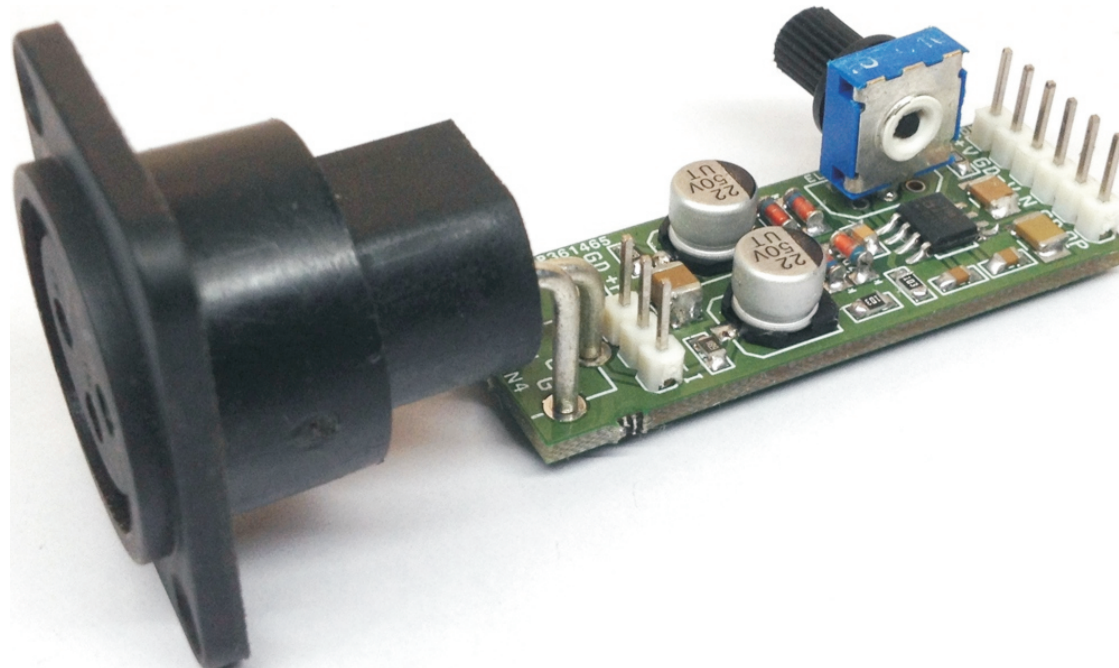


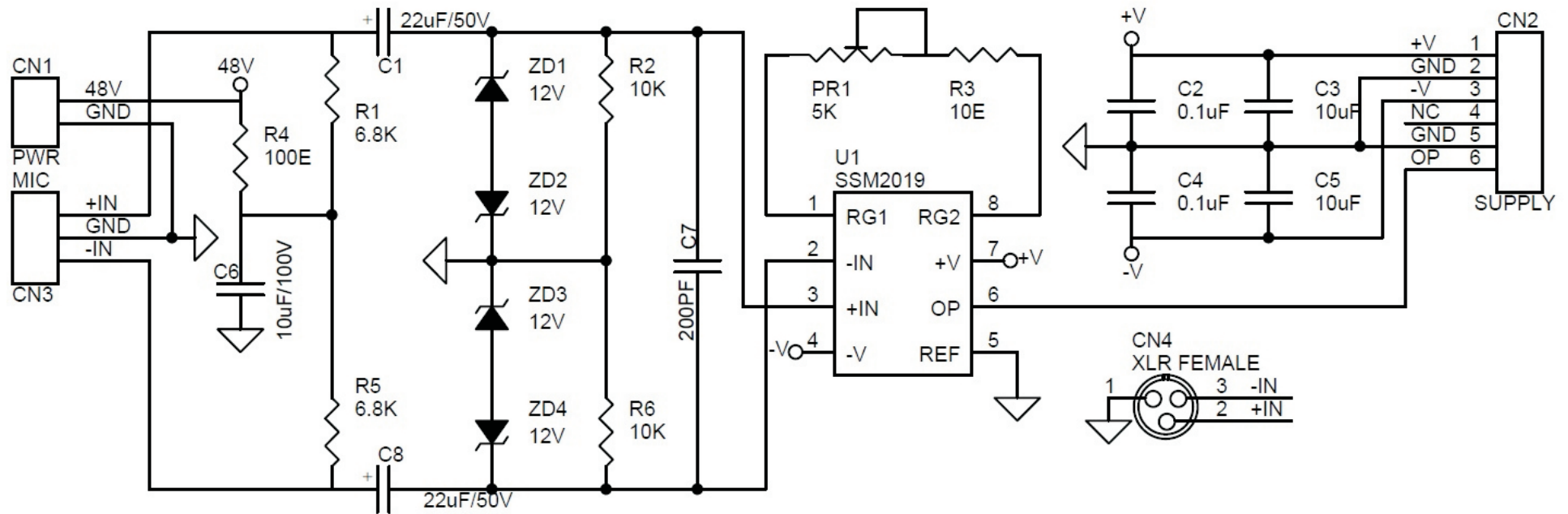
## Phantom Powered Micro-Phone Pre-Amplifier

