

TREBLE BOOST

CIR-KIT™ BUNDLE GUIDE

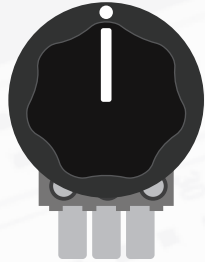


DIY

BY COPPERSOUND PEDALS

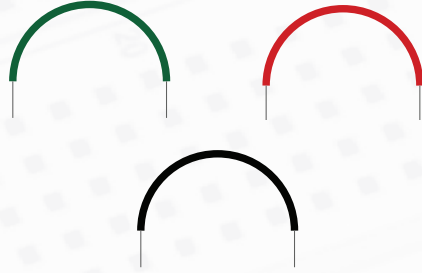
INCLUDED COMPONENTS

Potentiometer



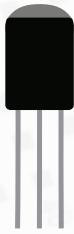
A100K
x1

Precut Wire



1.5" Red, Black, Green
x30

Transistors & Capacitors



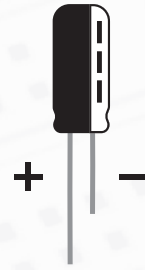
Transistors
2n3904
x1



Film Caps
(various)
x3



Ceramic Cap
100p
x1



Electrolytic Cap
(various)
x2

Resistors & Diodes



Resistors
(various)
x6



Diode
1n4001
x1

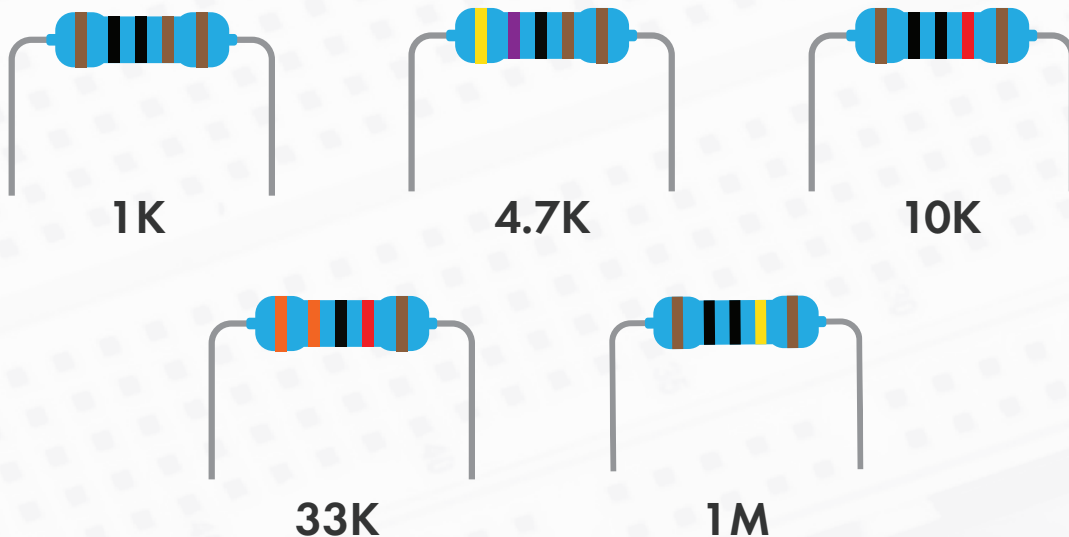
READING RESISTORS

Reading resistors may seem intimidating, but it's a very important aspect of breadboarding and is actually very easy! To determine the resistor value, follow the table and colors below. To ensure you are reading the correct value, keep in mind that the tolerance band is always found on the far right.



