

Amstrad PC-series Technical Details and Trivia

Connectors

- (Different depending on the computer series and model)

Technical Facts

- The power supply for the PC1512 and PC1640 system units are built into their respective supplied monitor, rather than being inside the system unit itself. This allowed Amstrad to do away with a cooling fan.
- The PC2086 and PC3086 XT computers contain Paradise PVGA1A chipsets embedded on the motherboard that support VGA graphics and come with 256K of dedicated video RAM (VRAM).
- The floppy drives used in all Amstrad PCs are 100% compatible with other PCs. They do, however, have jumpers on them that specify whether they are to be treated as Drive 0 or Drive 1. The one exception to this is the PC5086 whose Citizen drive uses a non-standard 26-pin connector which carries both data and power.
- Although PC1512 monitors display a CGA image (yes, even the "MD" monochrome monitor), they are not electrically compatible with other CGA monitors. For example, the PC1512 uses a composite sync signal, whereas normal CGA has separate horizontal and vertical syncs. This means the PC1512 monitor is almost useless outside of its original purpose with the PC1512 system unit. In addition, this CGA graphics chipset could not support the more common *Hercules* monochrome graphics standard.
- The PPC portable Amstrad computers used a hard drive called the Stratum Sprint. Other Amstrad XT hard drives before the 3-series used RLL (Run Length Limited) encoding. After the 3-series, all drives were XT-IDE compatible. These drives can be changed to 'AT-IDE' mode to make it work on a modern PC, by changing its jumpers.
- The PC1512/1640 models were altered slightly during its lifetime. Physically, there was a subtle change to the plastic case, where later models have a lighter grey texture than the original, ventilation holes were added to the top and side of the case, and the Amstrad logo was changed from brown to red on grey background. Another way of determining if you have a 'version 1' or 'version 2' is to boot it up - the BIOS and CGA character ROM are different despite the motherboard being identical; the BIOS displays a '(v2)' on boot-up with a copyright of 1987 as opposed to 1986 on the version 1 models, and the CGA character ROM contains a Greek char set that didn't exist in the version 1.
- The PC2086 support hard disk drives, either RLL (Run Length Limited) such as the Seagate ST-506, or more modern IDE (Integrated Drive Electronics) drives up to 32MB total capacity. Alternatively, you could add an 8-bit SCSI expansion card and use a SCSI hard disk drive.
- The PC1512's CGA graphics capability came with an extended mode not standard with IBM's CGA standard - it could display 640x200 in 16 colours.
- Amstrad also released the DMP3000 printer, which was an 80-character dot-matrix printer supporting NLQ (Near-Letter Quality) and could handle both A4

and fanfold paper. It connected to the PC1512 or PC1640 via its parallel port. They also released the SM2400 2400 baud internal modem for these machines, which was on an 8-bit ISA expansion card.

Trivia

- The Amstrad PC1512 and PC1640 computers came with a joystick port that is pin-compatible with the Amstrad CPC464/664/6128 home computers, so any joysticks that work on these could also be used on the Amstrad PC.
- The monitor for the PC1640 won't work unless it's also providing power to the PC1640 system unit.
- The PC1512 came with a light pen connector.
- The original keyboards and mice on Amstrad XT computers are non-standard and so cannot be used on other PCs. The exception is the PC5086 whose keyboard had a switch on the back to put it into 'XT' mode (for PC5086) or 'AT' mode (for other PCs). The PC5086 mouse is also a standard PS/2-compatible mouse.
- The BIOS in the early Amstrad PCs was written by MEJ Electronics - the same small design company that created the PCW's and CPC's hardware. Locomotive Software were asked to write the BIOS but declined because they feared that litigation by IBM (who of course wrote the IBM PC's BIOS) would wipe them out. This decision more or less ended any future relationship that Locomotive might have had with Amstrad.
- Early Amstrad PCs also came bundled with software from Digital Research. DR had lost ground in the Operating System market to Microsoft, so when Microsoft's quote for MS-DOS to Amstrad was too high, DR saw this as an opportunity to regain some market share. They provided Amstrad with an aggressive price for DR-DOS and for their graphical environment manager, GEM. Sadly, Microsoft realised the PC1512's potential in Europe and dropped its price, hence why some Amstrad PCs came with DR-DOS, others came with MS-DOS, and some even came bundled with both!
- Digital Research agreed with Amstrad to customise GEM (Graphical Environment Manager) to work on the PC1512 without a hard disk.
- The PC2386's floppy drive lacks a detector to distinguish a high-density floppy disk from a double-density one!
- The rather intelligent design of the PC2000-series placed the power supply along the centre line of the system unit, just below the monitor to help give support for the heavy monitor on top!
- All Amstrad PCs that used 4 AA batteries to store the realtime clock also relied on these batteries for the entire CMOS configuration, including the fitted hard drive configuration.
- Amstrad had originally designed the PC2000-series to be fitted system with an integrated hard disk controller for the Seagate ST277R drive, but it never worked properly and the machines were shipped with Western Digital 1006 RLL Controllers, with most of the controller BIOS in the system ROM.

