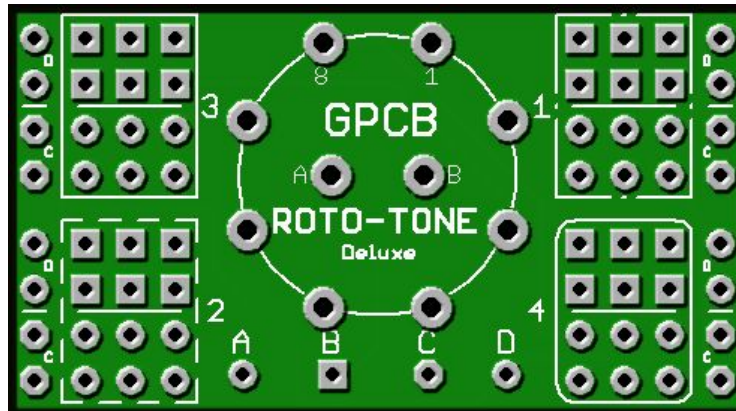


The *AMAZING* ROTO-TONE *DELUXE*

Wonderful ways to use this versatile add-on board!

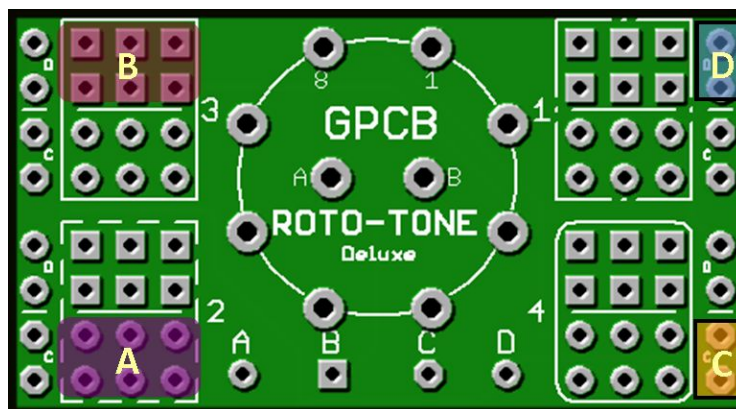
This improved version of the ROTO-TONE was inspired by our late Moderator, PETEVIG.

Pete made the suggestion to add 2 more sets of pads for fixed poles C and D. This gave additional capabilities to the board that added to its features.



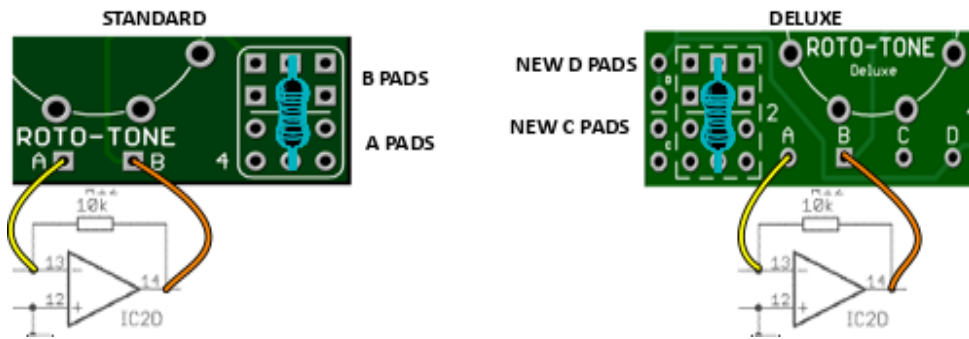
Each section contains 4 groups of pads associated with the poles as shown below:

Section 1 shows the D pads, section 2 shows the A pads, section 3 shows the B pads and section 4 is showing the C pads.