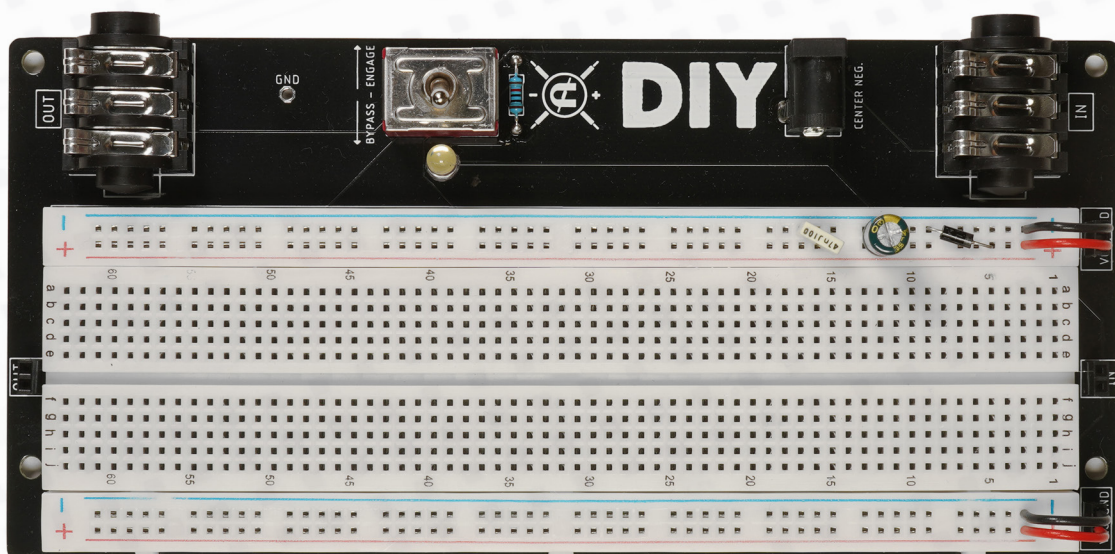
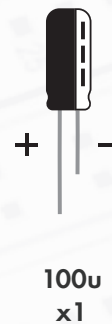
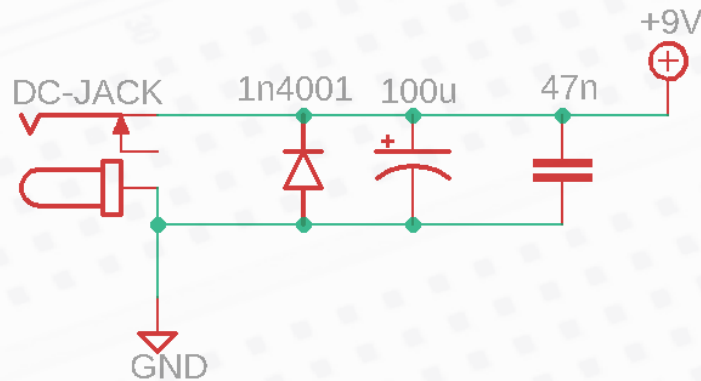
COLOR	1ST BAND	2ND BAND	3RD BAND	DECIMAL MULTIPLIER		TOLERANCE	
BLACK	0	0	0	1	1		
BROWN	1	1	1	10	10	±	1%
RED	2	2	2	100	100	±	2%
ORANGE	3	3	3	1K	1,000		
YELLOW	4	4	4	10K	10,000		
GREEN	5	5	5	100K	100,000		
BLUE	6	6	6	1M	1,000,000		
VIOLET	7	7	7	10M	10,000,000		
GRAY	8	8	8		100,000,000		
WHITE	9	9	9		1,000,000,000		
GOLD					0.1	±	5%

Shown below are the resistors and values that we'll be using in this build.



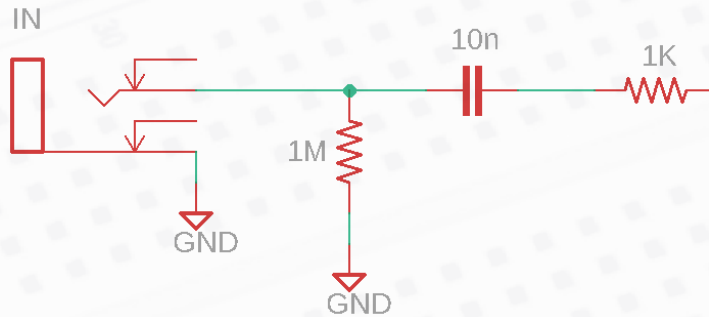
STEP ONE | POWER FILTERING

Power filtering helps to filter unwanted noise from power supplies, while preventing incorrect polarity from damaging the circuit. Ensure that polarized components (diode + electrolytic capacitor) are inserted correctly. In the schematic below, the power shows 9V, whereas the breadboard shows VCC. Please note that for the majority of pedal circuits, these terms are interchangeable.



STEP TWO | INPUT

The input capacitor blocks AC signal, while setting the amount of low frequency audio allowed into the circuit. The pull down resistor prevents popping from the switch.



