

CONCEPT 3D - Review In Sinclair User October 1986, pages 96-97



The Americans have invaded! Two QL packages from the States have winged their way across the Atlantic and their manufacturers, Tesseract Software Development and Sharp's Inc. are keen to show that they can compete with the French and the Danes.

Yanks like their computers chunky and you can't get more chunky than the QL which apparently is now, belatedly, attracting some attention over there. The same's true of their software: They like it colourful and epic-sized.

QL gets American stars and bars

Concept 3D

Concept 3D is the first package. It contains only one microdrive cartridge but produces a one-machine tour de force rather in the style of an Esther Williams swimming spectacular.

Three-dimensional graphics packages usually promise so much but fail to deliver. Concept 3D, however, fulfills all its promises and more. It produces two or three-dimensional images — to your specifications — and rotates them in the x, y, and z axes.

Designs are drawn in either TV or monitor modes. There's little difference between the displays but the larger lines and curves of the TV mode look slightly furry and broken. The images on both displays are, unfortunately, out of alignment with the centre of the screen because of differences in the US and UK television systems. The error is, however, only noticeable in the glider image demo that accompanies the package.

The screen is split into three windows. A one-line status panel at the top of the screen shows the percentage of memory used by your images, the window magnification factor, view — front of side — and the model number. Complex models, such as the glider, sometimes require nearly half the available memory but you can store a maximum of 50 images on the computer-defined Ram disc.

Command menus are displayed beneath the main design window. You use one key to enter each command; the first character of the command in either caps or lower case mode. Those keywords are paged through using the F3 function key.

Cursor control

The design window initially contains a cross-hair cursor and a direction indicator, showing the directions of the x, y and z axes. The cursor is moved either by direct input or cursor keys.

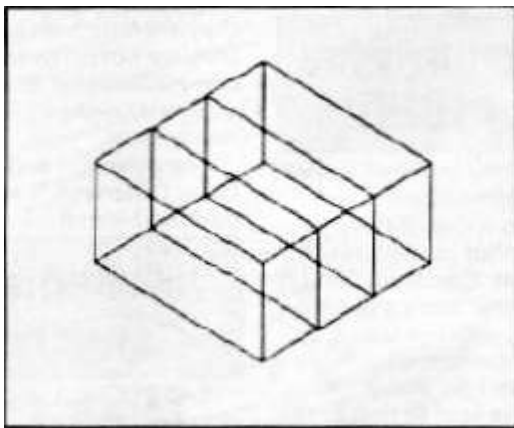
For direct input enter the letter of the axis you want to move the cursor position and the number of pixels from origin to destination. Positive numbers move the cursor up or to the right and negative values take it down or to the left.

Cursor key movement can be scaled to meet your speed requirements. You may, for instance, want it to move slowly across the screen so you'd set the move factor at one or two units. Alternatively it will move in long jumps with a large factor number such five or nine.

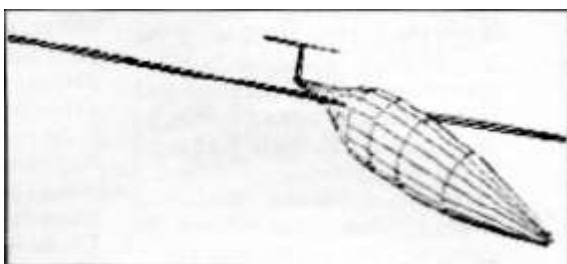
Each three-dimensional image is composed of a series of slices, called cells. First you choose your model number, side view and design starting point. From the start point you design your first two-dimensional cell shape using rubber-banded lines, circles ellipses and curves.

If your shape has a constant cross section you tell the computer to replicate the image a number of times — one behind the other to give the image its 3D quality. You could for instance state that the image is composed of three cell slices one behind the other.

Boxes also are easy to produce. Not all objects, though, have a constant cross section. Some will vary in width and shape as you go through them. The solution is, however, simple for Concept. Just specify the shape variable and you can design each of the cell depth components.



