



**PART 1
OF 5**

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Home computers in Australia

In this new multi-part series, **Darren Yates** re-traces Australia's computing history during the golden age of the 'home computer' in the 1970s and 80s, starting with our unique dawn of DIY computers.

Above: The Australian-designed MicroBee is well remembered as an education computer in NSW, but was first a DIY kit (Image credit: Bilby, CC BY 3.0).

Below: The prototype of the DREAM-6800 home computer (Image credit: Michael Bauer).

Australia has long had a reputation for punching above its weight in technological research and development. From the early days of radio to our pioneering involvement in radar to our world-class expertise in radio-astronomy, we've applied our ingenuity to our unique geographical requirements and shown the rest of the world a thing or two along the way. Even in the very early days of computing, Australia designed and built just the fourth stored-program computer in the world – the CSIR Mk I, better known as 'CSIRAC'. But it wasn't until the 1970s that

computers began to find a place in the home – that gloriously golden era of the 'home computer' that began with the launch of the Apple II, Commodore PET and Tandy TRS-80 Model I in 1977.

Except, it didn't – not in Australia. Over the coming months, we'll look back at our unique story and some of the computers (some remembered, others forgotten) that made it such a golden age – an age, for us, that began a few years earlier in 1974.

Electronics first, computers second

By the early-1970s, electronics was still a hugely popular hobby in Australia. Since the dawn of 'wireless' in the 1920s, many of us tinkered with electronic valves and parts to build our own radios and then, when television arrived in Australia in 1956, we began building our own TVs as well.

While some hobbyists gained their training at university and many more at state-based TAFE colleges, a great deal of Australia's home-brew verve was fostered by local technical magazines.

One of those magazines, now

gone, was *Electronics Australia*, or 'EA' as it was known. It was a descendent of *Wireless Weekly*, Australia's first dedicated technology magazine launched in 1922 by Australia's first female electrical engineer, Violet McKenzie (we covered her story last year). During this same period, electronics magazines were also very popular in the U.S. and in the U.K.

The 1970s was the era of the digital integrated circuit or 'IC', silicon chips containing Boolean-logic functions you could wire up to do almost anything. Computers of the early-1970s featured hundreds of these chips and were now receiving the 'Hollywood' treatment, starring in movies including 1969's *The Italian Job*.

But in 1971, Intel developed the first microprocessor chip, the 4004, and although it didn't change the world instantly, it set in motion the development of computers as we know them today.

EDUC-8 (1974)

In fact, you can wander into a Coles supermarket today and buy a \$59 computer masquerading as an



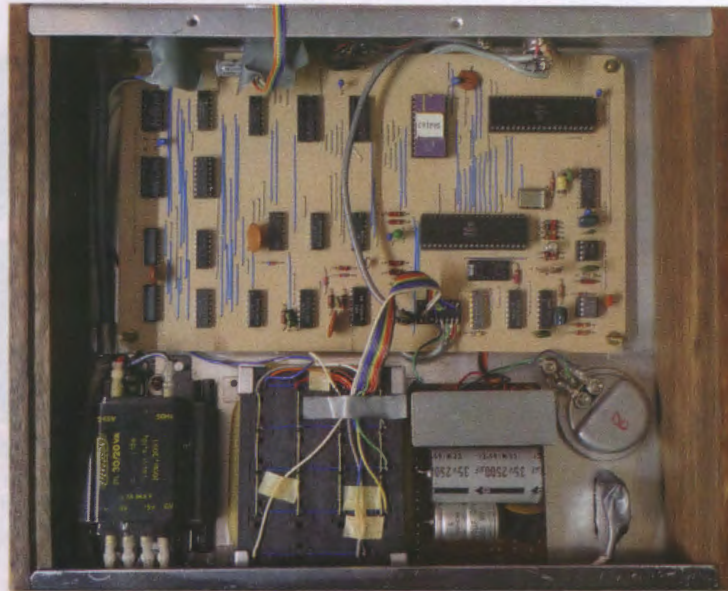
Android phone, but back in 1974, computers were business tools, cabinet-sized and very expensive.