10n
x1



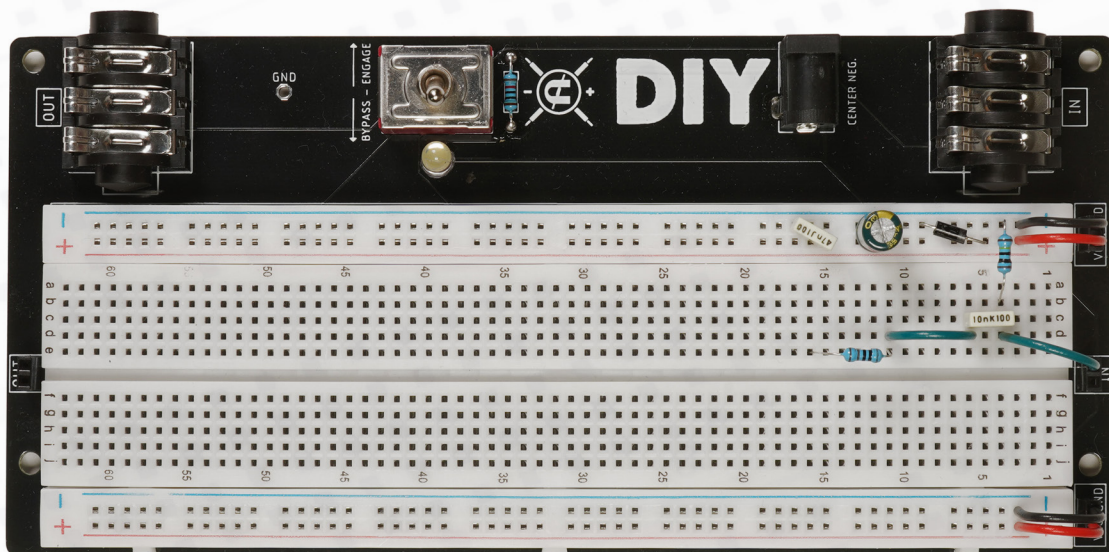
1M
x1



1K
x1

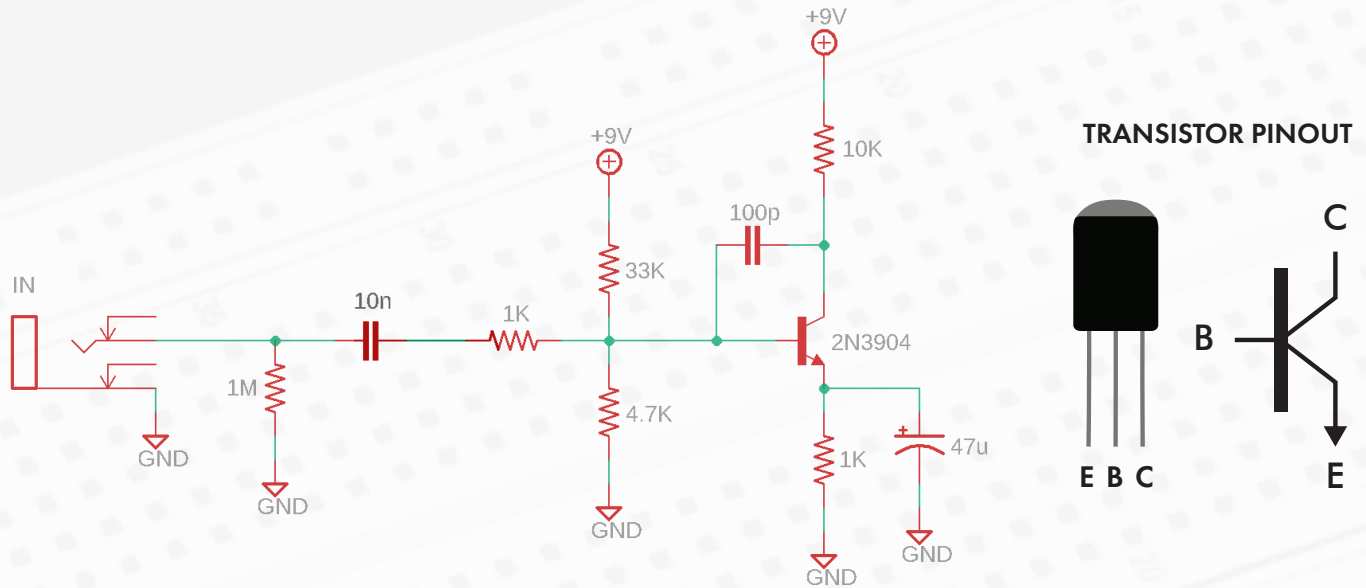


1.5" Green
x2



STEP THREE | GAIN STAGE

Signal enters the transistor and is amplified, based on the value of the bias resistors 33K and 4.7K. The 1K and 47u establish the gain amount.



