

Wolfgang 61

Based on:

Peavey 6505 preamp

Effect type:

High Gain Preamp

Build difficult:

Advanced

Amount of parts:

High, total 132 components

Technology:

J201 JFET N-Channel Transistor

Power consumption:

9V

Enclosure type:

1790NS

Get your board at:

[Wolfgang 61](#)

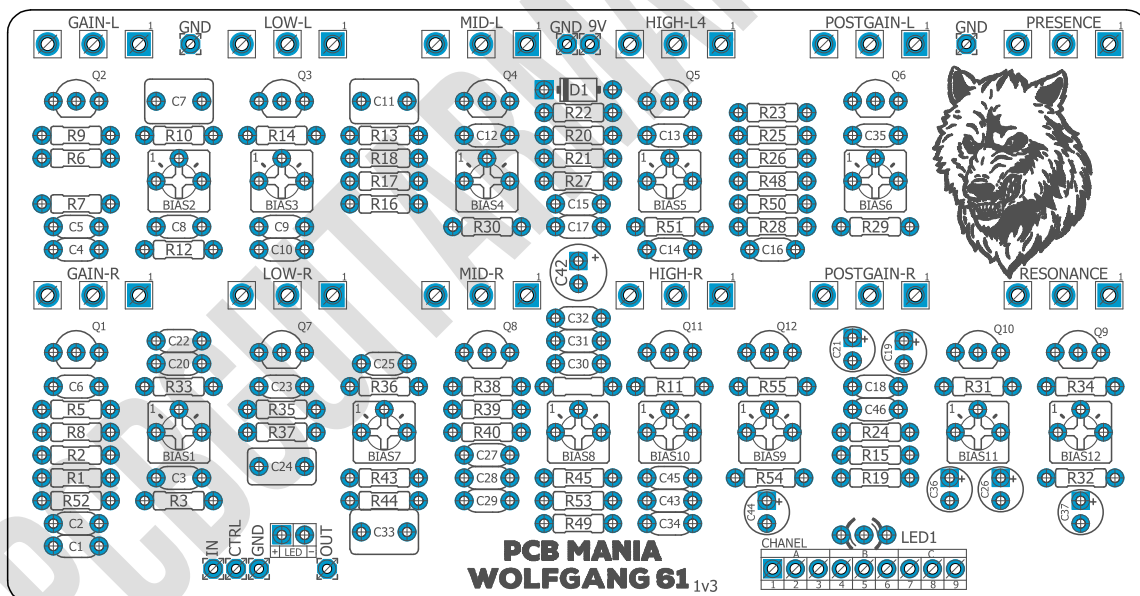
Get your kit at:

[Das Musikding \(Europe\)](#)

Project overview:

Wolfgang 61 is the Dual Channel adaptation of the Peavey 6150 preamp. It is powered by J201 transistors and includes Full EQ for each channel plus a common control for Presence and Resonance.

Get all the amazing features of the original six gain stages [Peavey EVH 5150™](#) and a new dimension of versatility only found in its predecessor!



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Introduction

The 6505 is the relaunch of the [5150 Series](#), the immensely popular amplifiers Peavey designed with Edward Van Halen. Since the debut of the first of these amps in 1992, they are regarded as one of the best modern amps for high-gain rock and metal sounds ever created.

The newer 6505 maintains the excellence of its predecessors as an outstanding amp for high-gain tones and comes with an entire line of different configurations to meet the needs of any guitarist looking for a huge and heavy sound.

For many scores of rock, hardcore, and metal bands, these amps are the unquestionable choice, and every day get an expanding list of new endorsers due to their raw tone and relentless power! Wolfgang 6105 preamp allows you to build your own in a convenient 1790NS enclosure. The time to rock is now!

