OFFICIALLY LICENSED CIRCUITS

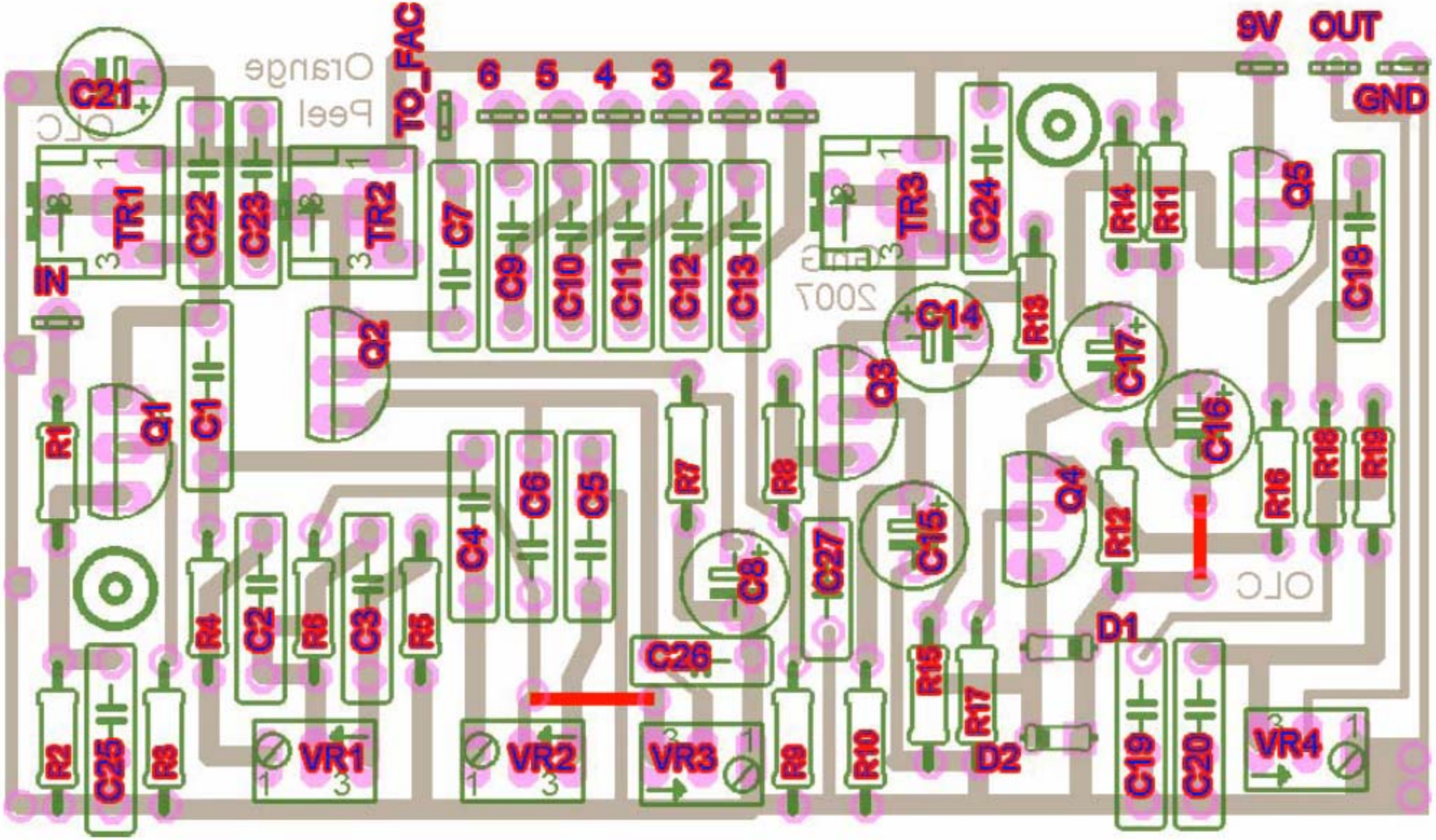
Quality Kits For The DIYer

Orange Peel

The Orange Peel is based on the legendary and unique 1974 Orange Graphic mkII amplifier and adapted for use as a distortion pedal. Like all of the OLC-exclusive kits, you won't find this anywhere else online. This circuit was initially developed by runoffgroove.com, and refined by OLC. Special, and I mean special thanks go to the runoffgroove.com team.