As the **ROTO-TONE DELUXE** switch is rotated, the **A and B pads** of the selected section are activated. **The C and D PADS ARE ACTIVE IN ALL 4 SWITCH POSITIONS.**

There're many options for using the ROTO-TONE Standard version with just A and B pads. The Deluxe version will also work using only the A and B pads in the same manner:



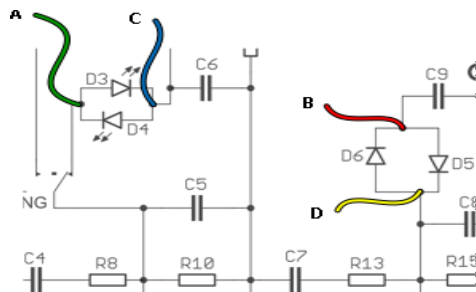
Use this hyperlink for the [ROTO-TONE Standard Document](#) or visit our [Guides Page](#) online.

Here are some new options that are available when using the new ROTO-TONE *DELUXE*.

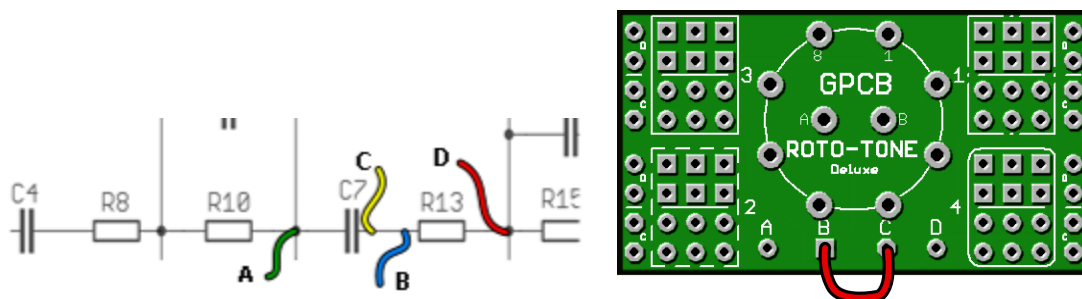
BOARD WIRING OPTIONS

1. **Select TWO different components located in TWO different positions in a circuit.**

This is done by wiring one set of components between pads A and C and the other set between pads B and D as shown in this schematic:



2. **Select TWO components in series** by placing a jumper between pads **B** and **C** at the bottom of the board. This will route the signal through A > C > B > D.



