

The Ring Resonator Deluxe Troubleshooting Supplement

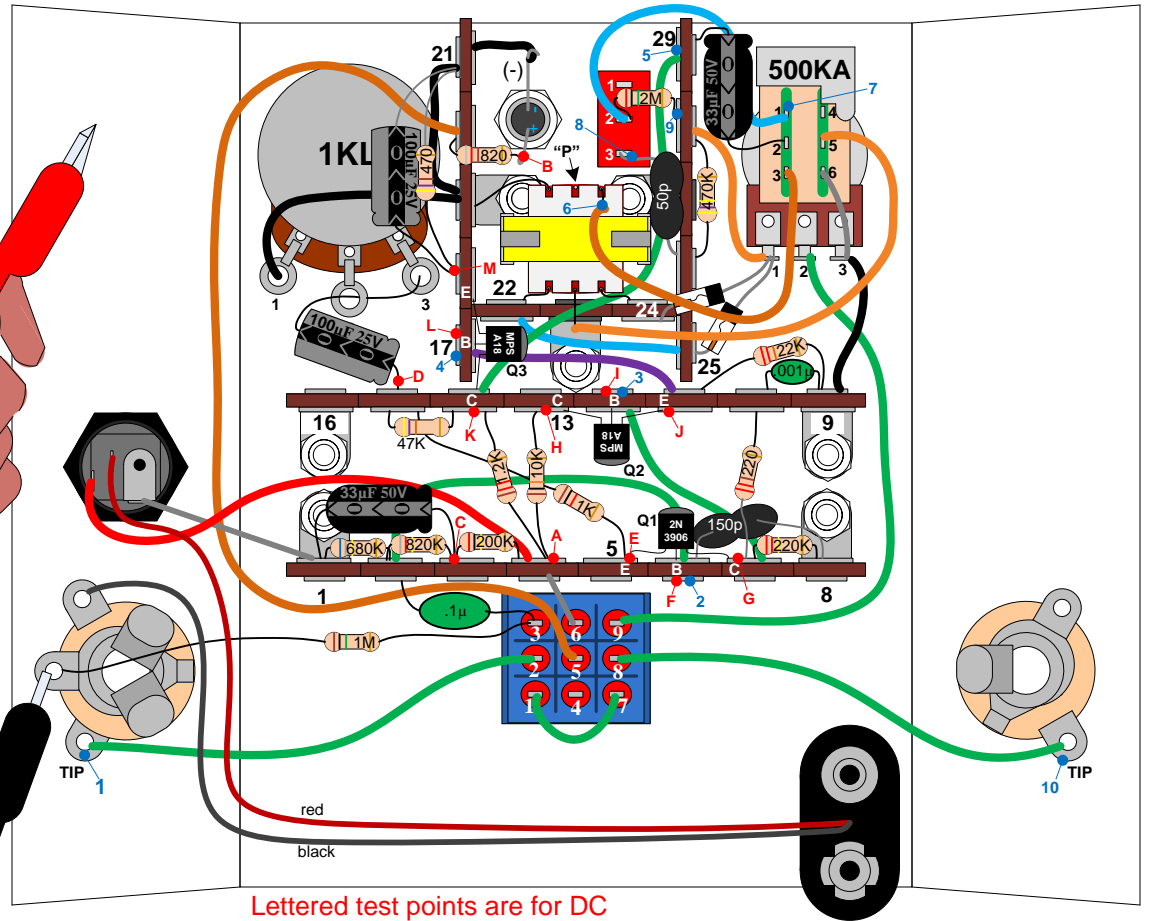
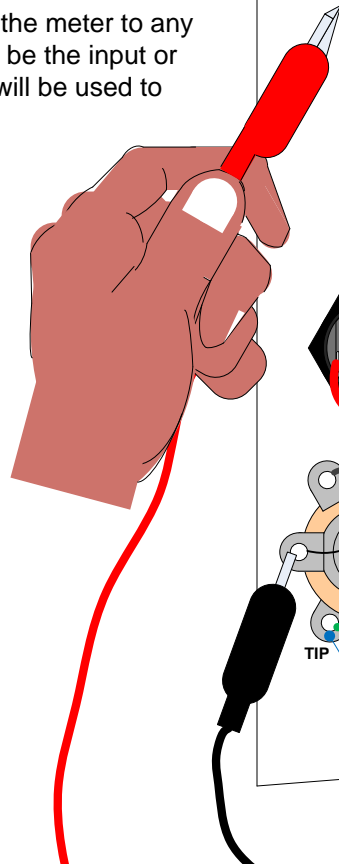
After thoroughly double-checking your connections, the next step is to take DC voltage measurements to help locate problem areas.

