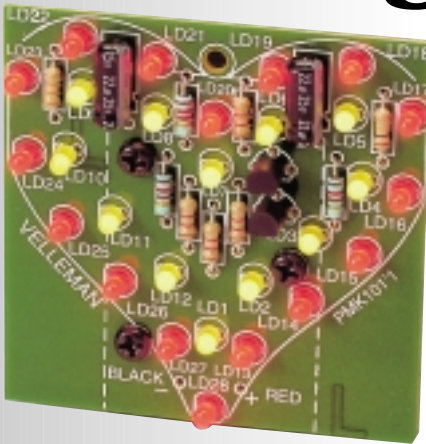


flashing LED sweetheart

an original Valentine present



A small effort and an even smaller outlay is required to throw an electronic gadget together that's sure to make a great gift for Valentine's Day. Belgium-based Velleman are suppliers of kits that enable this type of circuit to be built by the masses. We decided to try out one of their kits.

Most of you, we are convinced, would avow to being pretty seriously involved in electronics, be it as a hobby or professionally. Sometimes, too, you may get the feeling that it's all getting a bit too serious. Typically, our readers are busy working on practical applications of published circuits, or tweaking the specs. They will rave on about distortion, signal/noise ratios, or memory capacity, painstakingly seeking ways to achieve improvements no better than tenths of a decibel or a few parts per million.

Riveting stuff, of course, but it makes you wonder sometimes if all this activity captures any of the sheer fun that can be had from the noble art of soldering. That is why we can not resist voicing a clear "start having fun again" note to those of you with a tendency of taking a high-brow look at the hobby. Electronics, we feel, need not always be useful, in fact there's no reason why it should not be amusing, playful and without pretension. With simple means, dozens of interesting projects can be built. So, why not build an original doorbell, a running lights unit or a flashing brooch? Just for the fun of it.

Quite possibly, people around you may value simple gadgets more than the latest high-spec complex devices, probably because to them the latter will forever remain big electronic mysteries.

A LOVELY FLASHER

Most Summer Circuits and December issues of *Elektor Electronics* contain at least a few 'playful' electronic circuits. Some kit suppliers go one step further, having discovered a market for such products.

In the recent Maplin catalogue, we came across a **Flashing LED Sweetheart** from kit supplier Velleman. This

is presented as a lively little ornament consisting of red LEDs arranged in the shape of a heart. Flashing all the time, the LEDs beg for attention. Very decorative, we'd say, and highly suitable as a gift to someone close to your real heart.

Do not expect the latest design technology from this kit. As indicated by the circuit diagram, the circuit consists of little more than a bistable multivibrator built around two common garden transistors, with seven rows of four LEDs each in their collector lines. LEDs LD1-LD12 form the inner heart, and LD13-LD25, the outer heart. Both hearts flash in alternate fashion to mimic the well-known pump action.

The high-efficiency LEDs operate 'sparsely' using series resistors R1-R7. The result is a current consumption of just 8 mA, enabling a 9-V PP3 battery to last for about 24 hours.

If you want to personalise the cir-

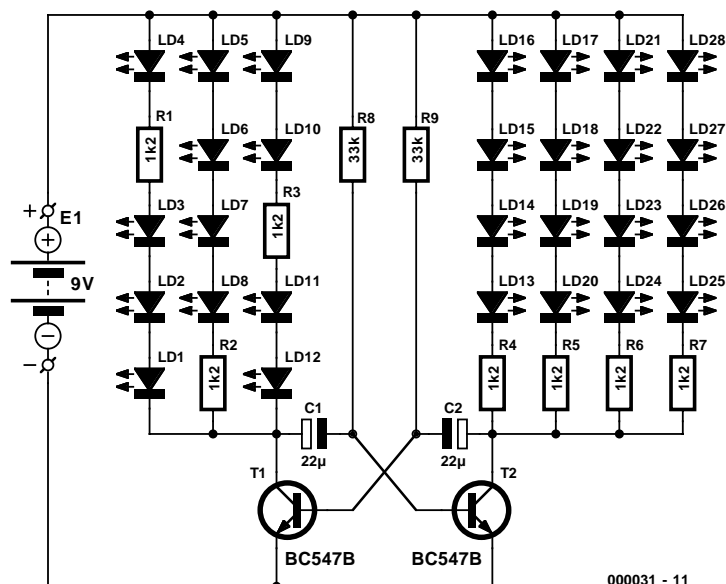
cuit, you may decide to use different colour LEDs for one of the hearts. Yellow LEDs, for example, do a fine job. However, in that case the series resistors may have to be decreased to about 820 Ω to compensate the higher voltage drop of yellow LEDs. If you do not change the resistors, the light intensity from yellow LEDs will be too low.

We do not know if Velleman offers any kind of warranty on this circuit. Reproducibility will not be a problem, we reckon, but a guarantee that the flashing sweetheart will succeed in actually conquering a heart will be impossible to obtain! However, at a price of just £4.99 it's well worth the effort.

The Maplin order code for this kit is VX75S.

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