PCB Layout

The following graphic shows the layout of the printed circuit board. Take a moment to become familiar with the board, its orientation, and the location of major components before proceeding.

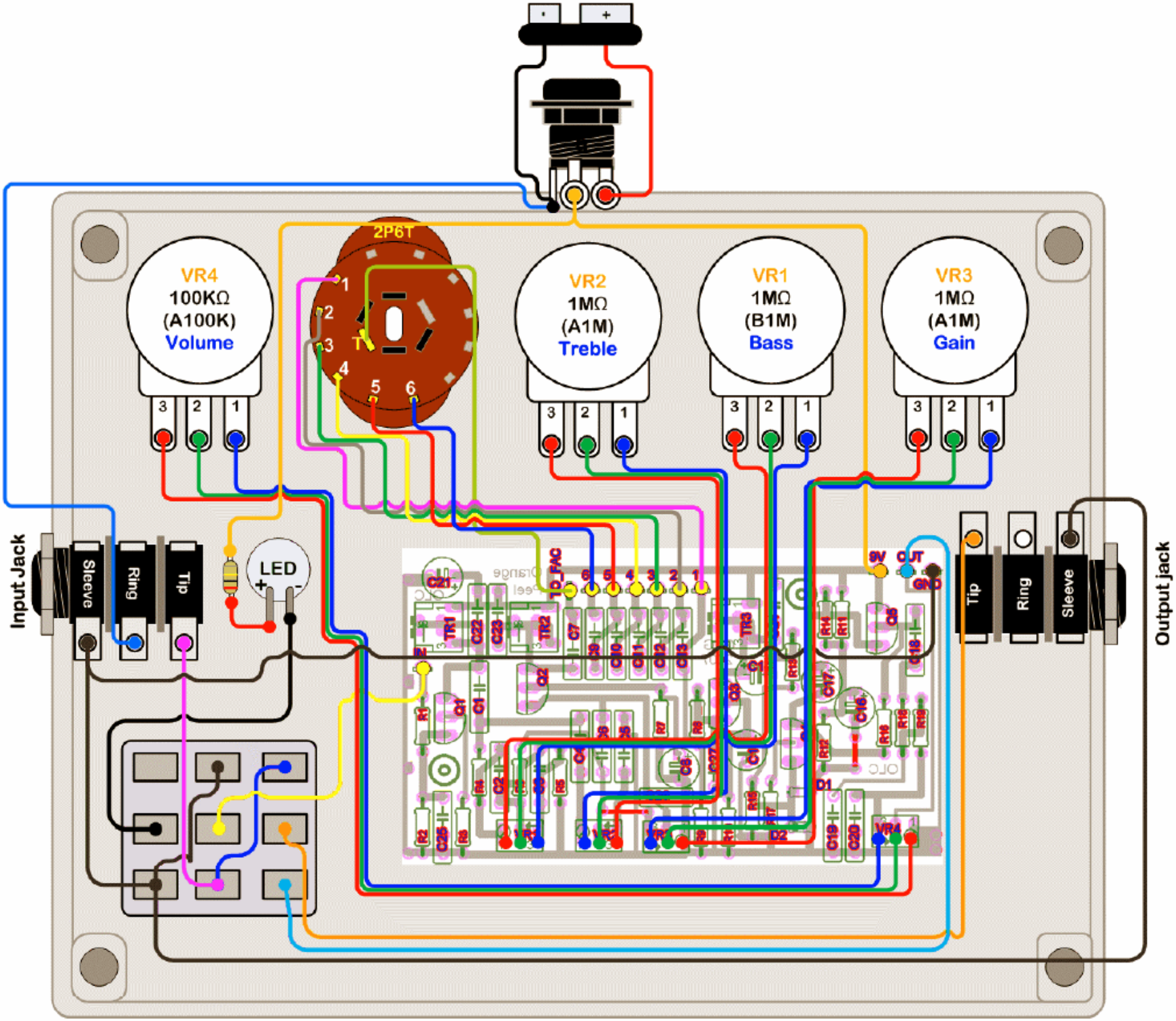


Schematic #	Part Value	Code/Notes
Fixed Resistors		
R1	33 KΩ	Orange Orange Black Red
R2	220 KΩ	Red Red Black Orange
R3	330 Ω	Orange Orange Black Black
R4	100 KΩ	Brown Black Black Orange
R5	22 KΩ	Red Red Black Orange
R6	22 KΩ	Red Red Black Orange
R7	1 KΩ	Brown Black Black Brown
R8	100 KΩ	Brown Black Black Orange
R9	180 KΩ	Brown Grey Black Orange
R10	1 KΩ	Brown Black Black Brown
R11	10 KΩ	Brown Black Black Red
R12	10 KΩ	Brown Black Black Red
R13	100 KΩ	Brown Black Black Orange
R14	1 MΩ	Brown Black Black Yellow
R15	1 MΩ	Brown Black Black Yellow
R16	390 Ω	Orange White Black Black
R17	390 Ω	Orange White Black Black
R18	15 KΩ	Brown Green Black Red
R19	15 KΩ	Brown Green Black Red