So, it was into that environment that 'Electronics Australia' published what was initially thought to be the world's first home-computer construction project in August 1974, called the 'EDUC-8'. This compact 8-bit computer was designed by Australian technology journalist and EA editor Jamieson (Jim) Rowe, describing it as a cut-down version of the famed Digital PDP-8 minicomputer he'd spent many hours programming. The EDUC-8 was unique in that it didn't have a microprocessor chip – they were still far too expensive in 1974 (more than a week's wages). Instead, it featured those now-common digital-logic chips, 96 of them to be precise.

The EDUC-8's specs were microscopically-tiny by today's standards - 32 bytes(!) of RAM and 500kHz (0.5MHz) clock speed. You programmed it by operating switches and read the results from the machine's LEDs. It sounds prehistoric today, but indeed, it was 'pre-history' – not even Microsoft (c. 1975) or Apple (c. 1976) yet existed, that's how revolutionary this little Aussie computer was!

Yet over the following months, the EDUC-8 grew to include an input/output (I/O) interface, external hexadecimal keypad and seven-segment display. A punched-paper tape reader followed, along with a printer and finally, a full ASCII keyboard in 1975. Like CSIRAC, it even learned to play simple music.

So why was it only 'initially



Left: Hobbyists could build the popular DREAM 6800 at home (Image credit: Michael Bauer).

thought' to be the world's first home computer? Sadly, just the month before, U.S. magazine 'Radio-Electronics' pipped EA at the post, publishing the 'Mark-8' computer.

But it didn't matter – the EDUC-8 lived up to its name to 'educate' anyone in the basics of computing, basics still valid today. It was also the computer you could make and repair yourself.

CHIP-8 programming language (1976)

The mid-1970s saw a rapid build-up of building blocks that would spawn those three iconic home computers of 1977 – the Commodore PET, the Tandy TRS-80 and the Apple II. One of those blocks was the 6502 processor, launched by MOS Technology in 1975; another was the Z80 CPU released by Zilog in 1976. The key to these CPUs was price – MOS Technology sold the 6502 for just \$25 each. In the end, Commodore and Apple chose the

MOS 6502, while Tandy signed up for the Zilog Z80. With 8-bit microprocessors now available in quantity and at reasonable cost, the market exploded in 1977 and the rest is history.

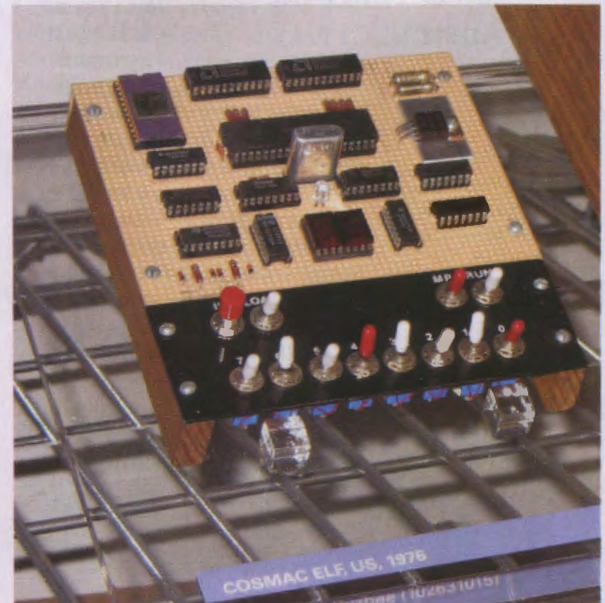
Nevertheless, the EDUC-8 got things rolling in Australia and interest in low-cost DIY computers ballooned globally well before events of 1977. One example was the COSMAC Elf, a DIY kit based on the equally-new RCA CDP1802 processor that appeared in the U.S. 'Popular Electronics' magazine in 1976. Like the EDUC-8, you programmed it using switches and read the output via LEDs. But the following year, the COSMAC VIP added a new 'video interface processor', giving it a TV-compatible output, along with a new 16-key hexadecimal (0-9, A-F) keypad. It was still primitive, but a now-familiar form was beginning to take shape.