33K
x1



4.7K
x1



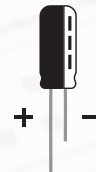
10K
x1



1K
x1



100p
x1



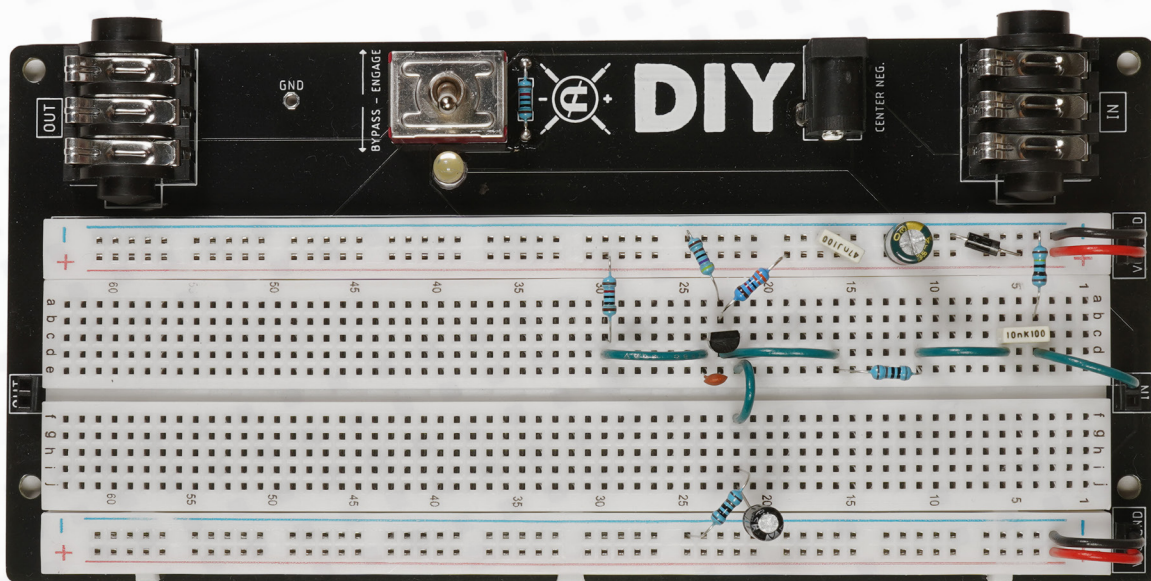
47u
x1



2n3904
x1

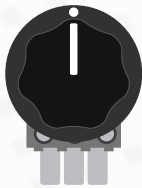
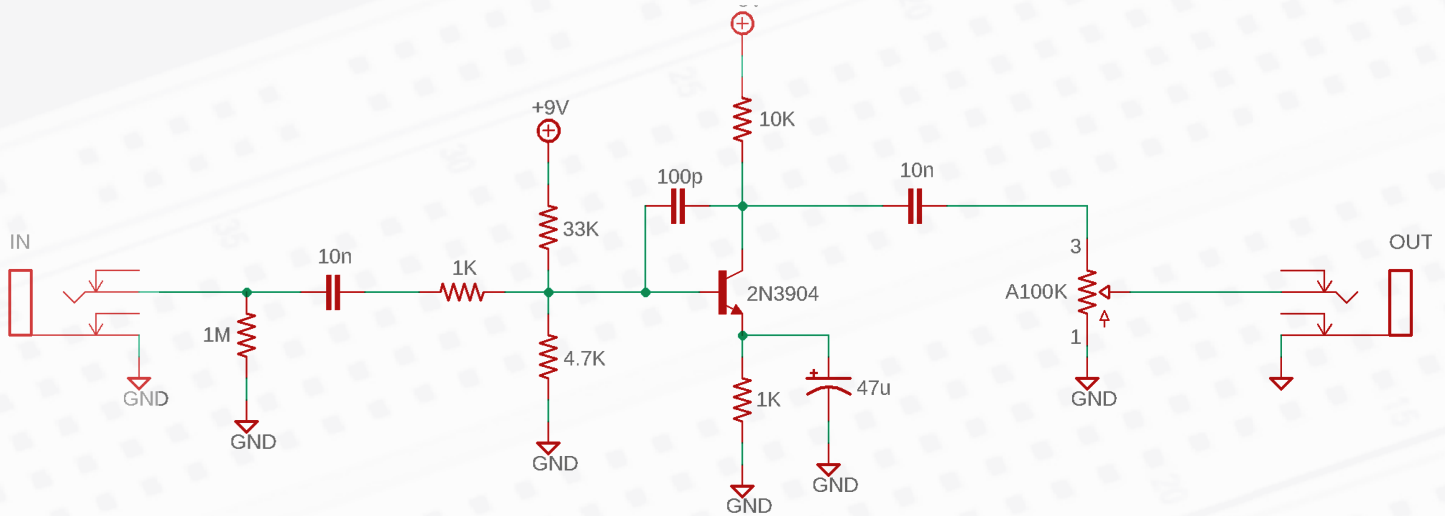