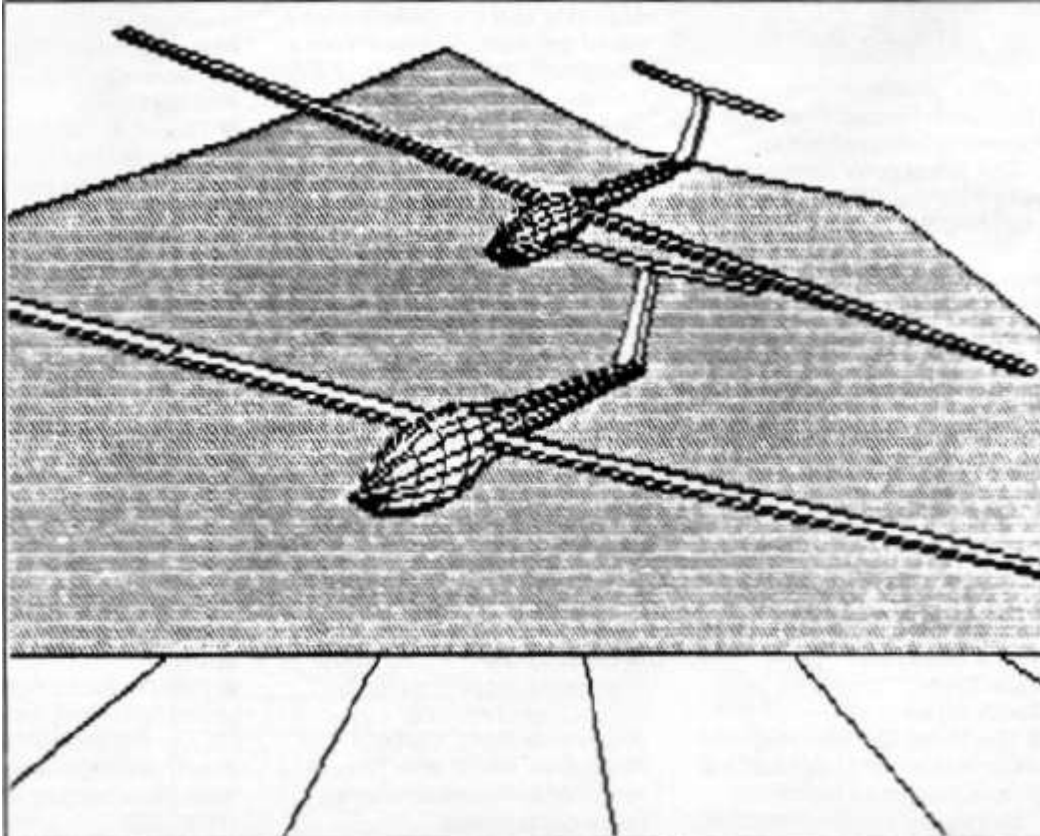
* The 3D rectangular box H made up of three smaller boxes, called cells. All 3D Concept images can be created in a similar manner.



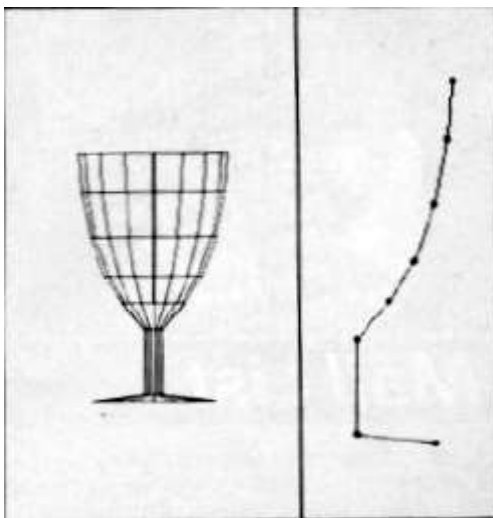
* The perspective on the glider is uttered by a change of viewpoint end plane. The QL makes the left wing longer and the right wing shorter. The nose is dipped.

Printer perspectives

Once you've done all the hard work you can sit back and manipulate your image. The computer produces a simple isometric viewpoint. The display default shows your object's hidden lines but a surface command redraws the image and excludes the view of the underside. Perspective can also be changed so that you can exaggerate the closeness of parts of the image to your viewpoint or make it grow smaller.



*The glider example is stored as a separate demo file. The Image can be rotated in any direction and the viewpoint distance adjusted.



* The goblet is made up of straight lines, despite its curved appearance. The program can also compose a circle using lines

Screen dumps of your image are obtained using the Psion Easel package which will dump to Epson compatible printers. No two Epsoms are alike — as you may know from experience — and some images, such as those using circles, will be distorted on paper. That effect is a fault of the QL and printer hardware rather than of the concept program.

Concept 3D is accompanied by a comprehensive manual which acts as tutorial and reference guide. It describes the processes of producing two- and three-dimensional images as well as manipulating viewpoint. The final section shows how the demo screen was built by the programmers and provides design ideas for Those of you who already know a bit about tech constructional drawing.

Concept 3D is a valuable tool for designers. The image routines are slow compared with dedicated CAD systems but if you can wait 20 seconds for a complex design to be produced Concept will provide an efficient and complex design facility.

American Pie

The United States has small part of the QL pie but, if quality products such as **Concept 3D** continue to come from the country which owns Silicon Valley, the American software houses concerned should congratulate themselves.

Concept 3D

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