MINI – PROJECT REPORT

SUBMITTED BY :

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SUBMITTED TO :

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DATE : 14/03/2023

WORKING PRINCIPLE

The objective is to make a dc power supply that takes 220V AC input, and converts that 220V to 12-15V AC using a step down transformer.

After the current has been stepped down, it goes through a bridge rectifier that converts it to DC Current which is about 12 – 13 Volts

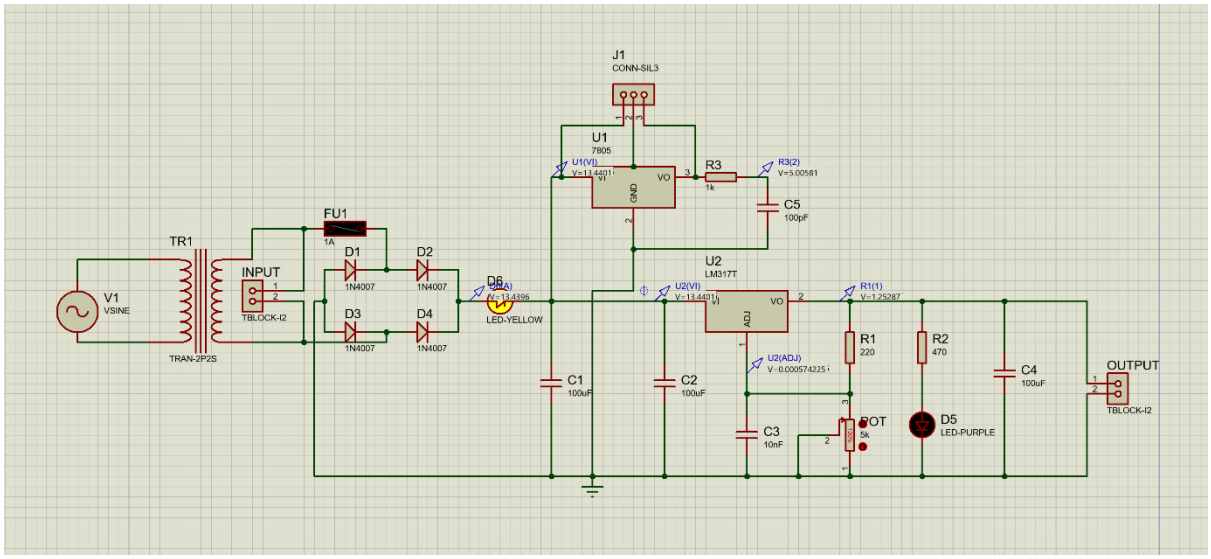
Then we have used to IC's LM7805 that converts the current to constant 5V and LM317 that also us to connect a potentiometer so that we can vary the voltage by varying resistance

The List Of Components Is Provided Below :