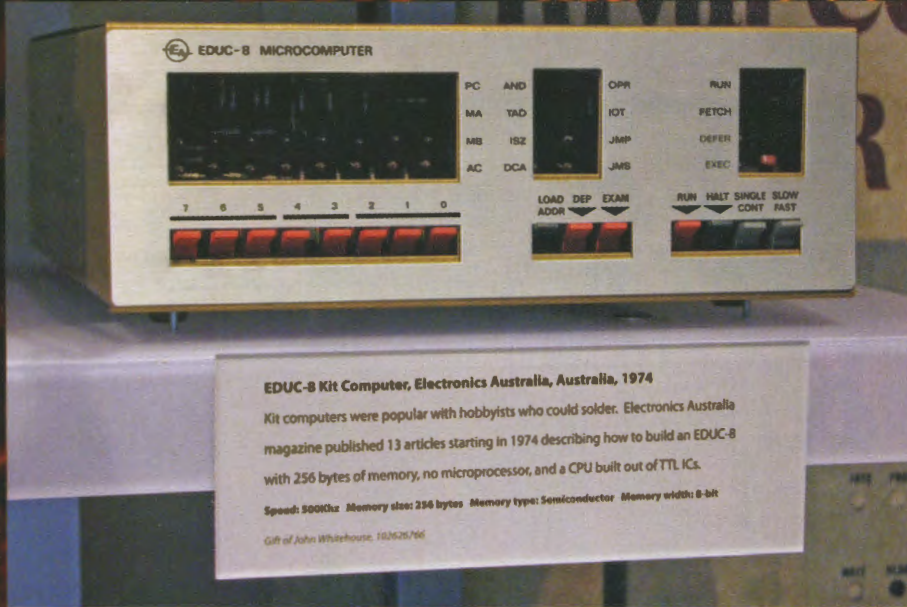
You coded the VIP on its keypad using a brilliantly-simple programming language

Below: The COSMAC Elf, an early U.S. home computer featuring the CDP1802 CPU (Public Domain).



Above: I've designed a new 8-bit Arduino Nano-powered version of the DREAM 6800, here plugged into a 4.3-inch car LCD monitor (Image credit: Darren Yates).





EDUC-8 Kit Computer, Electronics Australia, Australia, 1974
 Kit computers were popular with hobbyists who could solder. Electronics Australia magazine published 13 articles starting in 1974 describing how to build an EDUC-8 with 256 bytes of memory, no microprocessor, and a CPU built out of TTL ICs.
 Speed: 500KHz Memory size: 256 bytes Memory type: Semiconductor Memory width: 8-bit
 Gift of John Whitehouse, 16/02/1986



Above: The Color Maximite continues Australia's home computer tradition (Image credit: RSeverson, CC BY-SA 3.0).

Above: The EDUC-8, Australia's first home computer, designed by Australian tech editor Jim Rowe in 1974, on display at the Computer History Museum in California (Public Domain).

developed by Joe Weisbecker at RCA Labs called 'CHIP-8'. It had just 33 instructions, but was well suited to teach coding through computer games - many popular games including Space Invaders and Pac-man were ported to CHIP-8 using just those 36 instructions.

Mini Scamp (1977)

"Australia's home computer pioneers weren't gamers or software gurus - they were electronics engineers and enthusiasts, people who saw the future and rather than wait for big flashy brands to turn up and sell them computers, they got on with it and built their own. That's the Australian way."

With Apple, Commodore and Tandy still some months away from getting their products on shelves, Australia launched another home computer project, this one designed by Dr. John Kennewell at NSW's University of Newcastle. Unlike the EDUC-8, the 'Mini Scamp' was the first Australian home-built

computer to feature a genuine CPU, the SC/MP microprocessor from chipmaker National Semiconductor (now part of Texas Instruments).

Like the EDUC-8, the Mini Scamp featured switches and LEDs, with construction details published in 'Electronics Australia' starting in April 1977.

Below: The MOS Technology 6502 made many home computers possible (Image credit: Dirk Oppelt, CC BY-SA 3.0).



The following month, a young electronics entrepreneur, Dick Smith, began selling construction kits for the Mini Scamp.

DREAM 6800 (1979)

However, one of the first 8-bit CPUs to hit the market was the MC6800 ('6800') from U.S. tech giant Motorola in 1974 and by 1976, featured in a low-cost evaluation kit (an Arduino-style test board). Michael Bauer, a computer science tutor at Deakin University and electrical engineer, had one of these evaluation kits in 1978 and having seen the COSMAC VIP in a magazine, he was keen to make a VIP-alternative using the MC6800 instead. However, whereas the COSMAC VIP ran a video processor chip to create a U.S.-standard NTSC-video output, Bauer cleverly designed a PAL-standard video controller from discrete logic chips to support Australian TVs. The computer was known as the 'DREAM 6800'.

