

MAILBAG

No power switch for the TwinTen amplifier

I have read the article in the February 2005 issue on the TwinTen amplifier. One thing struck me as a bit strange, especially with your fixation about turning things off when not in use – it doesn't have a power switch.

To turn it off you either have to pull the power connector out of the back panel or turn it off at the wall GPO. With the intended use of this project as a kids' auxiliary amplifier, it will run all the time unless one method or the other is used to shut it off and if other kids' bedrooms are like my kids, the wall socket is "buried".

Sure, a power switch in the low-voltage AC circuit will not turn off the power pack but at least it will cut current draw to that which is the idle current of the plugpack.

I also am slightly bemused by the comment that this amplifier performed well on your staff member's "huge" stereo. I would not expect otherwise if this person's speakers were reasonably efficient – say in the order of 98dB/1W/1m). Any small amplifier will do well on speakers of this type. In the "olden days", pro speaker systems had efficiencies of 105dB/1W/1m) and they filled a whole auditorium full of people with just 50W.

However, when amplifiers are connected to today's rather abysmally inefficient speakers, an amplifier with this output runs out of "puff" really quickly.

Please don't get me wrong. The intended purpose of this amplifier is fully understood and I'm not knocking it; I just wanted to point out a couple of things. As an auxiliary amplifier, your new design is just what the doctor ordered . . . however, you can't turn it off!

**Brad Sheargold,
via email.**

Comment: as indicated in the article, the TwinTen was presented as a project for high school and college students. Many such schools will not let their students build anything with mains wiring in it, so using a plugpack is the only practical approach.

Certainly, running the plugpack continuously is a waste of electricity. And it does go against our philosophy of turning everything off because as you point out, laziness will mean that many such units will always be plugged in and never turned off.

If people want to, it would be reasonably straightforward to install a miniature toggle switch near the AC input socket but as you point out, that still leaves the plugpack powered up.

The TwinTen was tried with reasonably efficient loudspeaker (90dB/1W/1m) in a very large listening room.

PICAXE could be the death of logic

I have recently noticed the number of projects containing PICAXE components unnecessarily. In days past, these would have used a logic circuit. To prove my point, I built the recently featured circuit for connecting two phones but used logic instead. It worked a treat.

The same treatment can also be applied to other PICAXE circuits. Save the PICAXE for complicated circuits and use logic for the simple circuits. Otherwise in time, logic will be forgotten and everything will have to have programs before it will work, whereas with logic no program is required.

**G. Moore,
Warialda, NSW.**

Comment: we have produced quite a few projects with the PICAXE because it is easy to program and enables beginners to produce quite complicated circuit functions with very few components. Certainly, logic circuits can still produce good results but in most cases, the PICAXE can do it more cheaply.

Saving a Beta VCR from the tip

I have a Sanyo Betacord video recorder which I am loath to just put out for recycling where it will no doubt be trashed. If any of your readers are interested in it, it is a model VTC 9300PN. I can be contacted at datgrays@smartchat.net.au

**Dave Williams,
via email.**



White LEDs a good substitute in small torches

Now that ultra-bright white LEDs are readily available and very cheap, this must be placing some pressure on the manufacturers of small torch globes.

For instance, I have found it very simple to replace the tiny globes in Mini Maglites and also a small Coleman lamp (headband type) with a white LED.

The existing globes have a very limited life since in order to produce bright, relatively white light, they are run at more than their maximum rated voltage. From memory, with an ordinary globe, a 10% increase over rated voltage will more than halve their life.

Having had these fail on a regular basis and then finding the replacement globes to be overpriced, I have found white LEDs to be a perfect solution. They provide a pure white light, ideal for working on intricate equipment in confined dark areas, and they maintain their colour temperature over a large part of the battery life which is also extended, not to mention the long life of the LED itself.

With the Coleman lamp, the replacement was simply a matter of shortening the leads on the LED to the same length as the globe and then inserting it in the socket. You have to get the polarity right but if it is wrong, it simply doesn't light up; you then just rotate 180°!

The Maglites were a little more difficult. You need to open the hole in the lens to the diameter of the LED and also carefully bend the wires at the base of the LED so that they are closer together (approximately 1mm). This needs to be as close to the base of the