

In-Car PSU

Devised early 1979, published in April 1982 Everyday Electronics.



This project seemed to slip through IPC Magazines' net somehow because it got stuck in the works at IPC for nearly three years. I wanted to try out the relatively new LM317 variable three-terminal regulators and this d.c. converter design was intended to plug into a car cigar lighter socket to offer 6, 7.5 or 9V. I used the LM317 'T' version in a plastic power transistor package, fitted in a diecast alloy box (BIMbox again, my favourite) sprayed with metallic gold touch-up paint (from Ford I think).

Inside was a little p.c.b. to carry three trimmer resistors, and the board dropped straight into the BIM box. I found an unwieldy two-core curly cord for the 12V input connection, but universal multi-plug leads were quite unusual: I managed to source one from Maplin. The polarity changeover toggle switch wasn't a great idea (it could easily be knocked) and a slide switch would have been better really. An l.e.d. lensclip and spun alloy knob finished the project off.

I got the hang of preparing diecast boxes, using TO-220 transistor mounting kits and silicon grease, but I still couldn't afford heatshrink tubing yet so I used simple PVC sleeving for insulation instead. Overall it turned out well and I was pleased with the results, but I was very disappointed at the terrible delay in publishing. The prototype's still around, virtually indestructible. Here it is shown in colour after 30-odd years. It seems that I removed the polarity toggle switch and hard-wired the output for centre-positive.



A PDF of the original constructional article can be downloaded from www.alanwinstanley.com and it would still work fine today.

ARW April 2012

© Alan Winstanley 2012