It, too, was published in EA, beginning in May 1979. My dad was one of many who saw this as the opportunity to delve into the computing world in an affordable way (the parts back then only cost around \$100). He built one and the DREAM 6800 became my introduction to computing.

DREAM stood for 'Domestic Recreational and Educational Adaptive Microcomputer' and like the COSMAC, you coded the DREAM 6800 using CHIP-8 via the computer's hexadecimal keypad. It had 1KB of RAM and 64 x 32 monochrome (black-and-white) pixels, each one individually addressable. The 6800's clock speed was a spritely 4MHz and you could save programs to ordinary cassette tape using any cassette recorder (ideally one with a tape counter).

The DREAM 6800 was an important step forward at the time - unlike the EDUC-8 and Mini Scamp, it combined keypad code-entry with tape storage and TV-video output all in the ready-to-build design.

Again, you might read '64 x 32 pixels' and question how this could be usable, but it was more than usable - it was life-changing. As a young kid, seeing a chunky pixel move across the TV screen for the first time because I programmed it is something I'll never forget.

ETI-660 (1981)

Australia began the 1980s with a number of electronics magazines, including chief EA-rival *Electronics Today International* (ETI). Not to be outdone by EA, ETI published a design beginning in May 1981 similar to the COSMAC VIP called the 'ETI-660' (ETI numbered their construction projects). It was designed by New Zealander Hugh Anderson, with help from ETI staffer Graeme Teesdale.

Like the DREAM 6800, you coded the ETI-660 using CHIP-8, but this one ran the original RCA CDP1802 processor rather than the Motorola 6800 yet incorporated Motorola's MC6821 I/O chip to handle the hexadecimal keypad. The ETI-660 also had improved audio, able to produce tones from 107Hz to 13,762Hz. The magazine continued publishing information about the ETI-660, including code-listings you typed in by hand, until 1984.

Dick Smith Super-80 (1981)

Still, you could argue that even by 1979, with the Apple II, Tandy TRS-80 and Commodore PET now available, the idea of entering code via a hexadecimal keypad, or even making your own computer, was getting past its use-by date. However, with the right skills,

those DIY models were still a much-valued, affordable way into computing.

The competition between electronics magazines in Australia peaked in the 1980s and while ETI published its ETI-660 with its hex-keypad, Electronics Australia joined forces with well-known retailer Dick Smith Electronics to launch the 'Dick Smith Super-80' in August 1981. Unlike the DIY computers to-date, the Super-80 was a computer kit enough to give the Tandy TRS-80 and newly-arrived Commodore VIC-20 a run for their money.

It was based around the popular Zilog Z80 8-bit CPU running at 2MHz, with 16KB of RAM (expandable to 48KB) and used cassette tape for tape storage. Again, by today's standards, the display (32x16-characters) was rudimentary, but in comparison, the Commodore VIC-20 only had 5KB of RAM and 22x23-character display, so the Super-80 was a winner for its then-\$290 price tag.

What set it apart from many kit computers of the time was its full-travel ASCII keyboard and ability to run BASIC programs. Many developers today might nervously-twitch at the thought of BASIC programming, but in the era, BASIC was a launch pad for many future software engineers. Within a year, more than 2,000 Super-80s had been built – and it wouldn't be the last of Dick Smith's forays into home computing...

MicroBee (1982)

But Australia wasn't done with kit-built computers and in 1982, one of the most iconic Australian computers was released first as a kit, then quickly as a pre-

assembled system – the MicroBee. Another of the growing cache of Z80 CPU-powered models, the MicroBee was the brainchild of Australians Owen Hill and Matthew Starr working at Applied Technology, with construction details of the kit version published in 'Your Computer' magazine. The standout for MicroBee was winning a tender with the NSW Department of Education for an education computer, making the 'Bee (we believe) the first Australian design to do so. The improved version arrived the following year, upping the clock speed from 2MHz to 3.375MHz with a high-resolution 80-character x 24-line display.

The company survived the mid-80s global crash, but the last manufactured design arrived in 1987. Unfortunately, MicroBee couldn't hold off the might of U.S. competitors forever and by 1992, both it and the company were gone. However, in 2012, it resurfaced as MicroBee Technology and plans are afoot to reboot the classic MicroBee kit computer. At time of writing, a prototype was in progress but no launch date just yet.

