



# Convolvulaceae

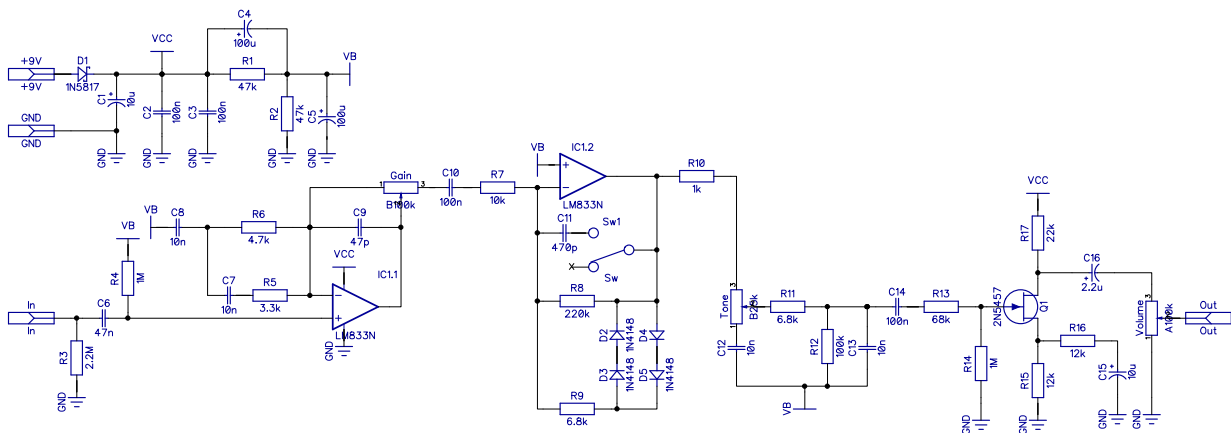
Based on Based on JHS Morning Glory

PCB artwork ©2021 drdFX

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Convolvulaceae is a clone of the well-known low gain overdrive Morning Glory from JHS.

## SCHEMATIC

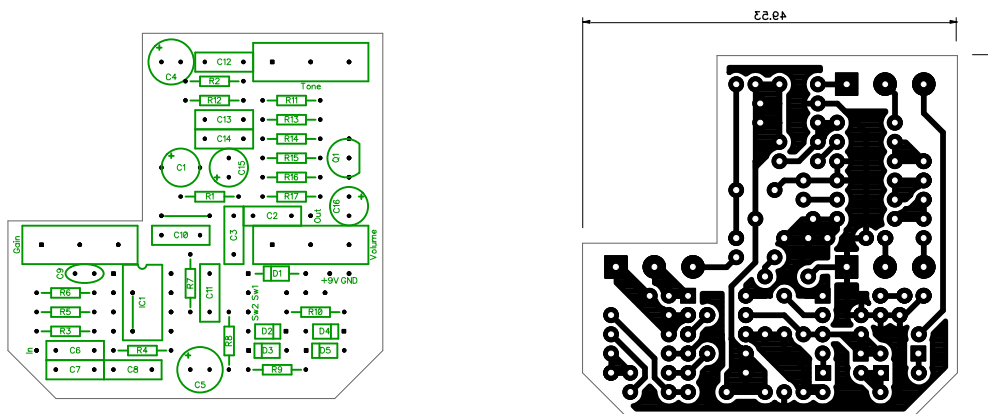


## BOM

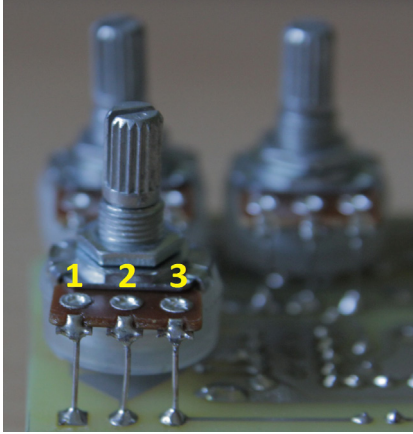
| Resistors |      | Capacitors |      | Semiconductors |        | Others |       |
|-----------|------|------------|------|----------------|--------|--------|-------|
| R1        | 47k  | C1         | 10u  | D1             | 1N5817 | Gain   | B100k |
| R2        | 47k  | C2         | 100n | D2             | 1N4148 | Tone   | B25k  |
| R3        | 2.2M | C3         | 100n | D3             | 1N4148 | Volume | A100k |
| R4        | 1M   | C4         | 100u | D4             | 1N4148 | Sw     | SPST  |
| R5        | 3.3k | C5         | 100u | D5             | 1N4148 |        |       |
| R6        | 4.7k | C6         | 47n  | Q1             | 2N5457 |        |       |
| R7        | 10k  | C7         | 10n  | IC1            | LM833N |        |       |
| R8        | 220k | C8         | 10n  |                |        |        |       |
| R9        | 6.8k | C9         | 47p  |                |        |        |       |
| R10       | 1k   | C10        | 100n |                |        |        |       |
| R11       | 6.8k | C11        | 470p |                |        |        |       |
| R12       | 100k | C12        | 10n  |                |        |        |       |
| R13       | 68k  | C13        | 10n  |                |        |        |       |
| R14       | 1M   | C14        | 100n |                |        |        |       |
| R15       | 12k  | C15        | 10u  |                |        |        |       |
| R16       | 12k  | C16        | 2.2u |                |        |        |       |
| R17       | 22k  |            |      |                |        |        |       |

