

AMSTRAD ADDICT

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Is it acceptable to replace the guts of retro tech?

So you've got an old Amstrad machine and you want to make some modifications. Should you go as far as totally ripping out its insides? Two talented makers have their say.

NO

Michael Wessel

Computer scientist who has created a portable computer based on an Amstrad CPC 464, replacing the tape deck with a screen.



"Keep it authentic, keep it real"

We see a lot of projects on social media these days where folks take a defunct retro computer, rip out its guts and replace it with a Raspberry Pi running *EmulationStation* or similar. While this is a reasonable approach if the machine appears irreparably broken, in my own experience this is rarely the case (and I have fixed dozens of CPCs).

Usually, something can be done to at least partially salvage the old machine – in the case of the CPC, the usual suspects (RAM and CPU) are still readily replaceable. And if you don't have the skills to do the repairs yourself, you'll probably find somebody in the CPC community willing to help out – so please don't just dump it!

I also feel uneasy if working CPC's are harvested for their parts, in particular their Gate Arrays (GA) which can be plugged into modern motherboard replicas or re-creations. The GA is the only true custom chip in the CPC and, so far, it has been impossible to replace with a modern substitute.

Thankfully, this is now beginning to change due to the heroic efforts of members from the CPC community (mostly Gerald from the CPC Wiki Forum). A modern FPGA GA replacement is now available so the "CPC refurbisher" is in a great position. It's possible to keep original hardware running for as long as possible!

Sure, eventually, all original CPC hardware will be gone – but, depressingly, this holds true of everything in the universe. Should we stop using original hardware right away and put the few remaining CPCs in a museum, using modern re-creations instead as *Perifractic*

(perifractic.com) has argued? That's a valid approach for sure since these modern substitutes are also easier to upgrade (USB, SDCard, HDMI, Wi-Fi and so on).

But, for me, the very notion of a CPC was defined in 1985 when I got my first CPC 464 for my confirmation. And it is that concept – that idea – to which I am nostalgically, if not emotionally, connected.

Yes, my personal "CPC concept" is malleable to some extent, but not arbitrarily and, in a sense, I am a bit of a traditionalist when it comes to the CPC. Modern upgrades are OK as long as they don't turn the machine into a Borg – it has to maintain its "retro-authenticity" both inside and out.

The form factor is definitely important to me – I don't want my CPC to be in a tower or a Mini ATX case or have an FPGA or a Raspberry Pi at its heart. It simply doesn't resonate with me. After all, when is a CPC no longer a CPC? When did Picard turn into Locutus of Borg? When did a bald man turn bald? For me, only the original is the real deal. Long live the CPC!

Check out Michael's project at www.hackaday.io/project/187051-the-amstrad-cpc-portable

YES

Philipp Hooler-Lutz

NixOS nerd who disassembled an Amstrad NC100 Notepad and replaced all of its innards to create a cyberdeck Linux terminal.

"Recycle old hardware in bad condition"

I have disassembled old hardware and equipped them with new technology and I know that idea alone can annoy vintage computer enthusiasts. But wait! There are actually reasons for doing this, at least from my perspective. In fact, I probably look at vintage computers from a different point of view.

I love the design of old hardware. In the past, designers could let off steam and they didn't have to make everything as flat and small as possible. That's how beautiful devices such as the Macintosh SE or the Amstrad NC100 came into being.

Yet the hardware in these devices is not up-to-date any more. Nobody can integrate an old Windows 3.11 machine into a productive workflow. Yet you can let the design live on by inserting new innards and this also allows you to work with the old device.

The advantage for collectors is that new hardware comes on to the market so that enthusiasts can repair their no-longer-functioning jewels. But, while there is still a lot of old hardware out there, their condition varies. Parts which are flawless are, of course, much more interesting for collectors than those in a bad condition – and there is a danger that poor parts end up with the garbage.

That would be a pity. Hardware can be upgraded, allowing them to live on. So, yes, there are two sides to everything but, in my opinion, the recycling idea clearly prevails here. I feel it's important to recycle old hardware in bad condition and offer them a place in today's world.

Check out Phillip's project at www.nerdbude.com/nb100.html

