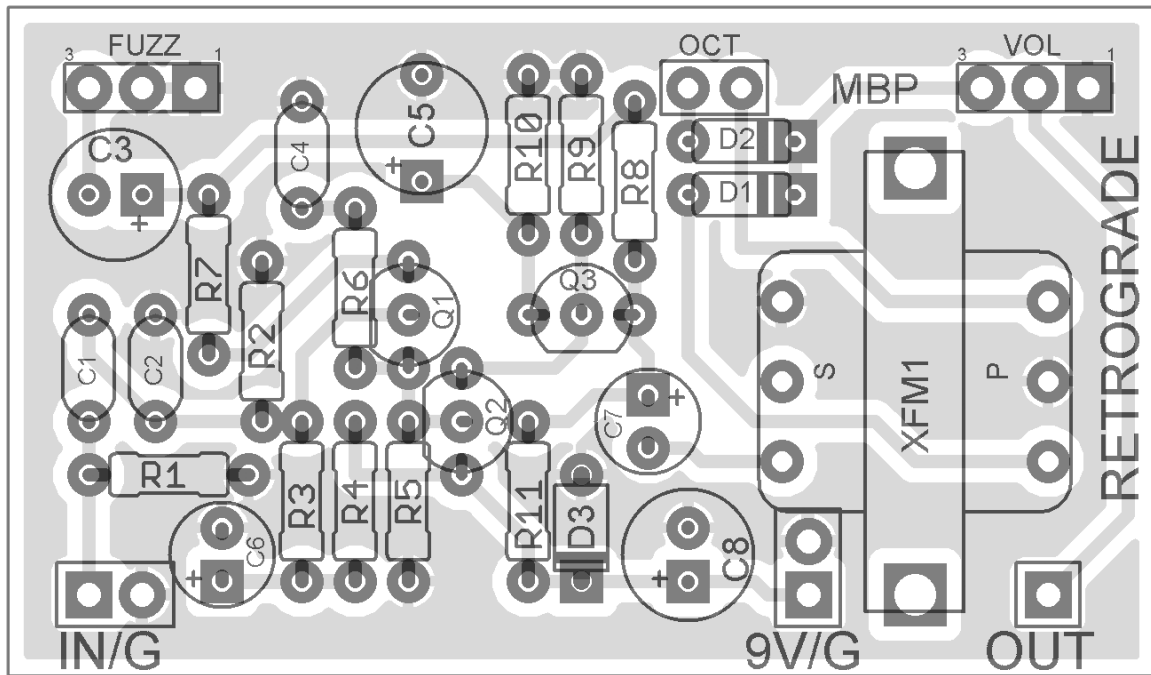


Licensing

Retrograde PCBs purchased (or etched from the included PCB artwork) from madbeanpedals may be used for small quantities of commercial pedal building (keep in mind that bulk discounting on PCBs is not offered). You may not, however, offer these PCBs for commercial resale (re-distribution) or as part of a "kit". Selling and trading through DIY forums is, as always, completely legit.

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Single Sided Layout



2.19" W x 1.29" H