DIY computing today

There were many others we don't have space to include, but today, DIY computing continues, thanks to Arduino, with dozens of microcontroller boards now available, often with similar amounts of RAM to the DREAM 6800 and VIC-20, able to interface with sensors and displays – and your PC.

But the 'home computer' era lives on through the likes of the excellent 'Maximite' computers



first developed by Australian engineer Geoff Graham (<https://geoffg.net/maximite.html>). These new designs incorporate modern electronics, VGA-resolution colour graphics and program storage on SD card, but are still coded using BASIC. You'll see them reviewed on YouTube by 'The 8-bit Guy' ([youtube.com/watch?v=IA7REQxohV4](https://www.youtube.com/watch?v=IA7REQxohV4)).

As for CHIP-8, Joe Weisbecker's famous programming language is still around today, teaching computer architecture and science. It's been expanded and seemingly ported to every computing device ever built – you'll find plenty of resources at <https://chip-8.github.io/links/>.

Leading the world

Australia's home computer pioneers weren't gamers or software gurus – they were electronics engineers and enthusiasts, people who saw the future and rather than wait for big flashy brands to turn up and sell them computers, they got on with it and built their own. That's the Australian way.

Nevertheless, there'd be no denying the march of time or the market's push to arm consumers with home computers ready to play pre-coded games and even try handling the family budget.

Next time, we look at Australia's early computer retail market and the electronics entrepreneur who gave us our own local alternatives to the Commodore VIC-20 and Tandy TRS-80. See you then. ■

Above: The COSMAC VIP featured a hex-keypad and output to a TV screen (Image credit: Dave Ruske, CC BY 2.0)



Left: The Dick Smith Super-80 had more RAM than a Commodore VIC-20 and over 2,000 were built in the first year (Image credit: GFHandel, CC BY-SA 3.0).

Home computers in Australia, a fast history

Part 2: The local market strikes back. **Darren Yates** re-traces Australia's computing history during the golden age of the 'home computer' in the 1970s and 80s, starting with our unique dawn of DIY computers.

PART 2 OF 5

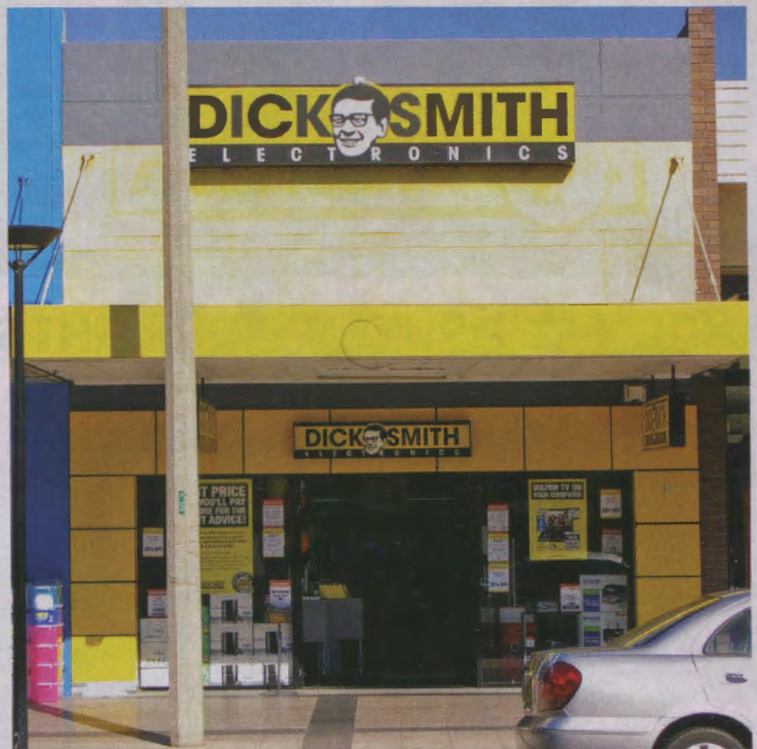
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Early computer users in Australia were largely electronics enthusiasts, who saw computers as a bunch of electronic components, first and programmable devices, second. This fascinating world of electronics had captivated us since before WWII, fed by specialty shops selling everything from army disposals to the latest components. But the 1970s saw the rise of the electronics 'chain stores', such as Tandy Electronics, that sold components, consumer tech and in 1978, launched the new TRS-80 Model I computer. The other key retailer of the day was Australia's own Dick Smith Electronics (DSE).

