



# Commodore 64

Commodore's latest home computer offers lively 'sprite' moving graphics, and uses your TV or hi-fi speakers to generate high-quality sound

The Commodore 64 is really the first of a new generation of home computers equally suitable for playing games, or assisting in the running of a small business.

Sixty-four Kbytes of memory as standard is enough to cope with sophisticated graphic displays, or business programs such as spreadsheets, word processors, and databases. Some compatibility with the Commodore VIC-20 and PET business systems, has increased the range of available software further.

The 64's range of interfaces means that it will operate with most types of peripherals including the VIC disk drive and printers. A complete system, consisting of the computer, disk drive and a printer can thus be purchased for around £700.

Two of the 64's strongest features are: sprite graphics (see page 45) and full music synthesis. Sprites are visual objects created on the screen using high resolution graphics, which can then be moved around using simple commands — ideal for space invaders, aircraft, explosions etc. Such effects are possible without sprite graphics, but require far more programming. On the 64, sprites

can be made to move, grow in size, shrink or change colour, or can be made to pass in front of or behind other sprites or stationary graphic objects such as background scenery — giving depth to a picture. It is even possible to detect when two sprites have collided — the cue for an explosion!

The sound synthesis is equally sophisticated, by contrast with the simple 'beeps' and 'squawks' of cheaper machines. In addition to having three separate voices (allowing chords and harmonies instead of just simple notes), the 64 permits full control over the various parameters that govern the sound or timbre of the note being played. In other words, the 64 can simulate a whole variety of musical instruments, and more abstract noises.

The weakness of the 64 is its BASIC language — which is virtually the same version as Commodore were using on their very first computers. Instead of a nice range of user-friendly commands to take advantage of the 64's otherwise superb features, most sophisticated operations require the unfriendly POKE command. Fortunately it is now possible to buy cartridge add-ons (such as Simon's BASIC — £50) to rectify this deficiency.

## Commodore 64 Keyboard

The Commodore 64 has an excellent keyboard with 'sculptured' keys (contoured for easy typing). Besides the normal characters there is a wide range of block graphic characters. A multi-purpose key marked with the Commodore company logo shifts between the various sets of characters. Colours are changed using the CONTROL (CTRL) key and one of the top row of keys.

The four function keys to the right of the keyboard can be assigned special functions within a program, thereby providing shorthand entry of special commands.

