

Converting the RS 15-2117 “Remote Command Center” to work on 230/240V

This document is purely meant to show what I did to convert an RS 15-2117 remote command center from working on 110V as used in the US to 230/240V as commonly used in Europe. If you want to use this as a guide for converting your own command center you do so at your own risk and the author bears no liability for any damage to you or your equipment resulting. I offer no warranty that this will work for you.

I recently got hold of a couple of RS 15-2117 remote controls, as well as a normal IR transmitter these include an RF transmitter in the remote and a “command center” which will respond to that RF signal and emit the corresponding IR signals, removing the need for a separate IR extender. The only problem is that these command centers were designed for the US market and hence run on 110V. So I thought I would take a look and see if it were possible to get it running on 230/240V. Here are the steps I performed, what I found and what I did.

1. Make sure it's not plugged in!
2. Open the case

The little rubber feet on the bottom need to be peeled away to reveal the four screws holding the case together:

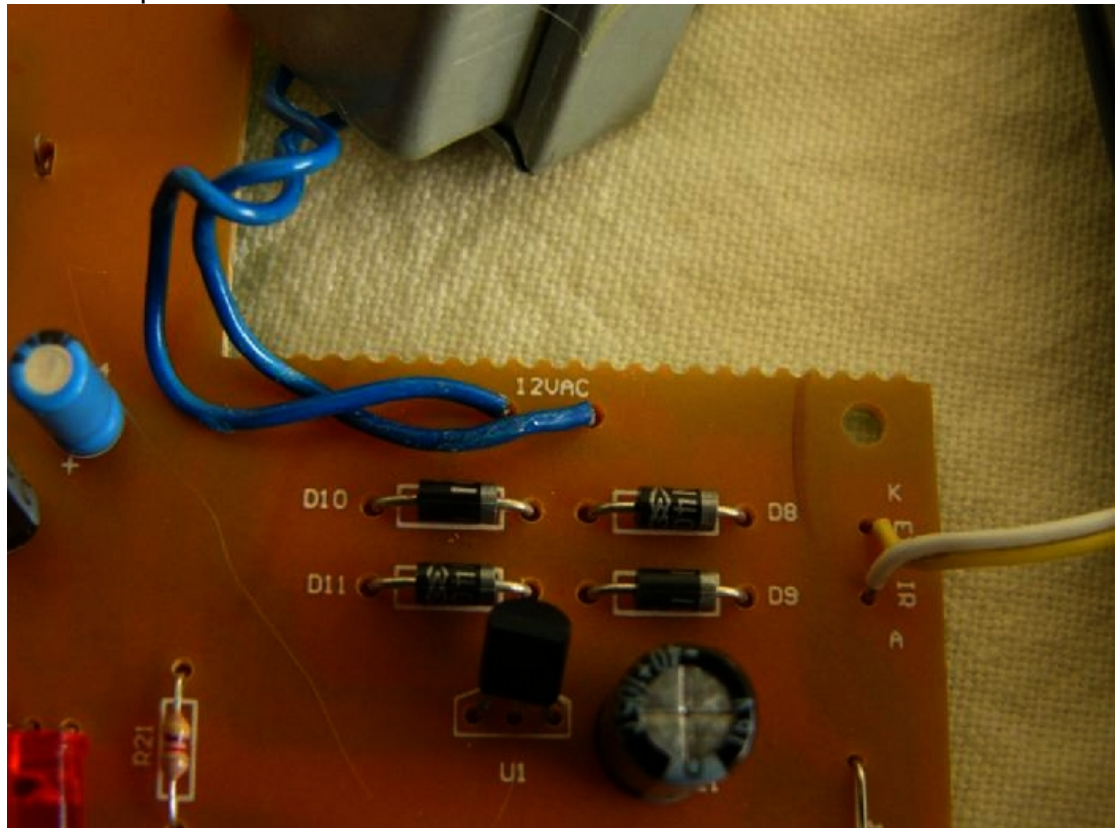


3. Here's what I found in the unit.



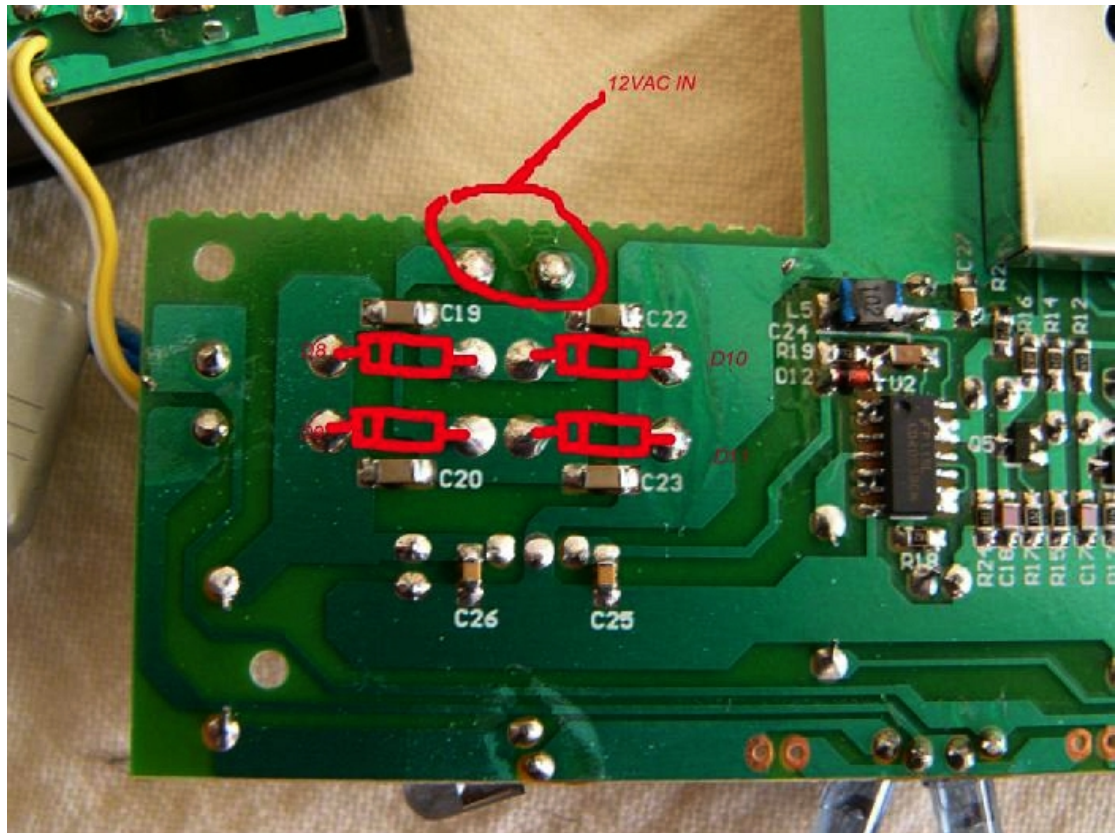
So the power cable enters in the top right hand corner of the picture goes into a normal wire wound transformer which then supplies the circuit board.