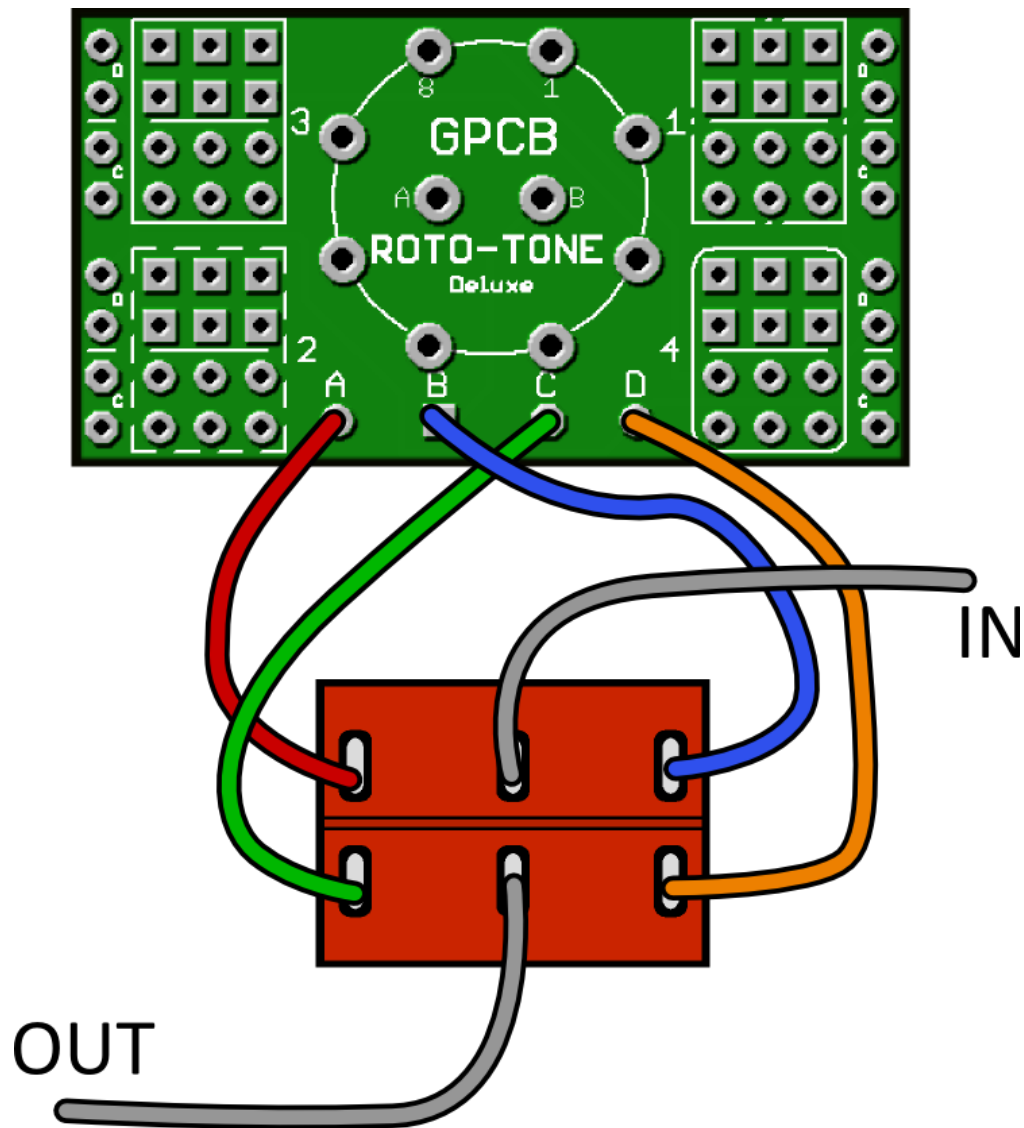
3. **An alternate routing of TWO components in series** will be achieved by adding a jumper between the A and D pads at the bottom of the board.

The signal will be routed from C > A > D > B or B > D > A > C

Select EIGHT different component options by adding a DPDT switch!

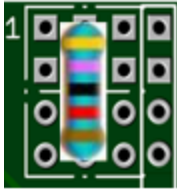
Attach the **A and C poles** to lugs **1 and 4** of the DPDT and attach the **B and D poles** to lugs **3 and 6** as shown below. In one position of the DPDT switch the ROTO-TONE *DELUXE* will select the components located between the A and C sections. In the other DPDT switch position, components located between the B and D sections will be selected.

Thus, a total of EIGHT different options are available!

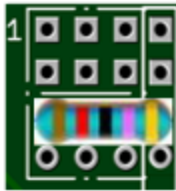


COMPONENT PLACEMENT OPTIONS

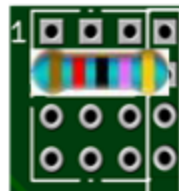
1. Resistors, capacitors and diodes can be placed in a variety of positions depending on what switching options are desired.



