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THE TOUCHSCREEN GOES TO SCHOOL

Touchtech 501 offers programs for all levels including severe learning and perceptual problems; by Chris Drage



Touchtech 501 offers children a fun way of learning and was very popular with autistic children

The Touchtech 501 is an input device that fits over the front of an M series Microvitec Cub monitor. It communicates with the micro via the RS423 port and is powered from the Beeb's 5v socket. The monitor sits on two feet which are attached at right angles to the bottom of the touchscreen with six screws. This also tilts the screen, making it comfortable to use.

The Touchtech 501 has a 6511Q micro-processor which detects when the screen is touched and responds accordingly. It sends out a pattern of invisible infra-red rays across the front of the host monitor. When

these rays are interrupted by the finger or stylus the position is calculated by the touchscreen and passed to the computer program for action.

The Touchtech 501 has eight modes of operation:

Mode 0 — Data dump mode to check the correct functioning of the touchscreen.

Mode 1 — Returns x, y position of an object.

Mode 2 — Returns x, y position and size (width & height) of object.

Mode 3 — Returns four x, y positions of four objects. Mode 4 5 6 7 relate to modes

0 to 3 but return a stream of data instead.

To assess the potential of the Touchtech 501, I decided to place it in a class of autistic children in a special school in west London. The teacher immediately saw the advantages over the Beeb's standard qwerty keyboard and was keen to implement it.

Obviously, the success of the touchscreen depends largely on the availability of good software. The Touchtech 501 comes with a demonstration disc containing nine programs for use with the screen and others that allow you to convert Basic programs for use with the touchscreen.

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All the programs are extremely simple to use and even children with severe learning and perceptual problems were able to use them successfully.

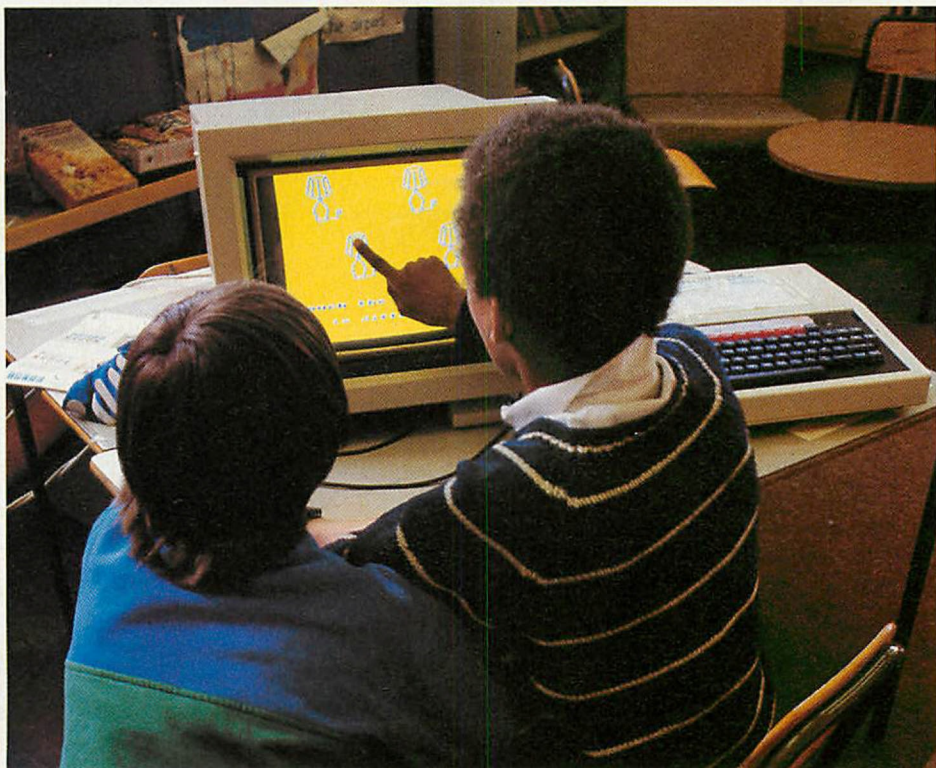
The keyboard need only be used to boot the Menu program. From this point on all programs are run and controlled by touching the screen. Of the nine programs on disc, *Artist*, *Odd-man*, *Simone* and *Cubes* were favourites with the children. *Artist* is a rather limited touch-paint program demonstrating the stream mode of Touchtech. The youngest children really enjoyed this program. *Odd-man* (out) proved quite hard for some of the children as the differences in the pictures are quite small. As a point of interest I included Superior Software's *Speech* program into *Odd-man*, which delighted the children no end. *Simone* is a variation of the popular Simon sequencing game.

Cubes proved to be popular with the older children. This program allows the children to 'build' 3D landscapes with cuboids. Of all the software *Music* is the most developed. Unfortunately, the sounds produced are rather poor and it is quite complicated for young children to use. *Words* is an anagram type program which contains 13 words with clues to help the child. These programs serve to demonstrate the touchscreen's capabilities and, though useful, need further development to be of lasting value.

All the above programs were produced by MEP which has produced a second disc called *The Touch Screen Sampler*. This disc contains programs designed specifically to make use of the features which the Touchtech 501 offers, as well as programs developed originally for keyboard use but which also lend themselves well to use with the touchscreen.

The programs vary in style and content and range from pre-school to secondary age. They include games of strategy, a multiple point test program, an animated geometry program, a program that can measure the size of real objects and a multiple choice quiz. All the programs have been designed to encourage close involvement between the user and the activity by removing the distractions usually associated with the keyboard. The quality of the software is high.

The star of this suite is *Trace*, a letter



From music to animated geometry and 3D landscapes, Touchtech 501 is definitely a master

formation program for infants. Although my version contained a bug, it is still a robust piece of software, immensely popular with the children. Another gem is *Cuppa* from Lincoln MEP. It is a sequencing exercise based on making a cup of tea. The delightful animated graphics are really appreciated by infants.

More programs are available from other sources including Microvitec itself, Megacycle Software, Micromate Software which is available from Toys for the Handicapped, and the Research Centre for Education of the Visually Handicapped (RCEVH), at the University of Birmingham. The SEMERCs are also producing software as are many LEAs.

However, the overall problem to date is that good software which really utilises the potential of the Touchtech 501 is still very thin on the ground. Software houses please take note!

The teacher in charge of the children using the Touchtech 501 sums up his experience: 'The Touchtech 501 has been the most successful piece of hardware, apart from the BBC micro, to cross the threshold of our school. Even teachers and nursery nurses who have always been somewhat wary of the computer have

taken to the touchscreen like ducks to water. The children love it and I have had to be something of a King Solomon to maintain peace and friendships! Even between some of the staff!!'

In the light of the success the Touchtech 501 enjoyed in the school mentioned in this feature, it seems rather incongruous that software support is still notable by its absence. As an alternative input device it scores heavily over switched devices which are its nearest rivals.

The relationship between cause and effect is heightened by use of the Touchtech 501. It not only works where other methods fail but works faster. Nor is its use limited to special education. Like the Concept Keyboard before it, there will be applications for the Touchtech 501 at all levels. Each regional SEMERC and MSU (ex-MEP) RIC has a Touchtech 501 available for demonstration.

In conclusion, the Touchtech 501 can be highly recommended to anyone involved in the field of education with young or special-needs children.

Touchtech 501 £210 + VAT
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