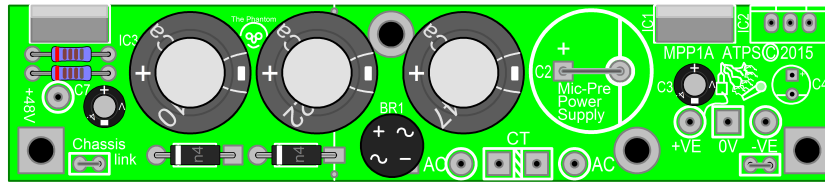


# MPP1A - 24V/48V addendum



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## Credits

This Article contains contributions by:

Richard Freeman

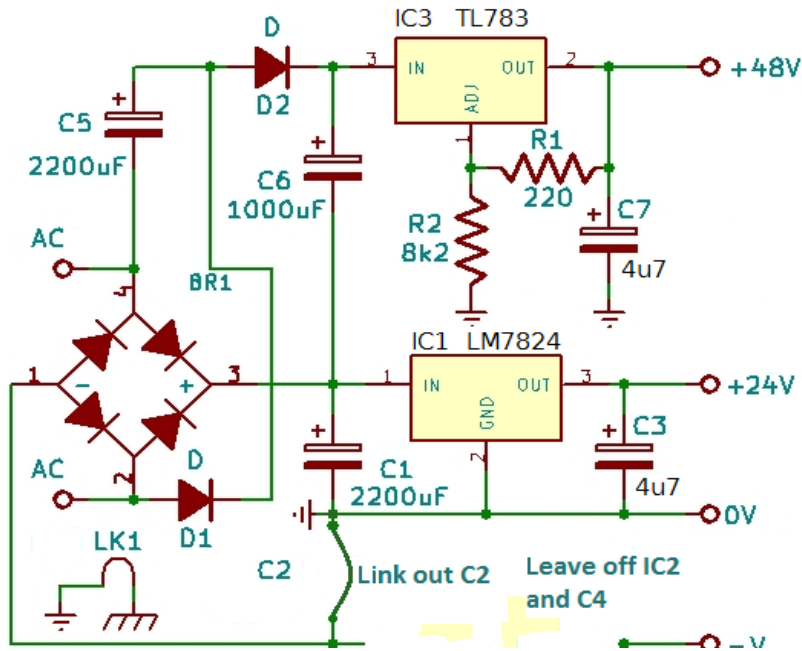
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# Introduction

The MPP1A Microphone Pre-amplifier power supply may be constructed to deliver 24V and 48V as required by some of the older discrete classic microphone pre-amplifiers.

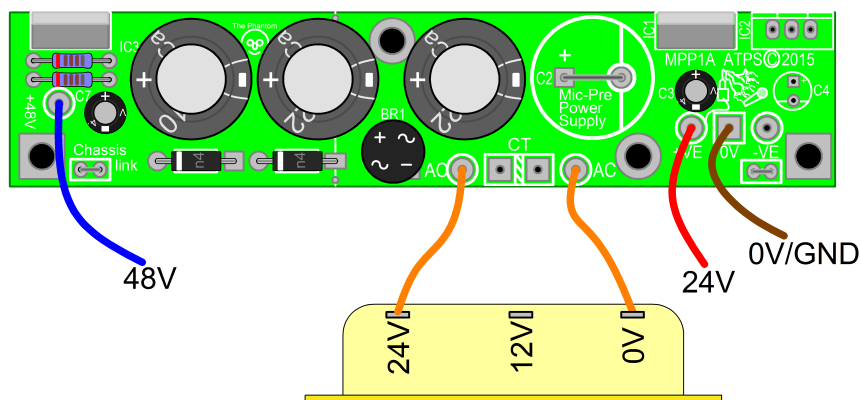
Obviously you will not need the negative regulator (IC2) and associated damping capacitor (C4) nor the filter capacitor for the negative rail (C2 – which will need to be replaced with a wire link).



IC1 will need to be replaced with an LM7824 or equivalent, while the Voltage rating for C1 will need to be increased to handle a peak voltage of over 39V. As higher voltage capacitors are physically larger for a given capacitance, this does mean that the value of C1 will have to decrease in order to find a capacitor which will fit the PCB. Using 2200uF as C1 will increase ripple on the unregulated supply to around 4.5V worst case (i.e. at 1 Amp) however the minimum voltage on the unregulated side of the supply should still be well above the drop out voltage of the regulator, so this will not cause any problems.

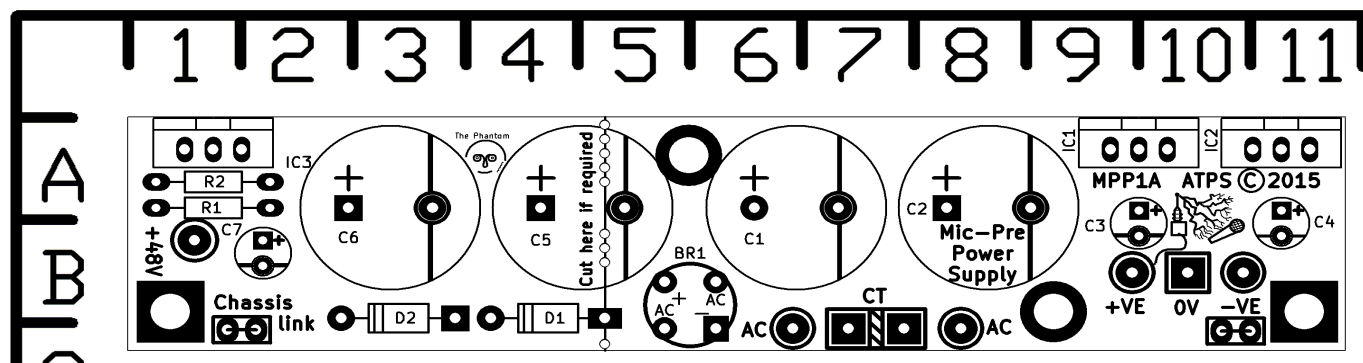
## Transformer

This version needs a 24V transformer, current rating depends on how much current you need, but worst case you are looking at about 1.5 Amps, or 36VA



Only a single 24V winding is needed for this variant, this connects between the AC pads on the PCB (as shown above).

## Layout



## Parts Locator

Part	Location	Description	Part	Location	Description
BR1	B5	W04	D1	B4	1N4001
C1	A6	2200uF 50V	D2	B3	1N4001
C2	A8	Wire Link	IC1	A9	LM7824
C3	B9	4u7 35V	IC2	A11	--- Leave off ---
C4	B11	--- Leave off ---	IC3	A1	TL783
C5	A5	2200uF 50V	R1	A1	220R
C6	A3	1000uF 50V	R2	A1	8K2
C7	B2	4u7 63V			

## Parts list

This circuit contains no critical parts and substitutes of similar components can be readily made. 1% metal film resistors are specified and would be preferable for reasons of stability and accuracy for the 48V supply.

## Bill of materials

Qty	Ref	Description	Notes
1	BR1	W04 rectifier	
1	C1	2200uF 50V	
1	C2	Wire link	
2	C3	4u7 35V	
1	C5	2200uF 50V	
1	C6	1000uF 50V	
2	C7	4u7 63V	
2	D1, D2	1N4001	
1	IC1	LM7815	
1	IC3	TL783	
1	R1	220R	
1	R2	8K2	