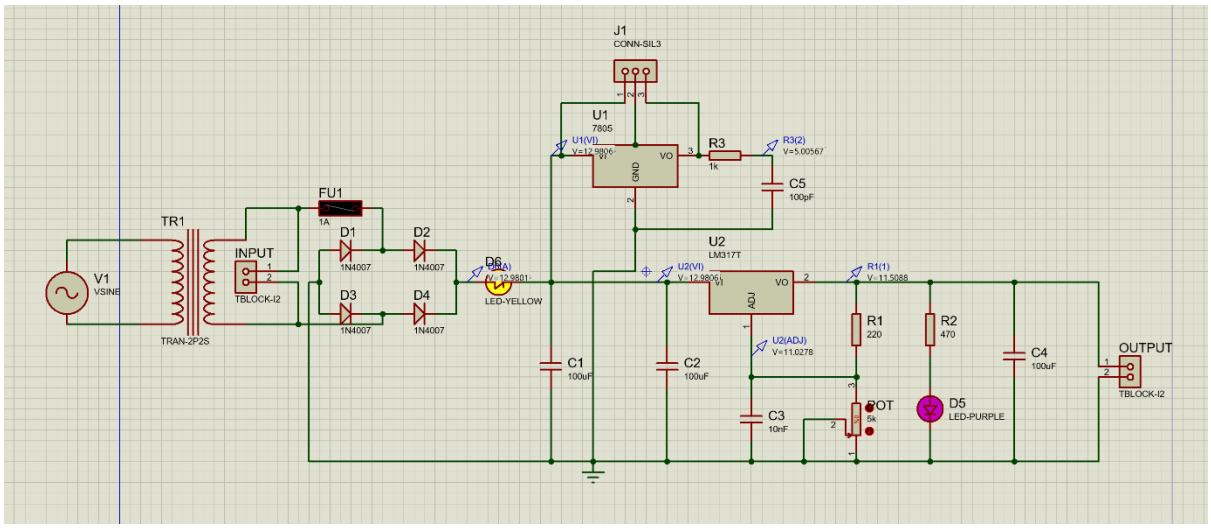
0 Modules				
Quantity	References	Value	Stock Code	Unit Cost
Sub-totals:				Rs0.00
5 Capacitors				
Quantity	References	Value	Stock Code	Unit Cost
3	C1-C2,C4	100uF		
1	C3	10nF		
1	C5	100pF		
Sub-totals:				Rs0.00
3 Resistors				
Quantity	References	Value	Stock Code	Unit Cost
1	R1	220		
1	R2	470		
1	R3	1k		
Sub-totals:				Rs0.00
2 Integrated Circuits				
Quantity	References	Value	Stock Code	Unit Cost
1	U1	7805		
1	U2	LM317T		
Sub-totals:				Rs0.00
0 Transistors				
Quantity	References	Value	Stock Code	Unit Cost
Sub-totals:				Rs0.00
6 Diodes				
Quantity	References	Value	Stock Code	Unit Cost
4	D1-D4	1N4007		
1	D5	LED-PURPLE		
1	D6	LED-YELLOW		
Sub-totals:				Rs0.00
7 Miscellaneous				
Quantity	References	Value	Stock Code	Unit Cost
1	FU1	1A		
2	INPUT,OUTPUT	TBLOCK-I2		
1	J1	CONN-SIL3		
1	POT	5k		
1	TR1	TRAN-2P2S		
1	V1	VSINE		
Sub-totals:				Rs0.00

LAYOUT ON PROTEUS :

