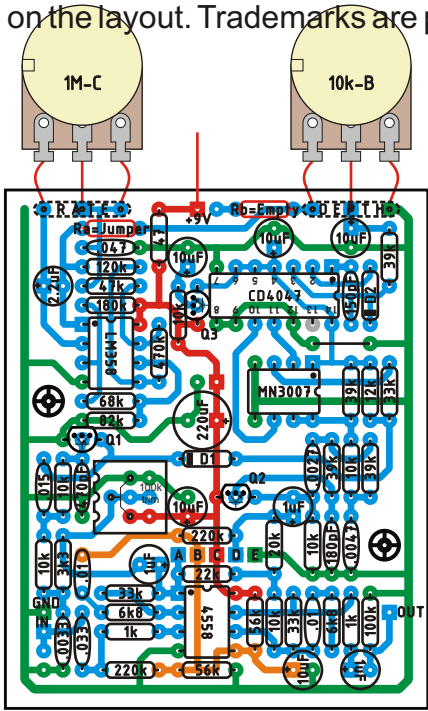
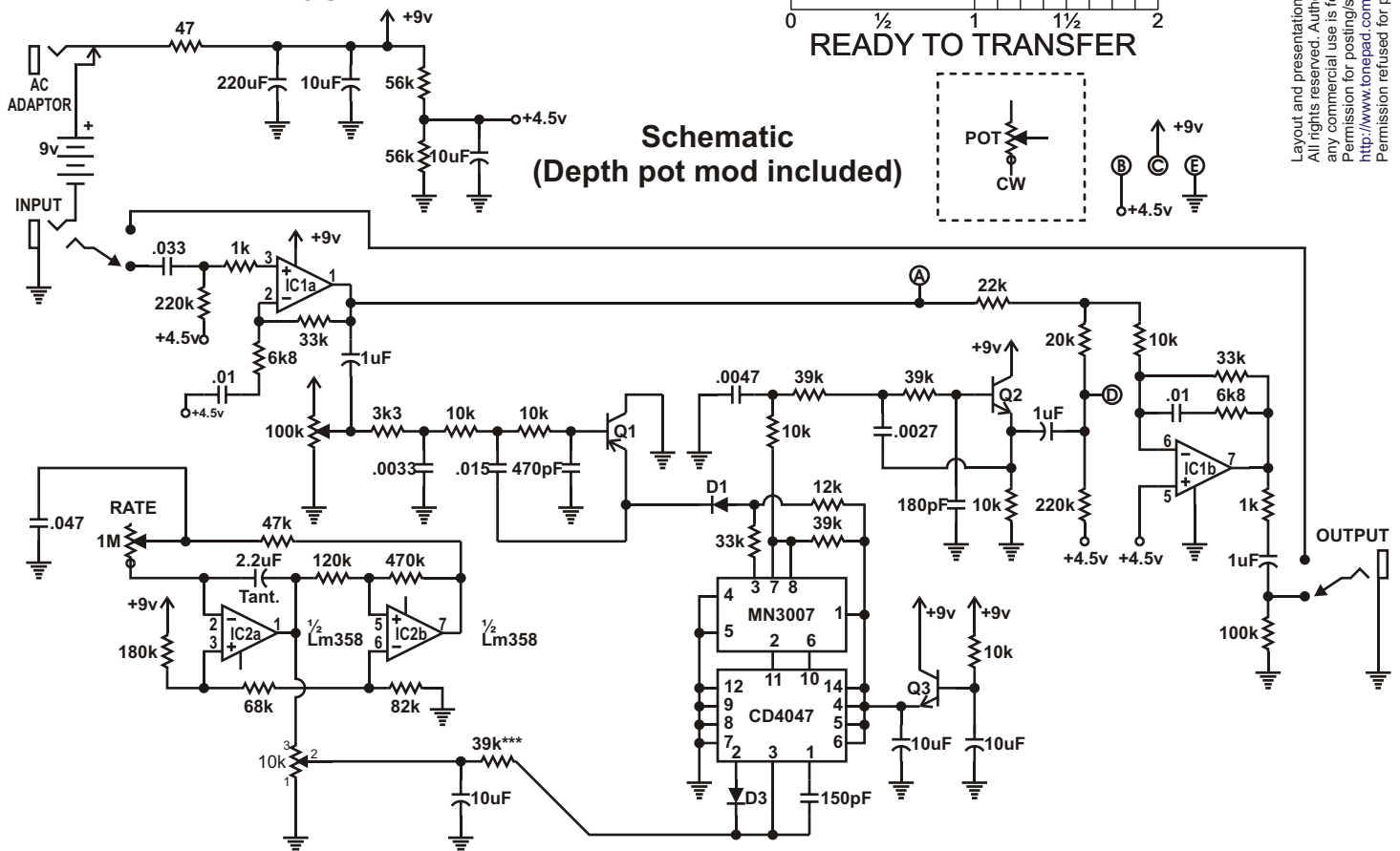
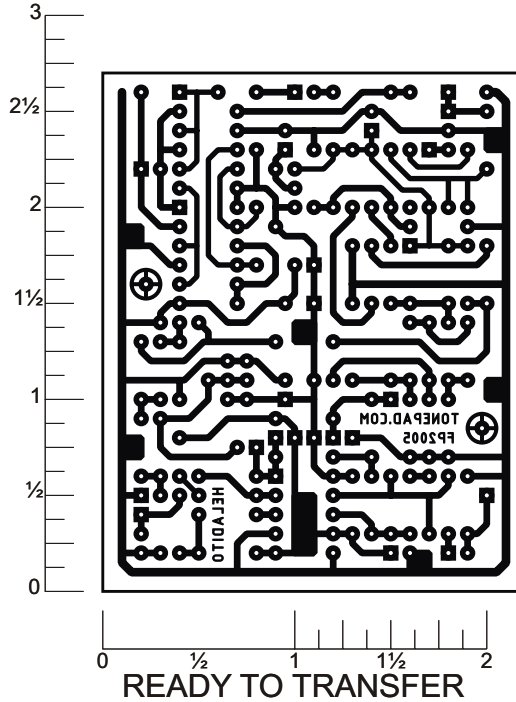


Build the Small Clone circuit on this layout. The FET switching has been removed to use true bypass switching. Layout shown with depth mod applied, see 'schematic for depth switch' for stock wiring. Pads A, B, C, D, E are for the stereo mod. Off board components except for the potentiometers are not shown on the layout. Trademarks are property of their owners.