A > B

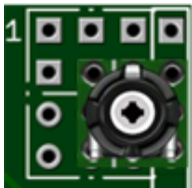


A > C



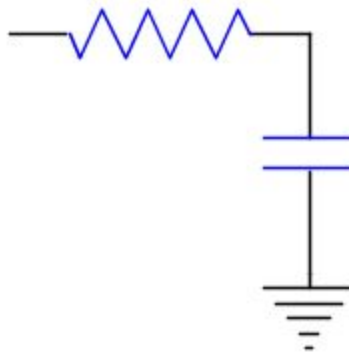
B > D

2. A trimmer potentiometer can be placed as well as shown here:

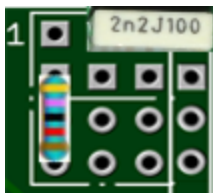


Lugs 1, 2 and 3 placed in A, B and C

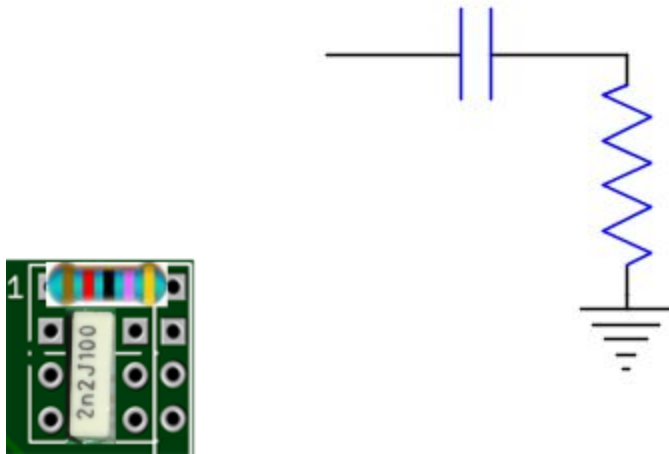
You can even install LOW PASS and HIGH PASS filters! These consist of a resistor and a capacitor as shown in this schematic:



LOW PASS FILTER



HIGH PASS FILTER

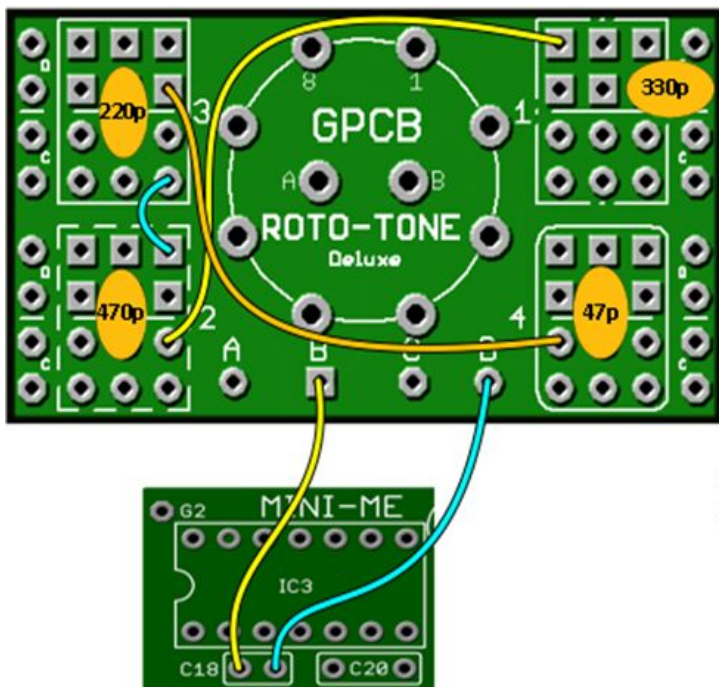


The filter frequency F_c is calculated by solving $1/2 \pi RC$.

More useful ideas for the ROTO-TONE *DELUXE*:

Wilkie1's Mini-Me "Chorus to Flanger" 4-Step Depth Mod.

This will yield four unique Chorus tones ranging from traditional to wild.

