

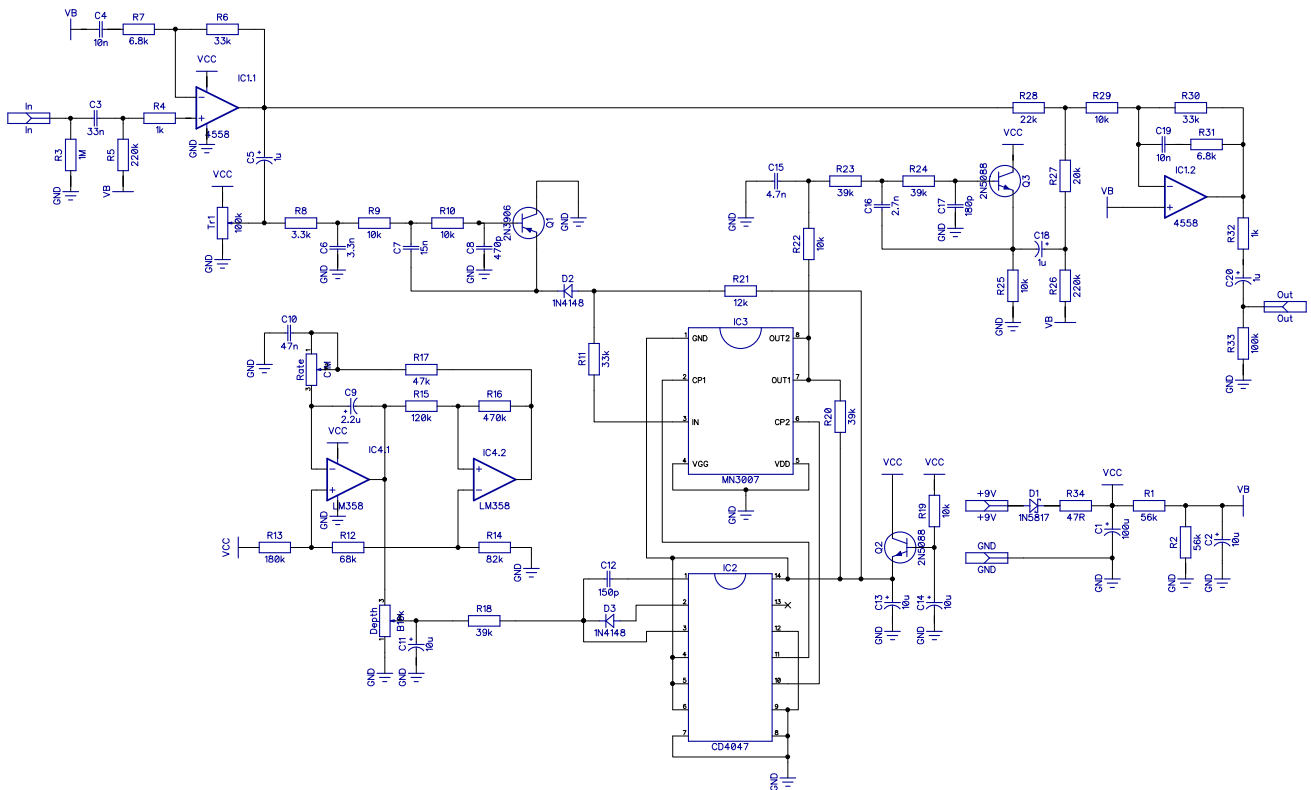


# Petit Clown

Based on the EHX Small Clone  
PCB artwork ©2015 drdFX  
Release date: 2015.11.16.

The Petit Clown is a clone of the famous Electro-Harmonix Small Clone chorus with an additional pot for the depth control instead of the switch found on the original.

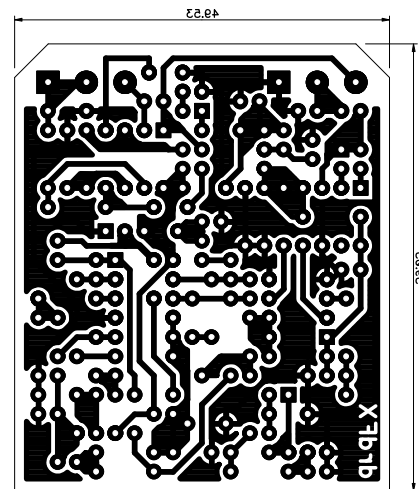
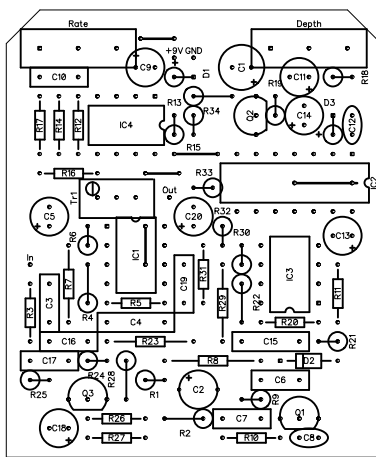
## SCHEMATIC



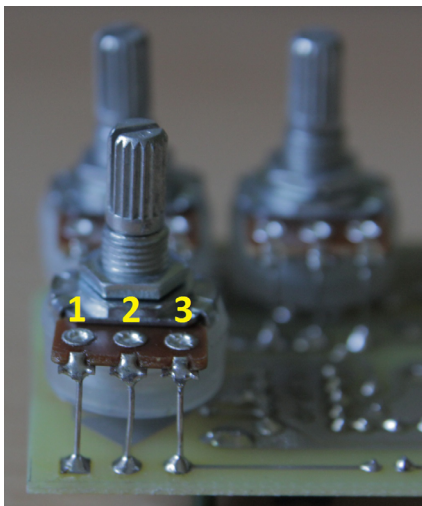
## LAYOUT

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. The layout is meant for the 1590B and the 125B size enclosures. Please note that in the 1590B enclosure a battery won't fit anymore, if you need battery driven operation too, then you will need to stick with the slightly larger 125B enclosure.