LAYOUT



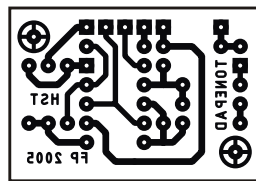
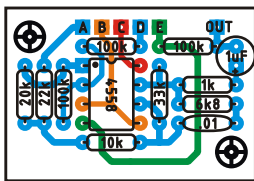
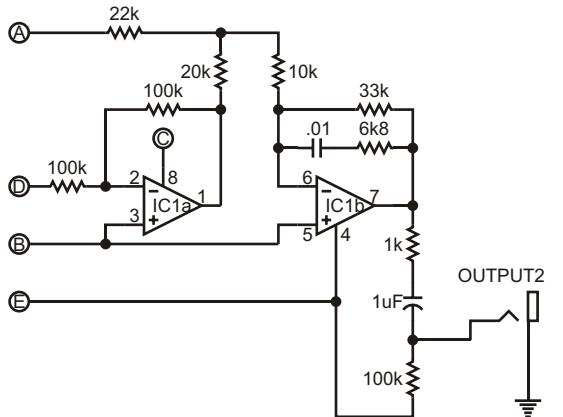
Schematic  
(Depth pot mod included)

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The Stereo Mod requires a separate board. The original small clone had a depth switch instead of the potentiometer, this gave two depth options only. The layout provides pads for this mod, just follow the schematic for the depth switch. Trademarks are property of their owners.

## SCHEMATIC FOR THE STEREO MOD

Use the pads on the main PCB and wire this circuit:



STEREO MOD LAYOUT/TRANSFER

## Parts List

### Resistors

- 1 - 47ohm
- 2 - 1k
- 1 - 2k7 (2.7k)\*
- 1 - 3k3 (3.3k)
- 1 - 4k7 (4.7k)\*
- 2 - 6k8 (6.8k)
- 6 - 10k
- 1 - 12k
- 1 - 20k
- 1 - 22k
- 3 - 33k
- 4 - 39k
- 1 - 47k
- 2 - 56k
- 1 - 68k
- 1 - 82k
- 1 - 100k
- 1 - 120k
- 1 - 180k
- 2 - 220k
- 1 - 470k

### Pots

- 1 - 1M Rev. Log.
- 1 - 100k Trim.
- 1 - 10k Lin.\*\*

### Capacitors

- 1 - 150pF
- 1 - 180pF
- 1 - 470pF
- 1 - 0.0027
- 1 - 0.0033
- 1 - 0.0047
- 2 - 0.01
- 1 - 0.015
- 1 - 0.033
- 1 - 0.047
- 3 - 1uF
- 1 - 2.2uF Tant.
- 5 - 10uF
- 1 - 220uF

### Diodes

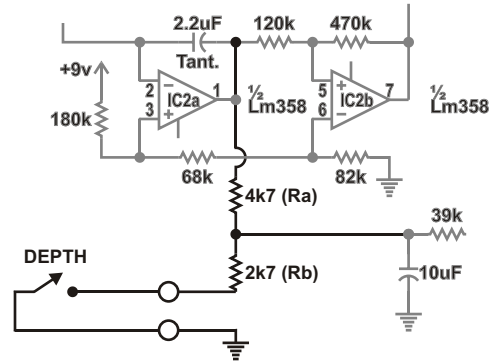
- 2 - 1N914

### Transistors & ICs

- IC1 - 4558
- IC2 - LM358
- 1 - CD4047
- 1 - MN3007
- Q1 - 2N5087
- Q2 - 2N5088
- Q3 - 2N5088

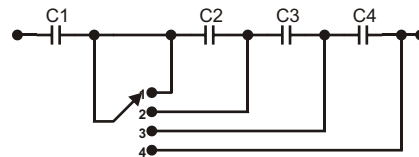
## SCHEMATIC FOR THE DEPTH SWITCH

Use Ra=4.7k and Rb=2.7k and wire a SPST switch like this:



## SCHEMATIC FOR CAP SWITCHING MOD

This mod is for changing the value of the 150pF cap going to pin1 of CD4007. Use a SP4T rotary switch wired like this:



### Cap Values

- C1 - 330pF
- C2 - 50pF
- C3 - 225pF
- C4 - 396pF

### Swpos/capacitance

- Pos1 - 33pF
- Pos2 - 100pF
- Pos3 - 180pF
- Pos4 - 330pF

### The Math:

$$\text{Pos1} = (C1^{-1} + C2^{-1} + C3^{-1} + C4^{-1})^{-1}$$

$$\text{Pos2} = (C1^{-1} + C3^{-1} + C4^{-1})^{-1}$$

$$\text{Pos3} = (C1^{-1} + C4^{-1})^{-1}$$

$$\text{Pos4} = (C1^{-1})^{-1} = C1$$

### Notes

- \* Only needed if building stock (no depth pot mod) version
- \*\* Replace with SPST switch if building stock version