Making your own gadgets

It's common knowledge that entrepreneur Dick Smith made his mark building a chain of electronics stores. As a young kid, I'd walk into one with my dad and it was like walking into a toy shop – all sorts of gizmos everywhere. But Dick Smith also did a roaring trade selling 'kits', packages of specific electronic components to build one of the many projects described in the pages of local technical magazines, such as 'Electronics Australia' (EA).

Below: The Exidy Sorcerer was the first computer sold in Dick Smith Electronics stores in 1979 (Image credit: Marcin Wichary, CC BY 2.0).



Above: The old Dick Smith Electronics stores were an Aladdin's cave of fun stuff (Image credit: Bidgee, CC BY 3.0)

While the complexity of those kits ranged from '1' to 'brain-surgery', Dick Smith also pioneered the 'Fun Way into Electronics' series, introducing this fast-moving global industry to the next generation through easy-to-make projects.

For kits were the name of the game – from amplifiers to metal detectors, test equipment to car battery chargers, we were a nation of builders and makers. What's more, it was great fun – you learned about electronics, how to trouble-shoot problems, you saved money into the bargain and you had the buzz of building something yourself. However in 1977, Smith took a chance and began selling kits for the new 'Mini Scamp' computer described in EA (and covered last month).

Buying a computer?

It's almost inconceivable to imagine today, but a budget \$60 Android phone from a Coles or Woolies supermarket has more or less the same computing power and on-board RAM as roughly 50,000 Commodore 64 computers, which, in 1984 Australian dollars, would have set you back \$25million.

But in the mid-1970s, the idea that you could walk into a retail shop and carry out a computer under your arm was unheard-of. Yet, the building blocks to make this happen were fast falling into place.

As we saw last month, Australia's pioneering role in DIY computers rapidly grew interest in computing in general, just as it had done for TV and radio in generations past. The arrival of

the 1977 trio of Apple II, Commodore PET and Tandy TRS-80 Model I captured new imaginations, but, uniquely, only the TRS-80 was available through its own chain of retail stores – and when it eventually arrived in Australia in March 1978, Tandy did a roaring trade.

By this stage, the 'Mini Scamp' computer kits were also doing well for Dick Smith. However, the rapidly-rising demand for ready-to-use computers was too great for the entrepreneur to ignore.

Exidy Sorcerer (1979)

The first of the 'ready-to-run' computers to appear in Dick Smith stores was the 'Sorcerer'. Built by arcade gaming specialist, Exidy, the Sorcerer first sold in March 1979 for \$995, the same price as the Commodore PET, but cheaper than the Apple II. Powered by the famous Zilog Z80 processor, it featured 8KB of RAM (the 16KB version was another \$255) and like any new computer of the era, came with Microsoft BASIC but, unusually, via cartridge, then the most time-efficient (and reliable) way of loading commercial software.

An upgraded 'Sorcerer II' appeared the following year, but its price was heading north, hitting \$1,395 for the 16KB version by May. While it sold well overall (more than 10,000 by the end of 1982), the Sorcerer probably didn't receive the same backing from Exidy as would a Commodore or Apple-backed machine and was gone shortly thereafter.



Dick Smith System-80 (1980)

To this point, home computer prices in Australia had remained stubbornly high, but in July 1980, Dick Smith Electronics launched its first 'home-branded' system, the 'Dick Smith System-80', at just \$595 for the 12KB RAM version, \$695 for 16KB version. Created by Hong Kong-based manufacturer EACA as the 'Video Genie' and powered again by a Z80 CPU, the System-80 produced 64 characters by 16 lines of text and 128x48-pixel graphics. Not only was it largely-compatible with the TRS-80 Model I, it also featured a built-in cassette recorder for program storage. Many computers of the era required you to source your own recorder, so the System-80's inclusion of one was a bonus.

DSE claimed in its ads to have sold more than 500 in the first ten days on-sale (remember, this is 1980; not an iPhone launch). A similarly-spec'd TRS-80 Model I

sold for over \$1,000 at the time, so the 16KB System-80 was great value and also plugged into a standard Aussie TV. I never got to use a System-80, but who wouldn't love a computer with woodgrain end-caps?