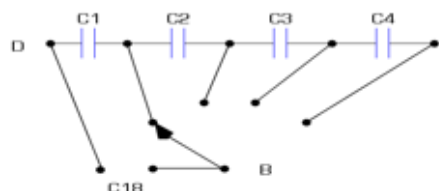
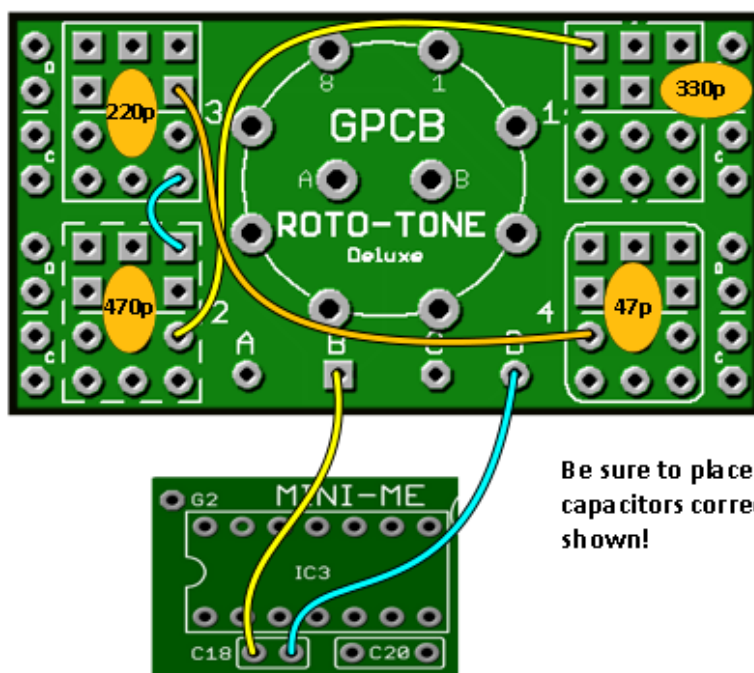


MINI-ME CAP MOD

This popular mod replaces C18 150p with a selection of 4 different cap values.

The jumpers on the ROTO-TONE board may be installed on the opposite side from the switch since all pads are plated through.

You may use ceramic, MMLC or film capacitors.



Since the capacitors are wired in series, the ROTO-TONE DELUXE decreases the capacitor total value as the switch is advanced. The resulting values are:
position 1: 330 pf position 2: 194 pf position 3: 103 pf
position 4: 32 pf

These values are calculated by:

$$C_T = \frac{1}{\frac{1}{C_1} + \frac{1}{C_2} + \frac{1}{C_3} + \dots + \text{etc.}}$$

Muff'N MODULETTA MODS

There have been numerous variations of the Big Muff. Each has its own distinctive tonal signature. GUITARPCB has been inspired by a popular version of a commercial Muff that offers

multiple choices of popular variants on a single Rotary Switch. Now you can make your Muff'N more versatile too!

The new amazing GPCB ROTO-TONE *DELUXE* provides the perfect way to install FOUR different variations in your Muff'N Build that will emulate these famous tones. This is achieved by replacing one resistor (R20) and one capacitor (C10) with the assigned values taken from each variant's schematic. Notice the ROTO-TONE *DELUXE* has FOUR Pad Areas each containing two components. These are a resistor and a capacitor that create the HI PASS filter in the tone section. The ROTO-TONE *DELUXE* will switch these to change the tone section to create your favorite Muff tones.

Simply follow the wiring diagram to install the ROTO-TONE *DELUXE* onto your Muff'N board. Then, install the unique sets of components on the appropriate pad sections as shown in the diagram on the next page. Although we have provided four sets of values that we like, feel free to choose others.

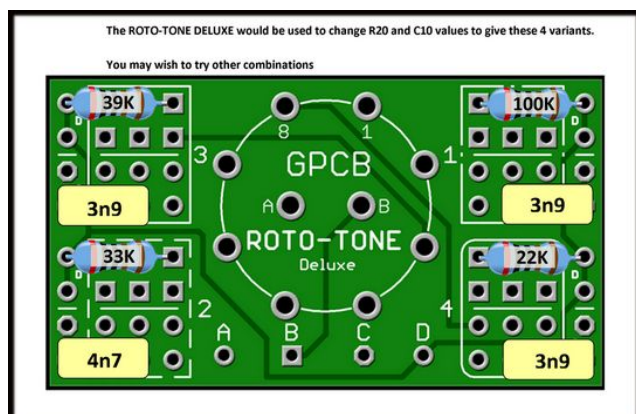
The values for R20 and C10 used by the various versions are listed in the Muff'N Bill of Materials. We suggest socketing the ROTO-TONE *DELUXE* to make changing values easy if you wish to experiment.

You may use the ROTO-TONE *DELUXE* on other circuits as well. The advanced guide shows a multitude of Mods you can create using the *DELUXE* version. You cannot Moduletta using the "Original" Roto-Tone.