## LAYOUT

Print out the PCB design without any resizing options and make sure you switch off the “fit to page” option. The design is free for personal/home use and you also may build one or two for your friends, but the PCB layout is my artwork, therefore protected by copyright and is not permitted to be used for commercial purposes. This effect can be built in 1590B or 125B size. The PCB is the same, but if you are unexperienced, then you might find the extra space available in the 125B enclosure more comforting.



## NOTES



The pots are board mounted to the bottom of the board. The square pads mark the lug 1, for the numbering of the lugs see the picture.

The switch is connected with off-board wires

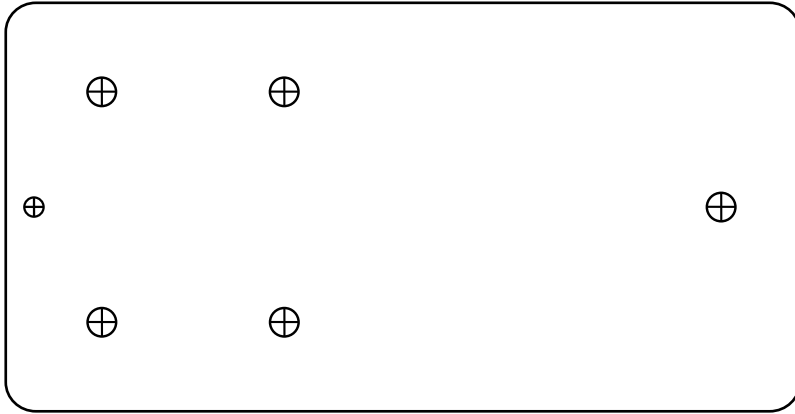
You can experiment with different opamp types.

The original used the LM833, but I've found it sometimes too noisy. TL062 has helped in those cases a lot, but you can try some of the higher end Burr Brown opamps too, like the OPA2134.

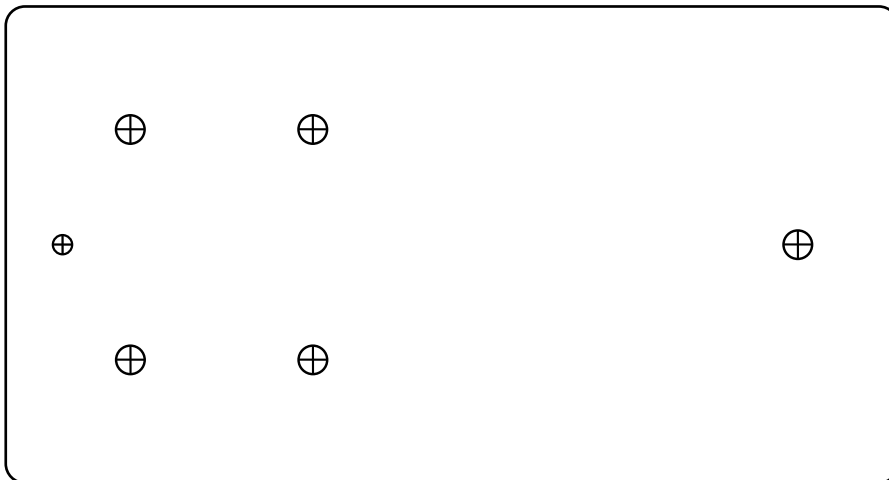
The 2N5457 JFET in the last gain stage is an obsolete part. You can either substitute it with another JFET that you have at hand or use the SMD version MMBF5457 with a conversion daughterboard. If you decide for another JFET type you will have to rebias that stage though. You can do that by substituting R17 with a trimmer or pot, find the correct value and then use that value as a fixed resistor.

## DRILLING TEMPLATES

This effect is meant for 1590B or if you prefer the additional space then 125B. Here are the drilling templates for them:



1590B



125B