By September 1982, over 8,000 System-80s had been sold. However, computer prices were now on the skids again and the System-80 was up against not only a new entrant designed to cash in with home users in the Commodore VIC-20, but also the new Australian marvel, the MicroBee from Applied Technology, both selling for \$399.

The System-80 had been a winner for Dick Smith, with sales topping 13,000 by May 1983, but it was fast-becoming unviable in an increasingly cut-throat market, despite dropping to its lowest price of \$499 (at the risk of jumping the gun, Dick Smith struck back the following month...).

Fun-fact: if you headed into a DSE store in July 1980, you'd have also found for sale a new computer magazine called *Australian Personal Computer...*

Dick Smith Wizzard (1982)

While the home computer market kicked off with the likes

Above: The EACA Video Genie System computer sold as the Dick Smith System-80 in Australia/New Zealand and the PMC-80 in North America (Image credit: Marcin Wichary, CC BY 2.0).



Above: The legendary TRS-80 Model I computer began selling in Australia in early-1978 (Image credit: Rama & Musee Bolo, CC BY-SA 2.0 FR).



Below: The Commodore VIC-20 was amongst the first sub-\$400 computers in Australia (Public Domain)



Above: The Dick Smith VZ200 sold over 25,000 inside two years, this one has the 16KB RAM expander (Image credit: I, John Dalton, CC-BY-SA 3.0)

of the Commodore PET and Tandy TRS-80, many of the most popular arcade games of the era were developed by Atari and the Atari Video Computer System (later becoming the Atari 2600) brought many of those games to the home TV.

Video Technology ('VTech') was a lesser-known maker of electronics products in Hong Kong and in 1981, launched the CreatiVision, a unique games console/computer combo. Dick Smith Electronics took the opportunity to import the CreatiVision, renaming it the 'Dick Smith Wizzard'. It debuted in September 1982 for just \$295.

The Wizzard combined two hand-controllers, which, when in place, provided a membrane-keyed QWERTY keyboard. You could also purchase separately a chiclet keyboard that plugged into the base unit by first removing the in-set controllers. The console featured a Rockwell-made MOS 6502 8-bit processor running at 2MHz (the same chip inside the Commodore VIC-20), but only 1KB of RAM.

Importantly, it did include

hardware sprites (really, a must-have for developing fast action games) and a decent (for the time) 256x192-pixel resolution. However, it didn't have the VIC-20's gravitas and I suspect even DSE itself realised as a computer, the Wizzard was a better games console. It was last seen selling for \$139 during 1984.

Dick Smith VZ200 (1983)

As microprocessor and VLSI (very-large scale integration) chip technology improved, home computers in the early-1980s began to shrink further. One example we'll look at next time was 1983's Tandy TRS-80 MC-10, which was smaller than the magazine page you're reading right now.

That same year, VTech launched a similar-sized model, the Zilog Z80-based 'Laser 210' system, running at 3.5MHz with 8KB of RAM. Renamed the 'Dick Smith VZ200', it became a genuine Australian classic, with reports of more than 25,000 sold by October 1984.

From a useability viewpoint, one drawback for the VZ200 was

its chiclet-key keyboard. While this matched the TRS-80 MC-10, you had Commodore, Apple and the majority of Tandy computers now with full-stroke keys. The VZ200 also lacked a disk drive, but its saving grace was its price. Commodore Australia sold the Commodore 64 for \$499 in June 1983 - in competition, Dick Smith Electronics launched the VZ200 for just \$199. Yes, it had a fraction of the Commodore 64's RAM, but Australia was then in the grip of a recession and the difference was more or less a week's wages at the time. You could always spend extra on the external RAM module, which added another 16KB.

Nevertheless, a new 1984 arrival saw the VZ200 price drop to just \$99 by July of that year.

Dick Smith CAT (1984)

Until now, Dick Smith computers weren't all straight clones of Tandy TRS-80s, but they shared certain similarities, not least of which their Z80 CPUs. However, one of the lesser-known but most interesting of all Dick Smith computers was the 'CAT'. This rebadged VTech Laser 3000 launched in May 1984 and was powered by MOS Technology's 6502A, an up-rated version of the 6502 that ran the Commodore VIC-20 and the Apple II.