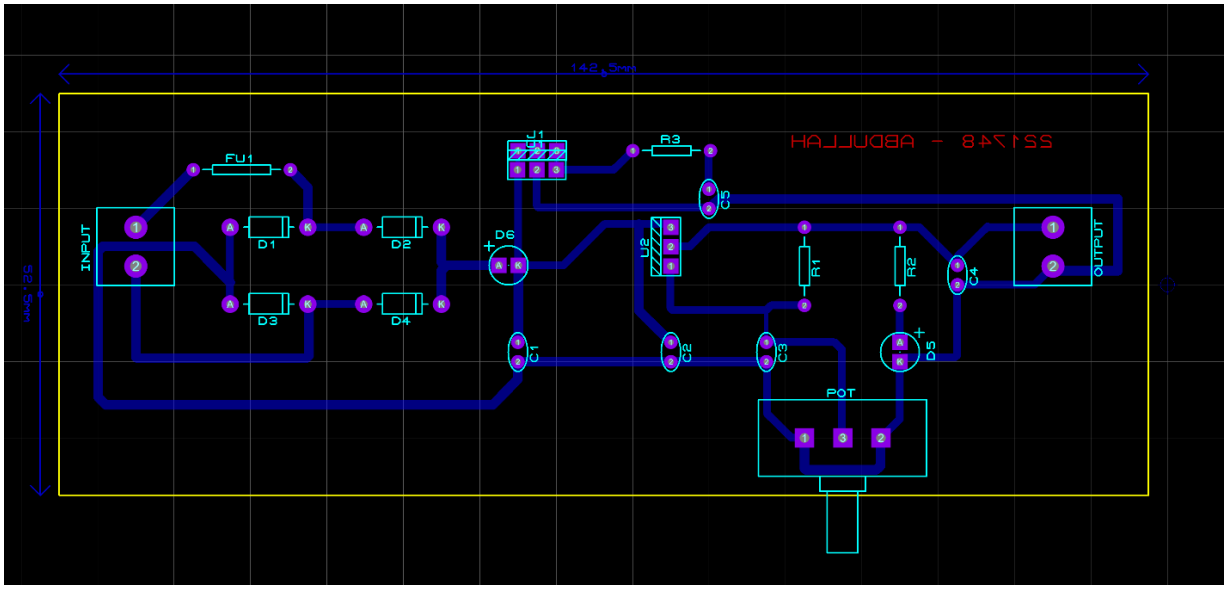
At 100 Resistance Using Potentiometer

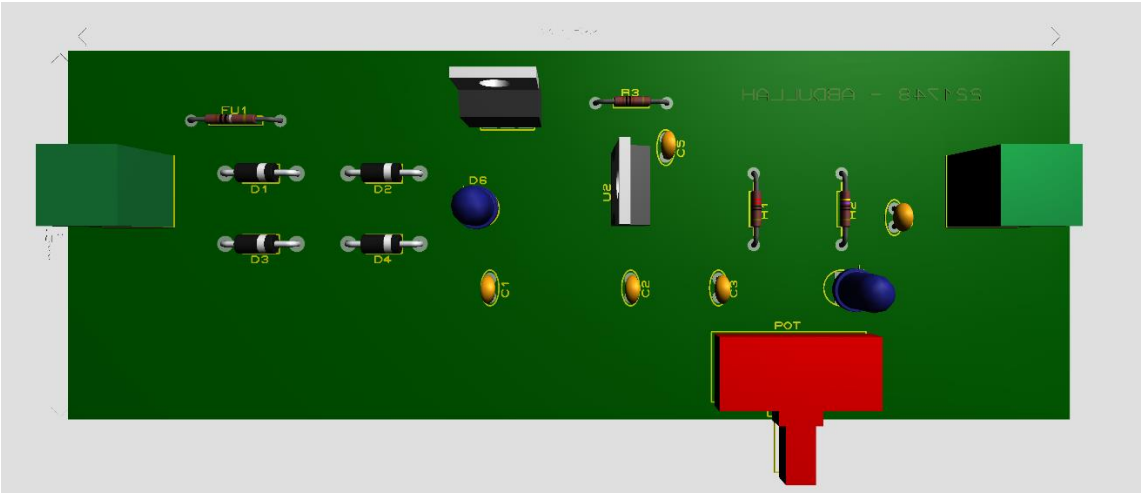