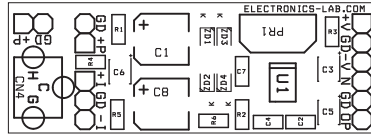
The project is based on SSM2019 IC which is a latest generation pro audio preamplifier. A female XLR connector is provided to connect a differential micro-phone. The circuit also provides phantom power input. Combining SSM preamplifier design expertise with advanced processing, the result is excellent audio performance, requiring a trimmer potentiometer to help adjust the output gain. The SSM2019 is further enhanced by its unity gain stability. Key specifications include ultra-low noise (1.5 dB noise figure) and THD (<0.01% at G = 100), complemented by wide bandwidth and high slew rate. Applications for this low cost device include microphone preamplifiers and bus summing amplifiers in professional and consumer audio equipment, sonar, and other applications requiring a low noise instrumentation amplifier with high gain capability. Z1 to Z4 provide transient overvoltage protection for the SSM2019 whenever microphones are plugged in or unplugged. Gain level adjustable 0 to 60dB. CN2 connector for supply input and audio output, CN4 female XLR connector for micro-phone input, CN1 phantom power input.

### Features

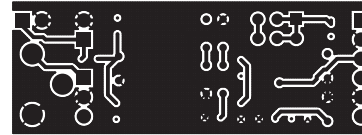
- Supply +/-18V DC Dual Supply
- Phantom Power Input 48V DC
- Female XLR Connector for Microphone Input
- GAIN Adjustable 0dB-60dB
- PR1 Trimmer Potentiometer For Gain Adjust
- Header Connector for supply input
- Header Connector for Phantom Power Input



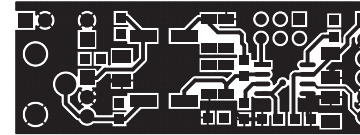




SILK SCREEN TOP

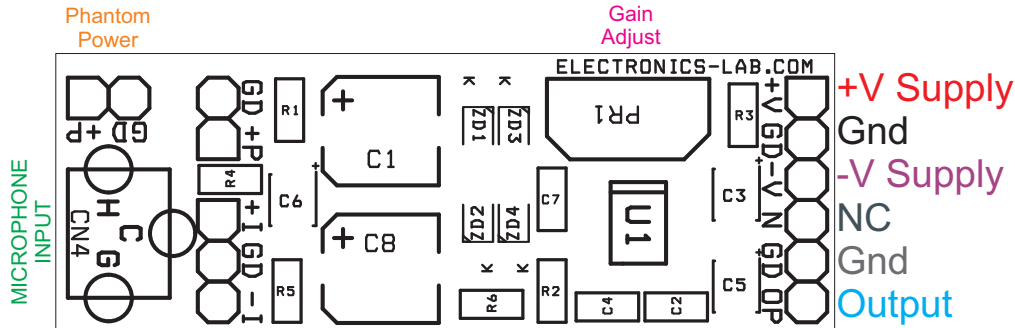


BOTTOM LAYER



TOP LAYER

PCB Dimensions 47.86mm X 17.83mm



BOM			
SR.	QNTY.	REF.	DESC.
1	1	CN1	2 PIN HEADER CONNECTOR
2	1	CN2	6 PIN HEADER CONNECTOR
3	1	CN3	OMIT
4	1	CN4	XLR FEMALE CONNECTOR
5	2	C1,C8	22uF/50V OR 63V SMD
6	2	C2,C4	0.1uF SMD 0805
7	2	C3,C5	10uF/25V SMD 1210
8	1	C6	10uF/100V SMD 1210
9	1	C7	200PF SMD 0805
10	1	PR1	5K VERTICAL TRIMMER POT
11	2	R1,R5	6.8K SMD 0805
12	2	R2,R6	10K SMD 0805
13	1	R3	10E SMD 0805
14	1	R4	100E SMD 0805
15	1	U1	SSM2019 SMD
16	4	ZD1,ZD2,ZD3,ZD4	12V/1W ZENER DIODE
17	1	CN5	OMIT