This last point was used in Dick Smith advertising, with the CAT's specs comparing favourably with the Apple IIe. The CAT's price, too, was heavily promoted, coming in at just \$699, or less than half the cost of the Apple IIe in Australia at the time.

The CAT ran at 2MHz with 64KB of RAM, expandable to 192KB. It offered Microsoft Enhanced BASIC, full-travel keys with



Above: The VZ200 was a very compact design, packed with chips and a Z80 CPU (Image credit: I, John Dalton, CC BY-SA 3.0).

Below: The VZ200 back panel featured TV, composite video and tape recorder ports, plus I/O and peripheral bus ports (Image credit: I, John Dalton, CC BY-SA 3.0).



separate numeric keypad, 80-column text and 650x192-pixel graphics. However, to get full Apple IIe-compatibility, you also needed the \$99 'emulator cartridge'. Even so, it was still the cheapest way to get an Apple-compatible computer. This was my third home computer and along with using its terrific keyboard, I spent hours playing (badly) the Apple II version of 'Zaxxon'...

Sales figures are difficult to find, but reports are the CAT sold into the 'thousands'. However, by mid-way through 1986, its price had dropped to just \$399 and sadly, few CATs seem to still exist today.

Dick Smith VZ300 (1985)

While the CAT was aimed mostly at business users, there was still a market for a low-cost beginners' home computer in 1985. However, in light of the competition, the chiclet keyboard on the VZ200 no longer cut the mustard. The solution was the Dick Smith VZ300, launched in August that year.

Still powered by a 3.5MHz Zilog Z80 CPU, but now with 16KB of RAM, the VZ300 was in fact VTech's new Laser 310. Not only did it feature full-travel keys, it also marked the first 'VZ' computer with a disk drive option. But with price-drops continuing to plague the market elsewhere, the VZ300 arrived with same launch price tag as the previous VZ200 at just \$199.

One of the weirdest things about home computers during this era was that it wasn't uncommon for the disk drive to cost the same, if not more, than the computer it connected to. This was the case for the VZ300 - while the machine itself cost \$199, the disk drive would set you back \$299, plus another \$89 for the controller. No surprise, then,



Above: The Dick Smith Wizzard combined 8-bit computer and games console (Image credit: Bilby, CC BY 3.0).

that many users chose the cheaper \$79 datacassette instead (in contrast, the Commodore 64 sold in Australia for \$499, the same price as its disk drive).

Nevertheless, the mid-80s' computer market in Australia was brutal and just four months after launch, the VZ300 price had been cut to \$99. It proved a popular move and by April 1986, more than 40,000 computers had been sold. It last appeared in DSE's June 1987 advertising as a 'kids' computer with datacassette for \$169. After that, both it and the local 8-bit home computer market were gone.

As had happened elsewhere, computing was getting serious - IBM's 'Personal Computer' standard had reached critical mass and even DSE jumped on-board, selling the DSE Multitech PC500 for \$995.

The flame still flickers

The recent, sad demise of Dick Smith Electronics stores has been well-documented, but the 8-bit home computers the company sold are still held in high regard by enthusiasts. Yes, they were largely rebadged VTech

machines, but many Australian software developers of a certain vintage would have fond memories cutting their teeth on a 1980s' Dick Smith computer.

As with many home computers of the era, there are emulators for almost all of DSE computers available online, but emulators aren't a patch on the experience of using an actual 8-bit computer.

Despite pioneering DIY computing in the mid-70s, Australia was in danger of being over-run within a few years by an influx of expensive U.S. brands. What Dick Smith did was to show the market that not only had we the skills to design our own computers (like the Super-80 discussed last month), but that, with lower prices, many more of us were ready to dive into this world of home computing.

Winter is coming...

Looking back at the period, one of the clear trends in our local market was the continual price-drops, particularly after 1980. While new-generation models would always see the previous generation sold at a discount, things changed drastically in 1983. Dick Smith Electronics was well on its run of home computers by this stage, but globally, it would become a year of chaos and carnage within the computer industry. Next time, we retrace this infamous period and its knock-on effects on the home computer market in Australia, as well as some of the computers that came and went, some in almost record time. See you then. ■

Left: The Dick Smith VZ300 was a popular rebadged VTech Laser 310 with full-travel keyboard (Image credit: AiGeek, CC BY-SA 4.0).