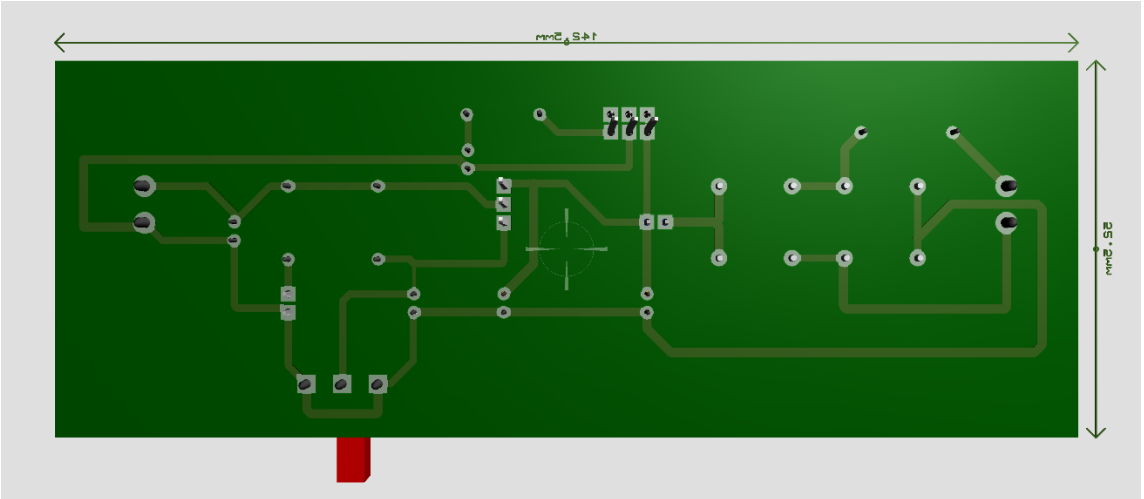
At 0 Resistance Using Potentiometer



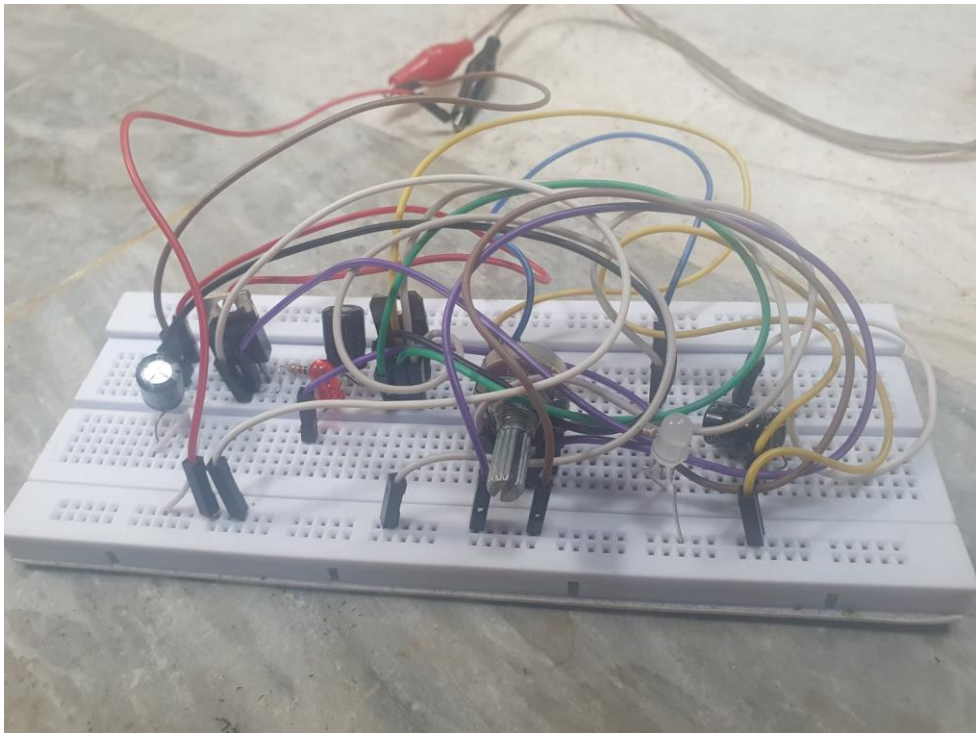
PCB LAYOUT :

