Looking back, looking forward

TechnoTalk

Mark Nelson

The above is a traditional topic for January commentaries, so why should I buck the trend? Relax while you read how our electronics hobby has changed – and hasn't changed – over the past sixty years.

OLD TIMERS (PEOPLE EVEN OLDER than me) sometimes wax lyrical about the early 1950s, when electronics was an affordable pastime – and one that earned you admiration from others. Ah yes, those were the days!

The good old days?

So what made them a golden era? For a start, being involved in hobby electronics in those days marked you out as a very clever and important person. Electronics was seen as a highly technical specialism and everybody had at least a vague notion of how 'boffins' had made a major contribution to the Allied victory with their work on radar, avionics and all manner of other electronic wizardry (this was before anyone had even heard of Enigma and Bletchley Park). If you could mend your neighbour's wireless set (or even fix his wife's vacuum cleaner) you too were one of those revered experts.

In those days there were no magazines dedicated to the electronics hobby but, *Practical Wireless* and *Wireless World* included plenty of articles on general electronics. Even better, their back pages were jam-packed with advertisements for all manner of government/war-surplus equipment for sale at bargain prices. You could buy radio receivers, transmitters, bomb release switches from aircraft, rotary converters, weird modules and heaven knows what else. Mail order was an option, but in those days many large towns had shops dedicated to a myriad of electrical and electronic 'junk'.

Make do and mend

Most of the items offered for sale had no direct use whatsoever – but they were ideal for disassembling. This way you could amass aluminium chassis, tag boards, fuse holders, panel lamps, switches, valve holders, passive components and goodness knows what else for (old) pence. All you had to do was carry the stuff home on the bus, ignoring the strange looks, and spend a happy evening or two desoldering the components, fortified with a steaming mug of Bovril. Every nut, bolt and washer was saved in screw-top glass jars, while the other components were stashed in cardboard boxes.

In those days, only a few folk could afford a television, although a number of people had a TV aerial installed to fool their neighbours into thinking they did have a telly. Taking the coronation year of 1953, the average weekly wage was £9 on which you paid 45% basic income tax (and had to work around 45 hours). This meant that a cheap television receiver (9-inch black and white screen, with just 405 lines of screen resolution) cost the equivalent of five weeks' wages.

Hero worship

Some electronic hobbyists became local legends by building their own TV set. Several publishers produced paperback booklets providing step-by-step instructions on how to convert a war surplus radar display into a (fairly) cheap television receiver. This was ideal if you didn't mind watching a green circular picture and could put up with terrific 'vision lag' that smeared your view of fast-moving images. People managed to put up with these shortcomings and basked in glory when friends and neighbours came round to watch the miracle of television after supper.

In those days, television, radio and Lo-Fi (there was little Hi-Fi back then) were considered luxuries by successive Chancellors of the Exchequer, and were fair game for raising taxes. You paid the dreaded purchase tax of 5% on the wooden cabinet (because it was furniture, hence, 'a good thing') but 50% on the innards (because they were a luxury). I'm told that the levels of purchase tax were reduced just before the coronation, so everyone rushed out and bought their first TV, creating a bonanza for the consumer electronics industry.

Back to the future

Things are different now, but practical electronics hobbyists are enjoying another golden era, thanks to the glut of low-cost components imported from the Far East. I have no idea how long this situation will last, but right now could be a good time to stock up on things that you might need in the future, however sore your wallet may be feeling. In that connection, it's probably daft to suggest you might have any money left following Christmas, but you might treat the following purchase suggestion as a need-to-buy item rather than an act of gross self-indulgence. (And if not that, then something to put on your wish list.)

If you cast a glance at the websites of professional electronics distributors you will see a category of goods called 'production aids', or more prosaically 'tools and equipment'. This is where you will find high-end soldering stations, purpose-made PCB etching baths, flow-soldering ovens and suchlike. Normally, I let my eyes glaze over at the sight of all this expensive equipment, but recently I discovered a gem of a product at a fairly affordable price and it might just interest you. I'm certainly pleased with the one that I have bought.

Absolute boon

For normal folk, populating a PCB with components and soldering them in place before they drop out of their holes can be a bit of a pain. At times like this you need four hands and asbestos fingers – and the forbearance of a saint. But not any longer, which is why I commend to you the Weller ESF 120 soldering stand. Because a picture is worth a hundred words and a video is a thousand of them, I suggest you take a peep at: **https://youtu.be/NMLoXg-yBe**s

In a nutshell it's a device that holds a PCB in mid-air while you plant each component, with a devilishly clever cushioned arm that prevents the component from dropping out when you turn the board over to solder it in. The adjustable grips can hold PCBs of any size up to double Eurocard size (160 x 235mm) and the board can be rotated through 360 degrees for adjusting and locking the board at the angle you require. As the manufacturer says, it is ideal for assembling prototypes and small production batches. I say it's an absolute boon. The price varies widely – so do shop around – but I found it for £49 at Farnell (order code 2292007).