Controls

Potentiometers

- GAIN-L
- GAIN-R
- HIGH-L4
- HIGH-R
- LOW-L
- LOW-R
- MID-L
- MID-R
- POSTGAIN-L
- POSTGAIN-R
- PRESENCE
- RESONANCE

Bill of materials

Resistors	
Part	Value
R1	10k
R2	1M
R3	1k8
R4	1M
R5	1M
R6	1M
R7	1M
R8	68k
R9	470k
R10	1k8
R11	1k5
R12	470k
R13	1M
R14	39k
R15	1k5
R16	330k
R17	220k
R18	1k8
R19	82k
R20	1M
R21	100k
R22	2k2
R23	2k2
R24	1M
R25	1M
R26	1M
R27	33k
R28	47k
R29	1M
R30	47k
R31	2k
R32	30k
R33	470k
R34	30k
R35	470k

R36	470k
R37	2k2
R38	470k
R39	220k
R40	2k2
R43	22k
R44	68k
R45	33k
R48	1M
R49	4k7
R50	82k
R51	47k
R52	1M
R53	4k7
R54	820r
R55	820r

Capacitors	
Part	Value
C1	39pf
C2	100n
C3	1u
C4	470pf
C5	1n
C6	22n
C7	1u
C8	1n
C9	22n
C10	1n
C11	1u
C12	22n
C13	22n
C14	10n
C15	470p
C16	22n
C17	22n

C18	6n8
C20	470p
C22	6n8
C23	470p
C24	330n
C25	22n
C27	100n
C28	3n3
C29	2n2
C30	22n
C31	22n
C32	470p
C33	2u2
C34	100n
C35	22n
C43	180p
C45	22n
C46	180p

Electrolytic Capacitors	
Part	Value
C19	10u
C21	10u
C26	10u
C36	10u
C37	10u
C42	220u
C44	22u

Potentiometers	
Part	Value
GAIN-L	A1M
GAIN-R	A1M
HIGH-L4	B250k
HIGH-R	B250k
LOW-L	A1M
LOW-R	A1M
MID-L	B50k
MID-R	B10k
POSTGAIN-L	A1M

POSTGAIN-R\	A1M
PRESENCE	A10k
RESONANCE	A1M

Trim pots	
Part	Value
BIAS1	1M
BIAS2	1M
BIAS3	500K
BIAS4	500K
BIAS5	100K
BIAS6	100K
BIAS7	100K
BIAS8	100K
BIAS9	100K
BIAS10	100K
BIAS11	100K
BIAS12	5K

Transistors	
Part	Value
Q1	J201
Q2	J201
Q3	J201
Q4	J201
Q5	J201
Q6	J201
Q7	J201
Q8	J201
Q9	J201
Q10	J201
Q11	J201
Q12	J201

Diodes	
Part	Value
D1	1N5817
LED	3mm red LED
LED1	LED Dual Common Cathode

Shopping list

Resistors		
Qty	Value	Parts
1	100k	R21
1	10k	R1
2	1k5	R11, R15
3	1k8	R3, R10, R18
13	1M	R2, R4, R5, R6, R7, R13, R20, R24, R25, R26, R29, R48, R52
2	220k	R17, R39
1	22k	R43
1	2k	R31
4	2k2	R22, R23, R37, R40
2	30k	R32, R34
1	330k	R16
2	33k	R27, R45
1	39k	R14
6	470k	R9, R12, R33, R35, R36, R38
3	47k	R28, R30, R51
2	4k7	R49, R53
2	68k	R8, R44
2	820r	R54, R55
2	82k	R19, R50

Capacitors		
Qty	Value	Parts
3	100n	C2, C27, C34
1	10n	C14
2	180p	C43, C46
3	1n	C5, C8, C10
3	1u	C3, C7, C11
11	22n	C6, C9, C12, C13, C16, C17, C25, C30, C31, C35, C45
2	2n2	C29, C33
1	330n	C24
1	39pf	C1
1	3n3	C28
5	470p	C4, C15, C20, C23, C32
2	6n8	C18, C22

Electrolytic Capacitors		
Qty	Value	Parts
5	10u	C19, C21, C26, C36, C37
1	220u	C42
1	22u	C44