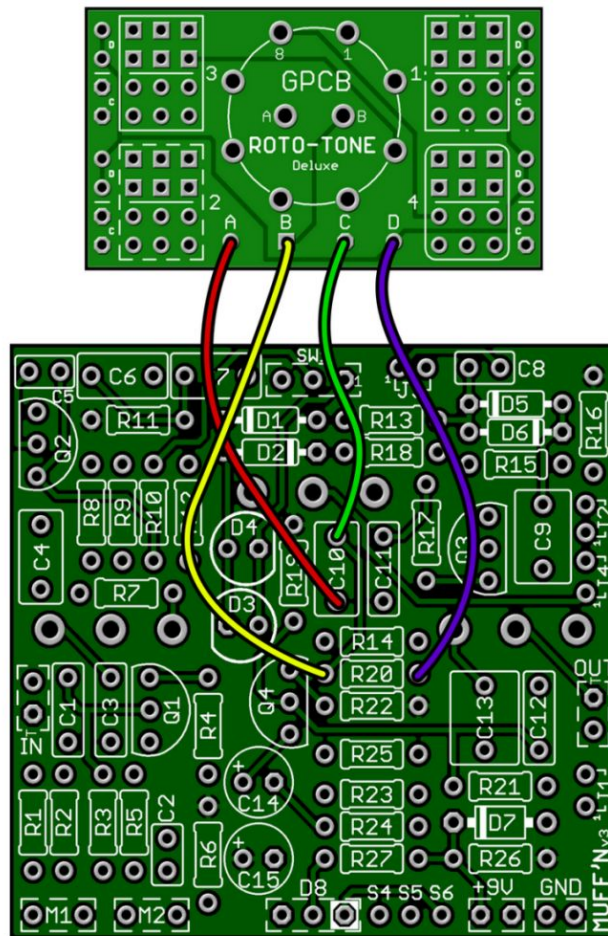
Please note that switching these components will create a mild popping (this is normal). To avoid the popping sound simply bypass the pedal before switching.

The diagram below shows values from R20 and C10 of our Muff'n taken from these variants:

Sec. 1- 3rd Edition; Sec. 2 - MAYO; Sec. 3 - RAM/TRIANGLE/C. DREAMER; Sec. 4 - RUSSIAN/CIVIL WAR



Full diagram:



The values used above were taken from **R9 and C10 of our Muff'n Schematic**. In each of the four quadrants of the Roto-Tone Deluxe we populated values from the popular variants. The bigger the values changes the more audible they will be to you.

Experiment with different cap and resistor values to find your favorite tones, Visit our forum to discuss more Mod ideas. The possibilities are endless. We look forward to any ideas or contributions you wish to share.

More interesting Mods to try and these will yield even greater variances in tone!

These will adjust the Mid Scoop response for the MuFF'N. Simply add jumpers to the ROTO-Tone DELUXE and install components as shown.