1590B/125B layout and PCB



## 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.

There are several mods for the Small Clone. The most popular is the “Depth knob mod” which replaces the original's Depth switch with a pot. This mod is already included in the Petit Clown.

Other popular mod is the Vibe switch. This eliminates the clean signal path and leaves only the wet signal path resulting in a vibrato-like sound. For this make the resistor R28 (22k) switchable with a switch.

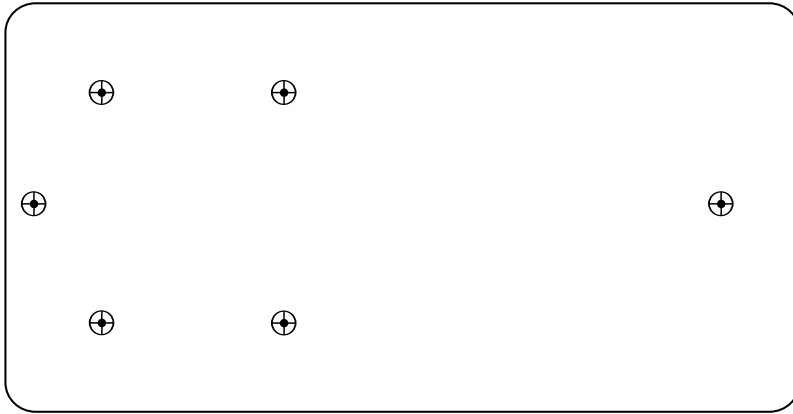
Easiest way is to solder only one leg of the resistor in the board, then take a wire from there to a SPDT switch' center lug and take another wire from one of the outer lugs of the switch to the board where the other leg of the resistor would go.

The original and also the Petit Clown suffers a bit of volume drop when switched on. This can be fixed with changing the R29 (10k) resistor to a smaller value. 2.2k has been reported to provide a slight boost, or alternatively you can replace this resistor altogether with a 10k linear pot and have an additional Level control as well.

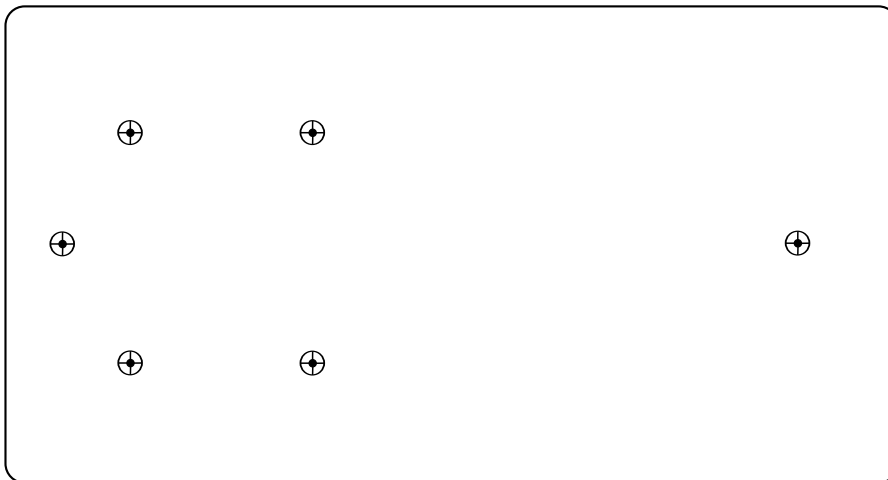
BOM							
Resistors		Capacitors		Semiconductors		Pots	
R1	56k	C1	100u	D1	1N5817	Depth	B10k
R2	56k	C2	10u	D2	1N4148	Rate	C1M
R3	1M	C3	33n	D3	1N4148	Tr1	100k
R4	1k	C4	10n	Q1	2N3906		
R5	220k	C5	1u	Q2	2N5088		
R6	33k	C6	3.3n	Q3	JRC4558		
R7	6.8k	C7	15n	IC1	CD4047		
R8	3.3k	C8	470p	IC2	MN3007		
R9	10k	C9	2.2u	IC3	LM358		
R10	10k	C10	47n	IC4			
R11	33k	C11	10u				
R12	68k	C12	150p				
R13	180k	C13	10u				
R14	82k	C14	10u				
R15	120k	C15	4.7n				
R16	470k	C16	2.7n				
R17	47k	C17	180p				
R18	39k	C18	1u				
R19	10k	C19	10n				
R20	39k	C20	1u				
R21	12k						
R22	10k						
R23	39k						
R24	39k						
R25	10k						
R26	220k						
R27	20k						
R28	22k						
R29	10k						
R30	33k						
R31	6.8k						
R32	1k						
R33	100k						
R34	47R						

## DRILLING TEMPLATES

The below drilling templates are for 1590B and 125B. I mark four drilling holes for the case if you want to apply the Vibe switch and Level pot mods. If you don't need these then only drill the upper two holes.



1590B



125B