Schematic #	Part Value	Code/Notes
Variable Resistors		
TR1	100 KΩ trim	100k trim
TR2	100 KΩ trim	100k trim
TR3	100 KΩ trim	100k trim
VR1	1 MΩ Linear Taper	1M-b Bass
VR2	1 MΩ Audio Taper	1M-a Treble
VR3	1 MΩ Audio Taper	1M-a Gain
VR4	100 KΩ Audio Taper	100k-a Volume
Capacitors		
C1	68 nF	683 or 68n or .68
C2	2.2 nF	222 or 2n2
C3	22 nF	223 or 22n
C4	1.5 nF	152 or 1n5
C5	10 nF	103 or 10n
C6	330 pF	331
C7	68 nF	683 or 68n or .68
C8	4.7 µF	4.7 µF electrolytic
C9	330 pF	331
C10	1 nF	102 or 1n

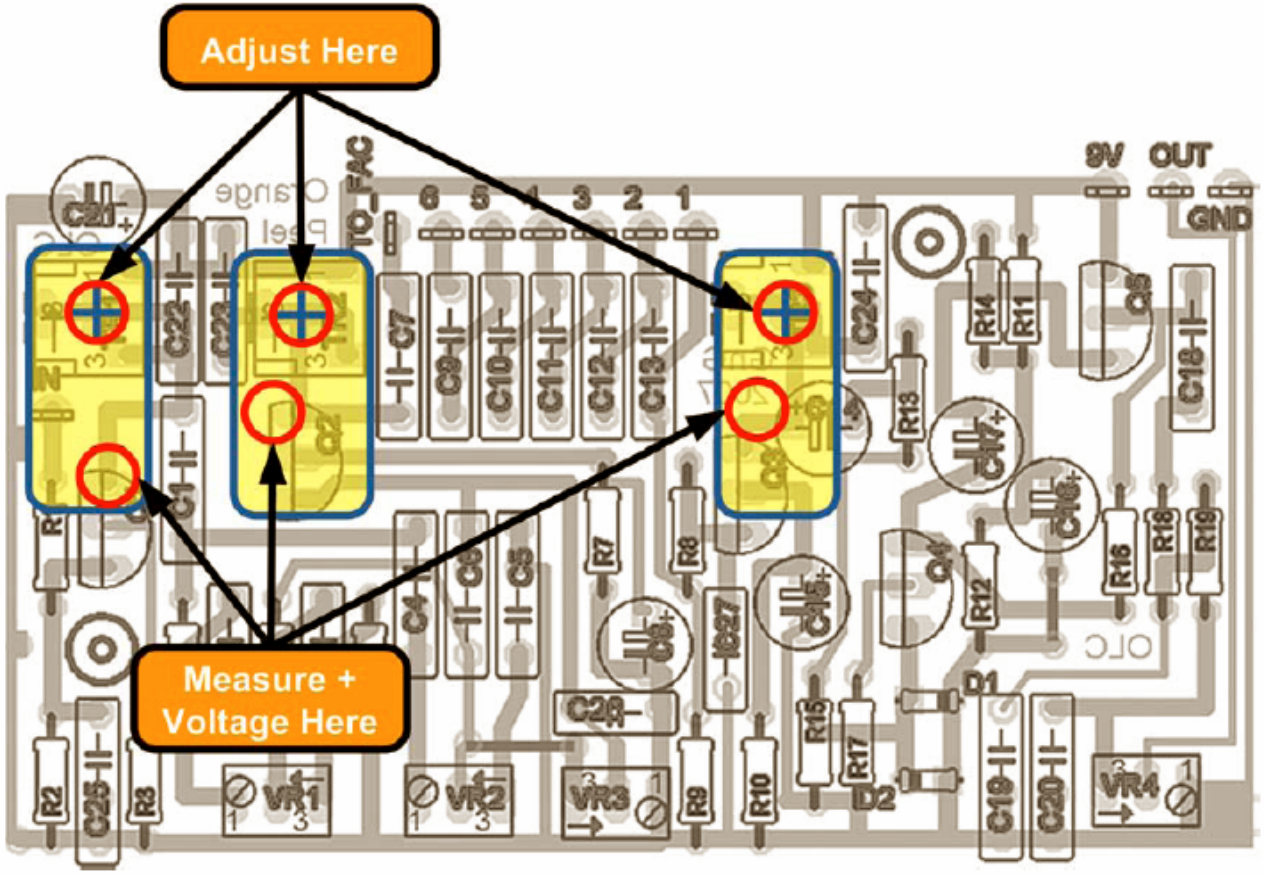
C11	2.2 nF	222 or 2n2
C12	4.7 nF	472 or 4n7
C13	4.7 nF	472 or 4n7
C14	1 µF	1 µF electrolytic
C15	4.7 µF	4.7 µF electrolytic
C16	100 µF	100 µF electrolytic
C17	1 µF	1 µF electrolytic
C18	100 nF	104 or 100n
C19	2.2 nF	222 or 2n2
C20	2.2 nF	222 or 2n2
C21	100 µF	100 µF electrolytic
C22	1 nF	102 or 1n
C23	1 nF	102 or 1n
C24	1 nF	102 or 1n
C25	100 pF	101
C26	100 pF	101
C27	100 pF	101