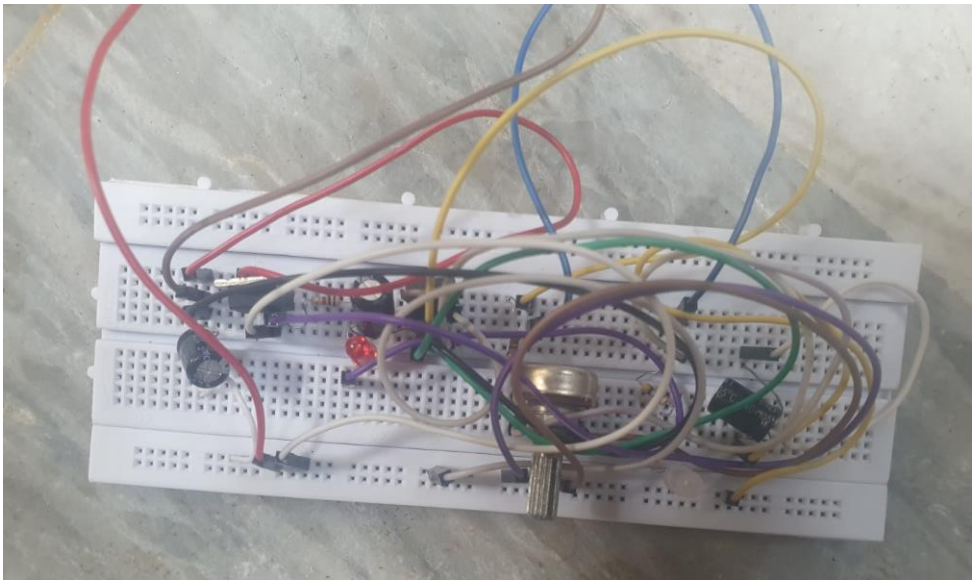

INPUT
OUTPUT
FU1
D1
D2
D3
D4
D6
J1
R3
U3
R1
R2
C1
C2
C3
C4
C5
POT