Using a volt meter, connect the ground side lead of the meter to any ground point on the pedal. One ground point would be the input or output jack's sleeve lug. The other volt meter lead will be used to measure DC voltages at the test points listed here.

If you are using only a battery for power, be sure to plug a guitar cable into the input jack when taking measurements. Any major differences from the voltages listed should indicate a problem area.

DC Test Points

A = 9.2 VDC Power	H = 8.1 VDC Q2 Collector
B = 2.0 VDC LED (+)	I = 2.9 VDC Q2 Base
C = 8.0 VDC 33 μ F (+)	J = 2.4 VDC Q2 Emitter
D = 4.2 VDC 100 μ F (+)	K = 4.8 VDC Q3 Collector
E = 4.2 VDC Q1 Emitter	L = 2.4 VDC Q3 Base
F = 3.5 VDC Q1 Base	M = 1.7 VDC Q3 Emitter
G = 2.9 VDC Q1 Collector	



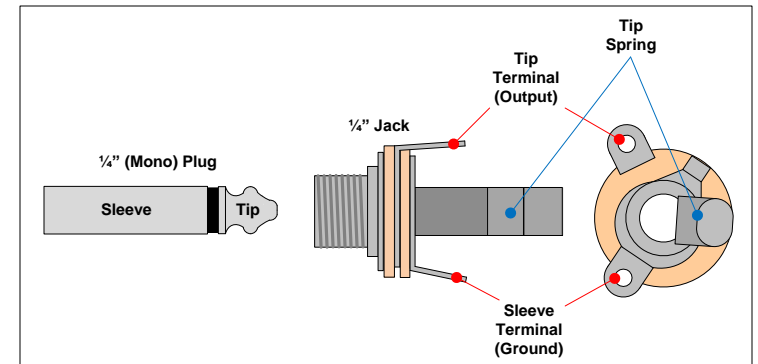
Lettered test points are for DC
 *Numbered test points are for AC
 *See the schematic for control settings.

Measuring AC Voltages from the Guitar Signal

Once your DC voltages are in order, if your kit is still not working properly, you can measure AC voltages along the signal path to troubleshoot further.

You will need a volt meter that can measure the small signal AC voltages that electric guitars put out. The output signal from your guitar will likely be less than 1 V.

First, measure the output signal directly from your guitar. You can do this by plugging your guitar cable into the guitar and leaving the other end of the cable disconnected. Connect your meter across the disconnected 1/4" plug's "tip" and "sleeve" sections. Make sure your guitar's volume and tone controls are turned up and strum a chord. When you strum, you should see the AC voltage reading on the meter quickly rise to some maximum value and then fall back to 0 VAC when you stop strumming and the strings are at rest.