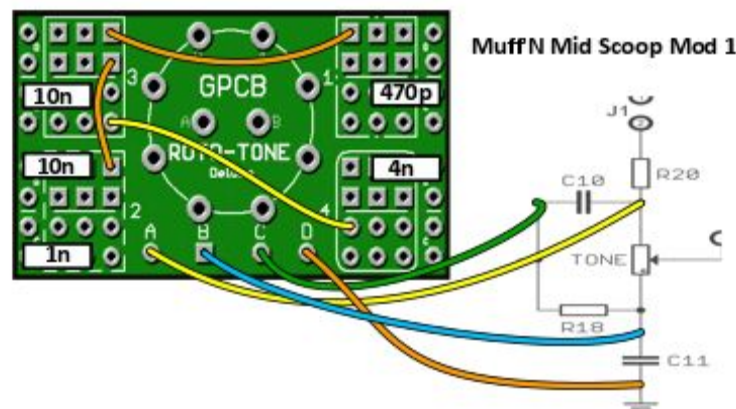
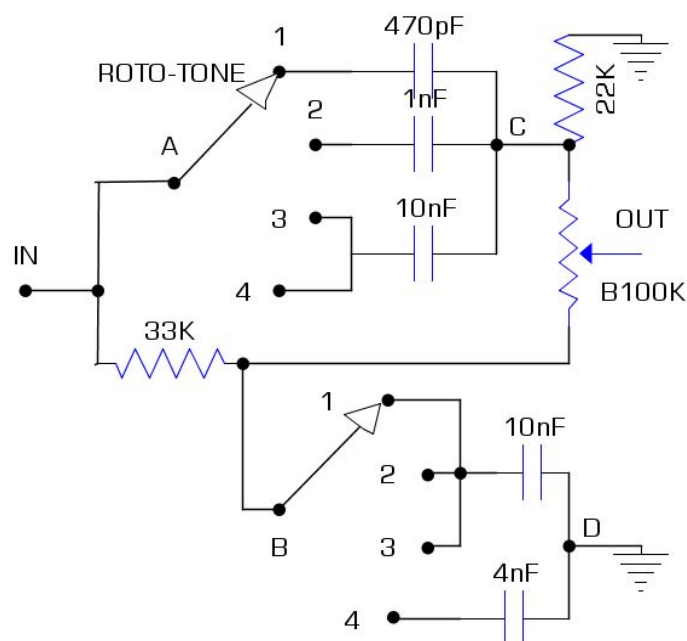
Replace C10 with wires to A and C.

Replace C11 with wires to B and D as shown on the next page:

MUFF'N MID SCOOP MOD VERSION 1

MUFFN TONE STACK

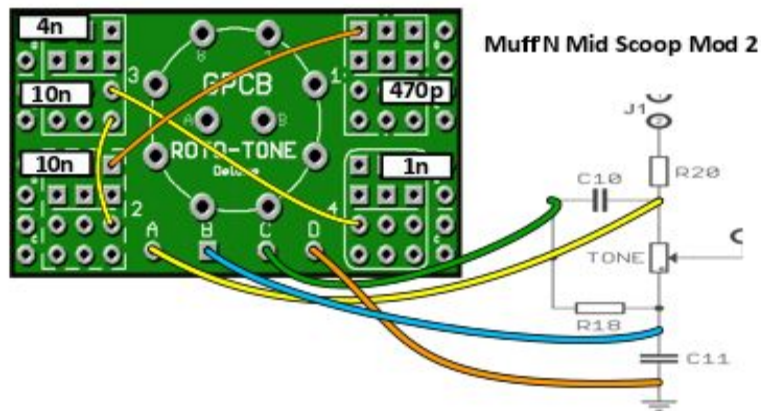
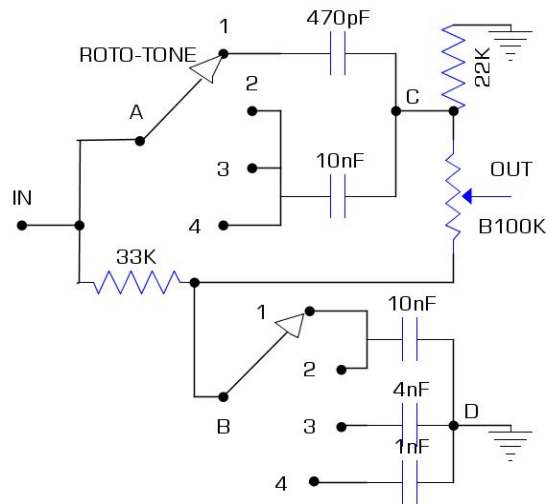
1- HEAVY SCOOP, 2- MILD SCOOP, 3- FLAT EQ, 4- BOOST



MUFF'N MID SCOOP MOD VERSION 2

MUFF'N TONE STACK

1-SCOOP, 2-FLAT EQ, 3-MILD BOOST, 4- HEAVY BOOST



SUMMARY

We hope these examples will give you plenty of ideas to try. Please share your own applications for the ROTO-TONE DELUXE on our forum! Let us know what pedal circuits you used. Our members will thank you too!



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