FU1
D1
D2
D3
D4
D6
R3
U3
C1
C2
C3
C5
POT

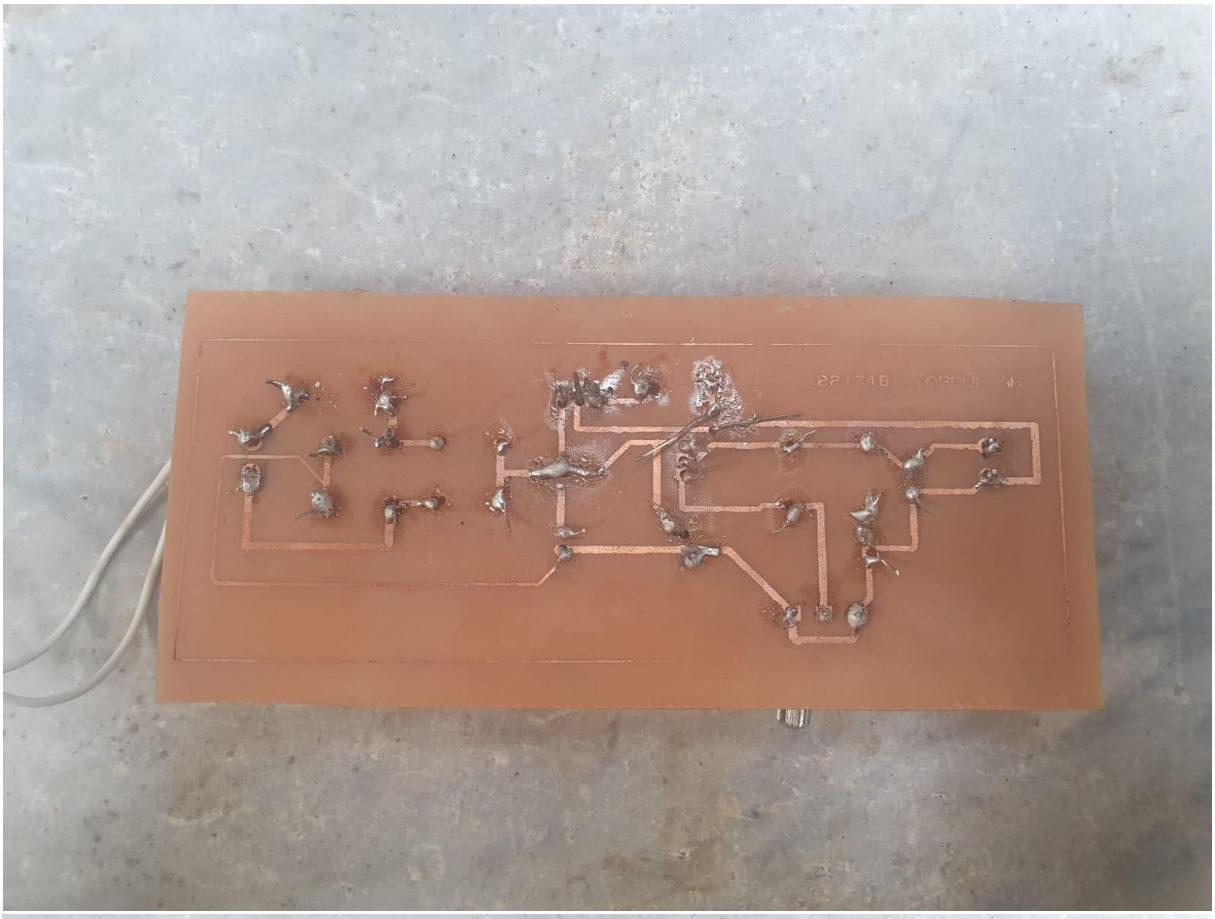


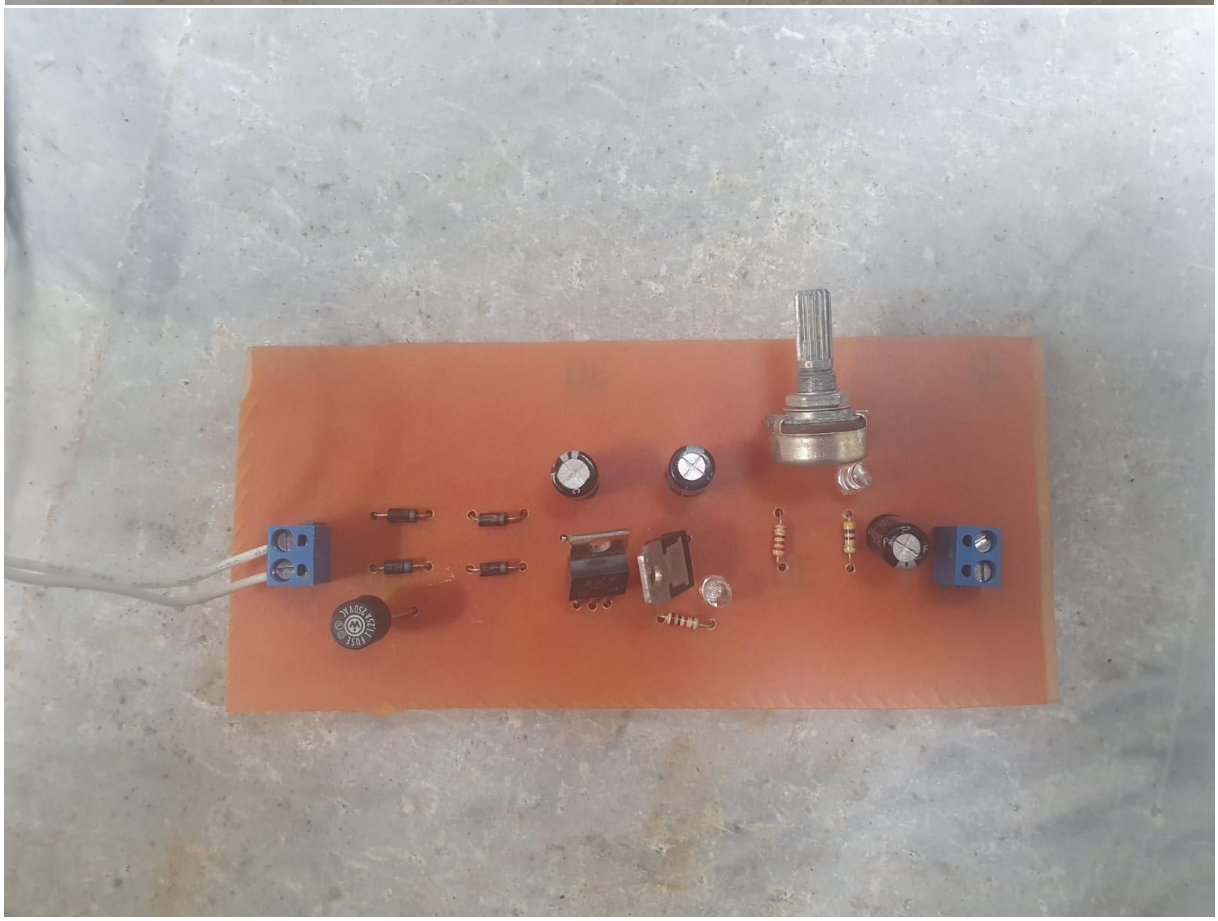