Potentiometers		
Qty	Value	Parts
1	B10k	MID-R
7	A1M	GAIN-L, GAIN-R, LOW-L, LOW-R, POSTGAIN-L, POSTGAIN-R, RESONANCE
2	B250k	HIGH-L4, HIGH-R
1	B50k	MID-L
1	A10k	PRESENCE

Trim pots		
Qty	Value	Parts
7	100K	BIAS5, BIAS6, BIAS7, BIAS8, BIAS9, BIAS10, BIAS11
2	1M	BIAS1, BIAS2
2	500K	BIAS3, BIAS4
1	5K	BIAS12

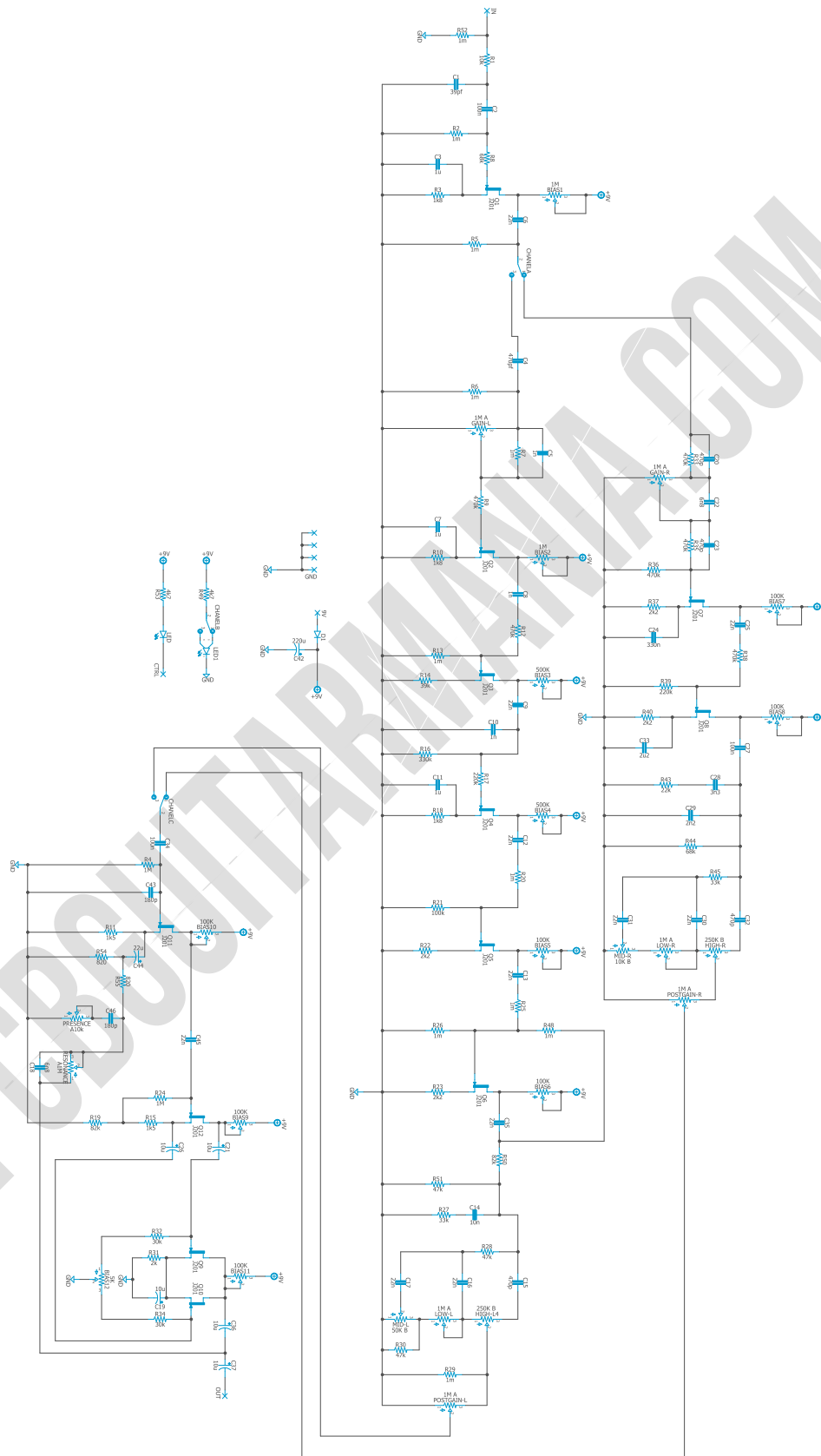
Transistors		
Qty	Value	Parts
12	J201	Q1, Q2, Q3, Q4, Q5, Q6, Q7, Q8, Q9, Q10, Q11, Q12