1.5" Green
x3



STEP FOUR | OUTPUT

The volume knob acts as an attenuator, setting the output volume of the circuit.



A100K
x1



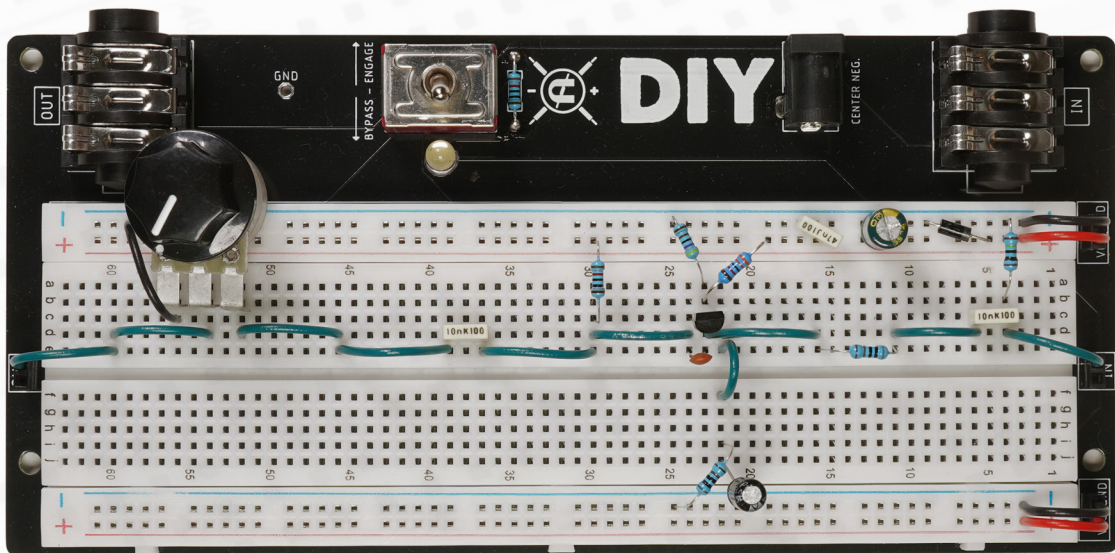
10n
x1



1.5" Green
x5



1.5" Black
x1



TROUBLESHOOTING

Not getting power to the Power Rails/LED is not turning on when the toggle switch is set to the 'Engage' position.

Check that the proper connections are being made from the "VCC" & "GND" pin headers to the Power Rails. Pay attention to the orientation of Polarized components (Diodes and Electrolytic Capacitors).

Check the polarity of your power supply. Breadboards require "Center negative" polarity (as is with the power supply shipped with the bundle).

Not getting any effect when the toggle switch is set to the Engage position.

Most common issues will pertain to the proper connections being made. This could be as simple as a component being 1 slot away from the correct Audio Rail.

Check that transistor are in the correct orientation, and not flipped around 180 degrees.

Getting effect when toggle switch is set to Engage, but it doesn't sound as expected.

Check that the transistor is in the correct orientation and not flipped around 180 degrees. Check that the resistors are in the correct place and didn't get swapped with a different value. Pay attention to the orientation of Polarized components (Diodes and Electrolytic Capacitors).

Still stuck? Please reach out to us with any questions you have! We're here to help. Email us at: diy@coppersoundpedals.com