BREADBOARD TESTING.mp4

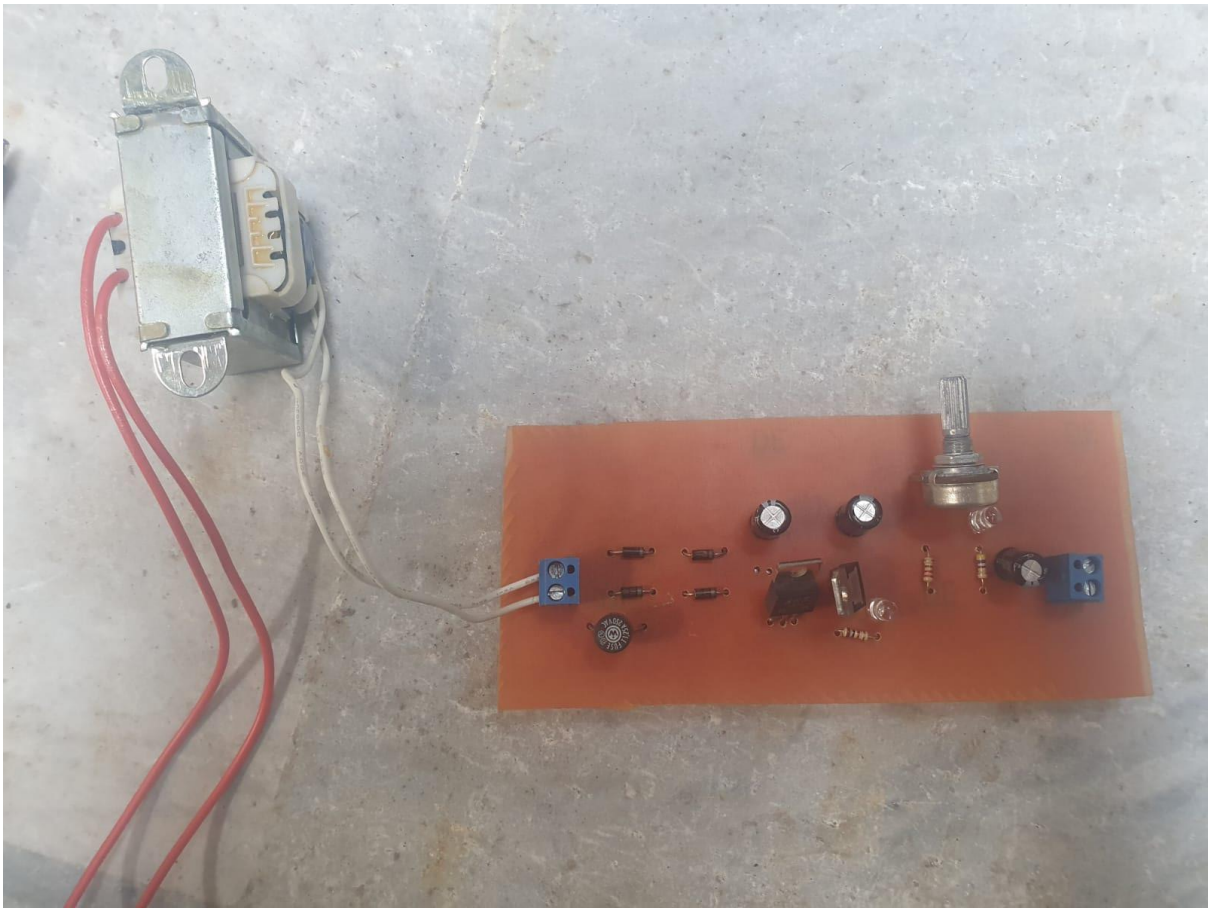




PCB IMAGES







END OF REPORT