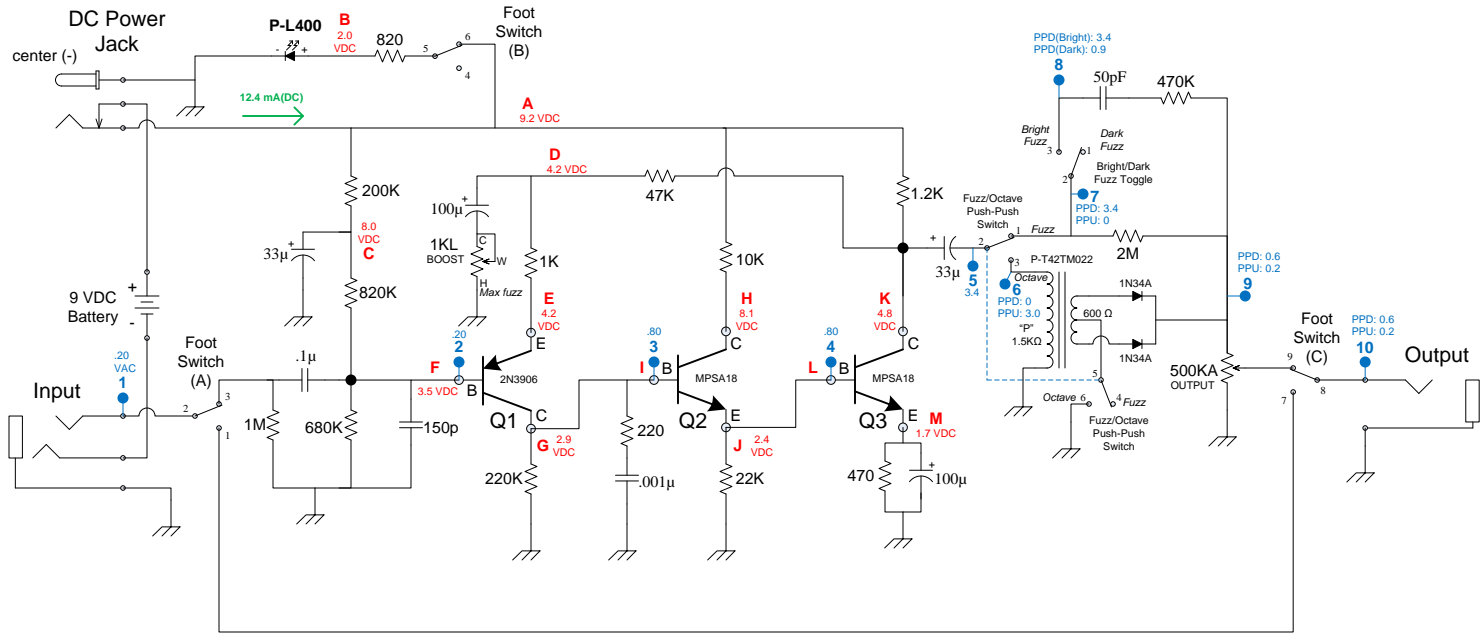


Once you are able to measure the output signal from your guitar directly, plug the guitar into the input jack of your kit and use the AC test points to measure the guitar signal along the signal path. Start with test point one and move along in order. You should be looking to identify the last test point where the signal seems normal and the first test point where the signal seems unusual or where it is no longer even present.

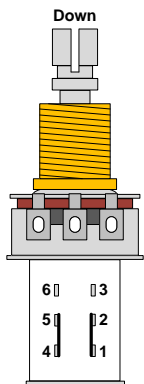
Control settings for Voltage Measurements

- Output (500KA) = full clockwise rotation (max)
- Fuzz (1KL) = full counter-clockwise rotation (min)
- Push-Push Pot Down = PPD; Push-Push Pot Up = PPU
- Toggle Switch: PPD(Bright) = Up, PPD(Dark) = Down
- Guitar: Strat Neck Pickup (full volume and tone settings)

- Letters A to M = DC Voltage Measurements
- Numbers 1 to 10 = AC Signal Voltage Measurements

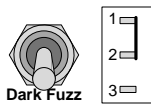


R-VPSH-500KA



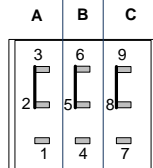
P-H540

SPDT "Bright/Dark Fuzz" Toggle Switch

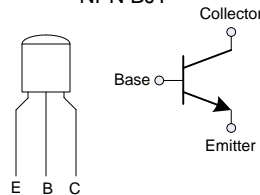


P-H501

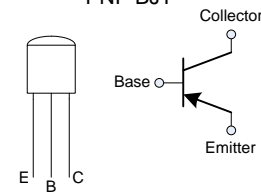
3PDT Footswitch



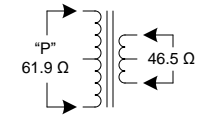
MPSA18 NPN BJT



2N3906 PNP BJT



P-T42TM022 DCR Measurements



MOD

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"The Ring Resonator Deluxe"
(K-976) Schematic