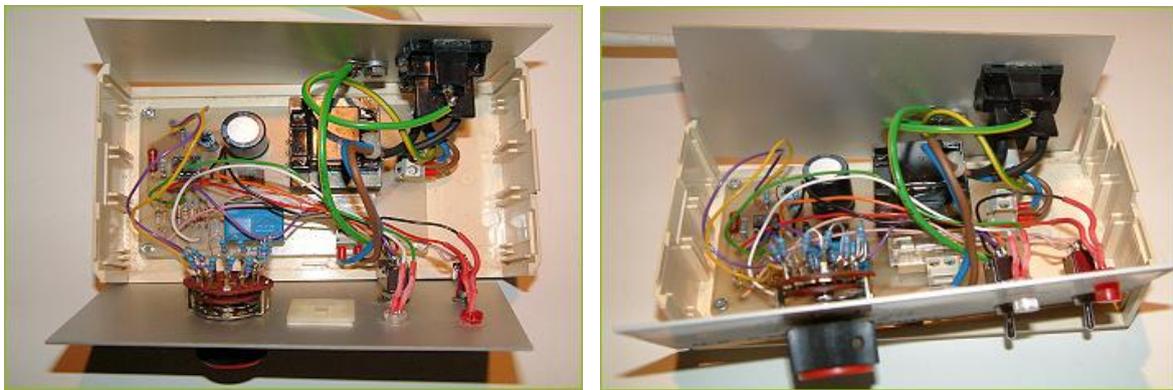


## UV Exposure Timer

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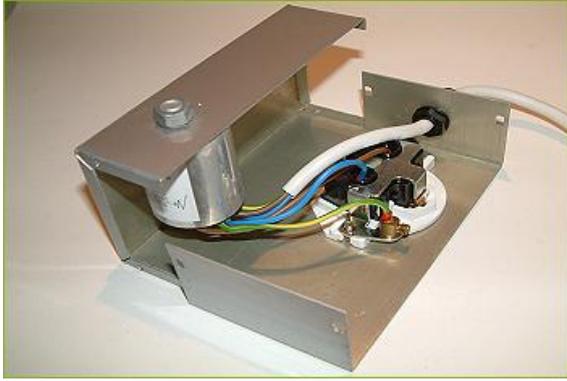


This design was a pretty good classic 555-based mains timer which originally started life as a Radio Sleep Timer that nobody wanted, so I recalibrated it and adapted it for my UV exposure box instead, in order to obtain more consistent results when making UV-sensitive p.c.b.s.

I used a smart clip-together ABS box with alu. panels which was probably a bit too compact for comfort, but it went together OK and looked the part. Letraset and spray lacquer were used as usual. Lots of care was needed to make sure the mains connections avoided the alu. panels!

A small IEC-style socket was used for the mains outlet, with my preferred C&K sub-min toggles, lens clips and panel nuts on the front as normal. The bi-colour l.e.d. (another dual-purpose feature) has a clear lens clip. I liked using spring-biased toggle switches when they could have multi functions (eg start/ stop/ centre off). This saves panel space. However I've found them unreliable over the years and I see that this prototype suffers like many others from stiff/ sticky / inoperative switches.

The pcb carried most of the mains wiring and as an earthing point was needed I used a "P" clip for mains cable retention, and its mounting bolt held some earthing solder tags on the back panel. I see some other innovations were used in construction, including 'ferrules' to terminate the mains wires that connected to the screw terminal blocks, and heatshrink tubing at last. But everything was a tight fit and you didn't want stray copper wires doing damage anywhere!



A last-minute problem was that my UV light box could re-trigger the timer after timing out, so I had to knock together a beefy mains suppressor to counter this.

There was no room for anything in the small box, so I used a 5A Roxburgh delta-cap unit in a separate aluminium box that plugged directly into the UV Exposure Timer. The suppressor also carried a flush-mounting mains socket that I had

used on other ideas as well (see **Power Controller** prototype notes, November 1988).

The mains socket needed a 49mm cutout (darn!) for some reason, so I would make do with a 50mm Q-Max chassis cutter and M3.5 raised countersunk screws to finish it off. These parts were also used in my own speed controller, a near commercially-viable device that I'd worked on a lot during the 1980's so I had stocks of parts to hand.

The suppressor went together neatly and did the job perfectly, but you can see it's almost as big as the Timer itself. The prototype is in use to this day when I do any PCB work with my UV lightbox, which itself must be 30+ years old (Maplin).

You can download the original constructional article as a PDF from [www.alanwinstanley.com](http://www.alanwinstanley.com).

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