4. A close up of that area of the circuit board



So the board is quite clearly labelled 12VAC and in close proximity are four diodes D8-D11 (Can anyone say Bridge Rectifier.)

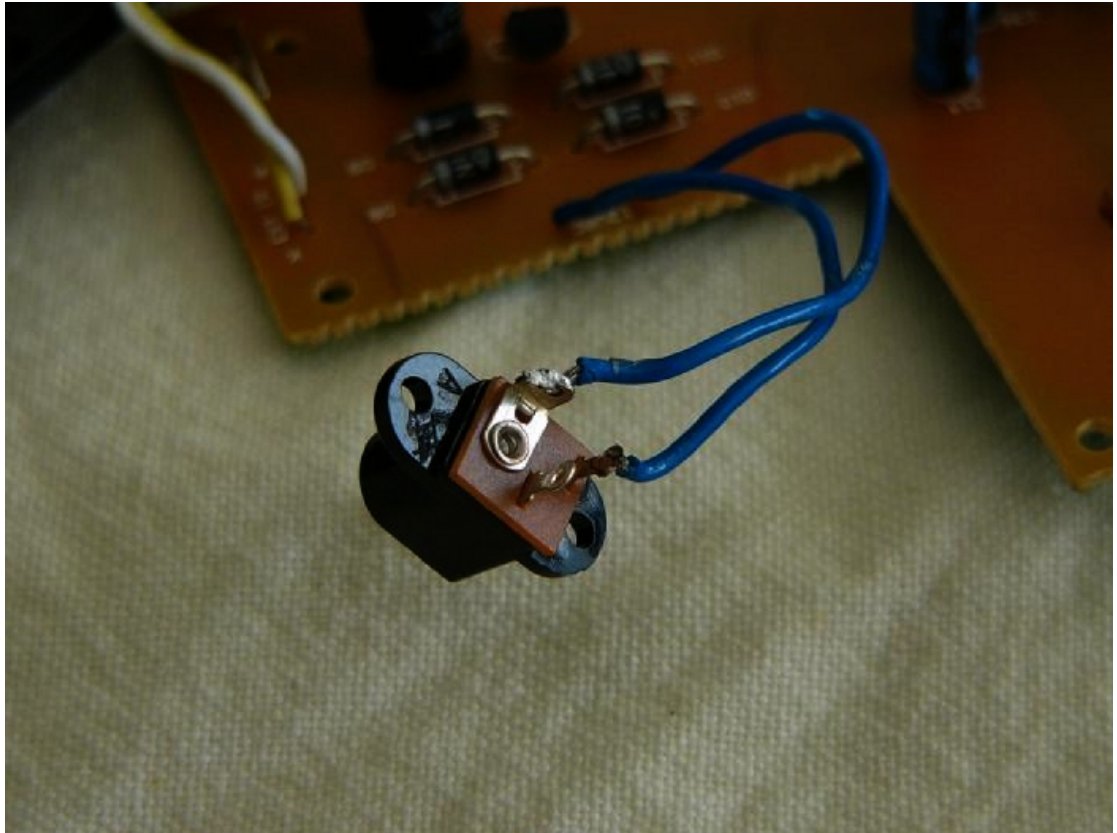
- Looking at the underside of the board shows that indeed the power does flow in and through the diodes as a rectifier.



- So the simplest idea seemed to be to replace the existing wirewound transformer with a 230/240V version. After a little bit of looking I found a suitable 12VAC 500ma external plug pack, this comes with a standard 2.1mm power plug. Note it's important that I used an AC power pack and that it wasn't a very high current power pack. I also have a generic switchable power pack which does 3-12V AC and DC, this would have done set to 12V and AC.



7. As mentioned since this has a 2.1mm plug and I don't need the old 110V transformer or power cord, I simply chopped the wires from the circuit board to the transformer as close as possible to the transformer end. I then soldered a 2.1mm socket to those wires. Being AC it didn't matter which wire went to which terminal.



8. After testing I used a saw and file to cut a hole for the new socket on the back of the unit, and glued the socket in place to the bottom of the casing.

So the parts I used were:

- 1 * 12 VAC power supply (CPC part PW0117966 £1.67)
- 1 * Chassis Socket (CPC part AR7063866 £0.29)

These came from www.CPC.co.uk and had a total ex vat cost of £1.96, though for orders less than £30 they charge a £5 shipping cost.