Schematic #	Part Value	Code/Notes
Semiconductors		
Q1		MPF102
Q2-Q5		J201
Diodes		
D1-D2		1N914
Hardware		
Aluminum enclosure		Hammond 1590BB style
DC jack		Black plastic with chrome nut
LED		Color varies with kit/order
9 volt battery snap		Red=positive, black=negative
LED bezel clip		Black plastic ring with notches
LED bezel ring		Black plastic ring
Heat shrink tubing		Insulators for LED leads
Knobs (5)		Quarter inch plastic
3PDT stomp switch		
¼" Stereo input jack		
¼" Stereo/mono input jack		
Transistor sockets		


VR4
100KΩ
(A100K)
Volume
2P6T
VR2
1MΩ
(A1M)
Treble
VR1
1MΩ
(B1M)
Bass
VR3
1MΩ
(A1M)
Gain
Input Jack
Sleeve
Ring
Tip
LED
Tip_FAC
9V
OUT
GND
Tip
Ring
Sleeve
Output jack

Setting the Transistor Supply Voltage

The Orange Peel uses trimmer potentiometers to set the supply voltage for Q1, Q2 and Q3. You can simply plug everything in and power it up and set the trim pot values by ear. Or you can get out your multimeter and set them to the circuit's specified supply voltage of 4.5 volts. Here's how to accomplish this.



1. Make sure the pedal is powered up, either with a 9v battery or AC adaptor. Plug in your guitar so the pedal is on.
2. Connect the negative lead (black) of your multimeter to the ground lug on the board.
3. Touch the positive lead (red) of your multimeter to the Drain of Q1. This should be easy because you can get to the Drain pin before it enters the transistor. Remember that the Drain pin is the top-most of the pins as shown in the Layout Diagram.
4. Adjust the trimpot TR1 until your multimeter reads approximately 4.5v+.
5. Repeat steps 3 and 4 for TR2/Q2 and TR3/Q3.

Note that Q4 and Q5 has a fixed operating levels—you do not need to adjust those.