Switches		
Qty	Value	Parts
2	3PDT Stomp foot	-

Diodes		
Qty	Value	Parts
1	LED Dual Common Cathode	LED1
1	1n5817	D1
1	3mm red LED	LED

Jacks		
Qty	Value	Parts
1	DC Jack	-
2	Audio Jack	-

Schematic



Components Recommendations

As many people like to experiment with some pedals with higher voltage, always ensure your **electrolytic capacitors'** max tolerance is over 25v.

This board has been tested using Film box capacitors for most of the values over 1nf and ceramics discs for those under 1nf. However, high-quality components such as Wima's Capacitors and Panasonic's electrolytics can deliver a better performance.

All the resistors used for testing this project are 1/4W Metal Film.

The BOM and Shopping list are exclusive regarding this project. It doesn't include all the hardware like the 3PDT bypass switch, audio/dc jacks, enclosure, etc.

Build Notes

If this is one of your first projects, I recommend you to take a look at our [Pedal Building Guide](#).

For a successful and tidy build, it's recommended the following order:

1. Resistors & diodes
2. Capacitors, starting with the smaller ones and the ceramic ones.
3. Electrolytic capacitors (always check the polarity)
4. Transistors
5. Wires
6. Potentiometers and switches
7. Off-board wiring

Wiring Diagram

All our projects include a free 3PDT Board to make the wiring easier and tidier. Also, all of our PCBs feature the status LED on board.

The pad named "Ctrl" or "LED" is the one that controls the status of the led; wire it to the "LED" pad on the 3PDT board or in the control slug of your 3PDT.

This board has been designed to match our EZ 3PDT PCB; check it [here](#) to access our [Pedal Wiring Guide](#).

Drill Template

This Project has been planned to fit into a 1790NS enclosure type.

Check the Attached “Drilling templates” to drill the box properly. The files are on Scale 1:1, ready to print on an A4 page.

Licensing and Usage

We really appreciate your trust and support in buying this PCB, as well as your will to dive into the DIY electronics world. For us, that's why you can make this project work properly and enjoy not only the building process but also experiment and play with it on your rig.

We try to reply to every question we receive on our email or our social media. Still, we try to encourage all our customers to join our [PCB Guitar Mania – Builders Group](#) on Facebook to post all your doubts, issues, suggestions, or requests, share your builds, and have some feedback from other fellow builders and us!

We tested all our projects following this same guide on their standard configurations. Although, not all of the variations and mods have necessarily been checked. These are suggestions based on the schematic analysis and the experiences and opinions of others. Feel free to share with us your views and recommendations regarding the mods your personal experimentation.

These boards may be used for commercial endeavors in any quantity unless expressly noted. No attribution is necessary, though accreditation or a link back is always much appreciated.

If you are a builder planning to make your own run of pedals, we also offer the service of custom-made boards with your brand and logo, design according to your specifications.

The only usage restrictions are that, first, you cannot resell the PCB as part of a kit without prior arrangement with us, and second, you cannot scratch off the silkscreen or other way of trying to hide our logos and the source of the PCBs. Like it's written above, if you want to have your designs with your brand and logo, we could undoubtedly reach an agreement.

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