

# Money

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Help for handicapped. Inventor Lori S. Saffo incorporates an Apple computer to work with impulses from an ultrasonic beam emitted from a headset. The new product is among many at the One Computer Show at the Tucson Convention Center. Page 100.

'The latest and greatest' in computers are on display at the TCC, says the show's sponsor

## Access for all

### Inventor helps paraplegics, others use computers

By Bob Christmas  
The Arizona Daily Star

At first blush, Lori S. Saffo's invention looks like one of those controllers that operate automatic garage door lifts and turn on lamps inside the house.

Basically, that's the approach, except Saffo incorporates an Apple computer to work with impulses from an ultrasonic beam emitted from a headset designed for physically impaired people.

There are about a dozen ways that someone with a physical impairment can control the computer, including one method that's foot-operated and another by careful placement of the tongue on a mechanism in the roof of the mouth.

Saffo's unusual display for paraplegics and other physically impaired people is but one of many products on display at the One Computer Show, which opened yesterday at the Tucson Convention Center and runs through tomorrow afternoon.

Stuart Handler, executive sales manager for show sponsor ComputerLand, says the show has attracted "the latest and greatest offerings from the major manufacturers."

One Compaq computer at the show has more power than the huge mainframes

computers operated by the U.S. government until 1975, he said. And Plus Development Corp. is displaying a hard disk drive that looks like a VHS television tape cartridge, but has a 48-megabyte capacity and can be slipped in and out of the computer as easily as changing a VCR tape.

Concerning the invention for the physically impaired, Saffo said he was working for Apple in 1988 when a customer asked for equipment available for the disabled.

"I discovered there was nothing, so in January 1988 I began to design equipment, and I invented the first voice-activated controls."

He quit Apple and worked for the Department of Energy for about a year, then decided to pursue his invention further.

His Saffo International Inc. is now in Gilbert, and a half-dozen of the \$9,990 units have been bought by hospitals and other places where Saffo offered them on trial. "They wouldn't give credit back," he said.

A Macintosh computer manufactured by Apple operates through the use of a

"mouse" manipulated on a pad by the operator's hand. The position of the mouse on the pad represents the position of a pointer on the screen.

The headset takes the place of the hand-held mouse. By aiming the headset at the computer monitor's screen, the headset can point to a telephone, typewriter, "axons" (for instant outside help) or a chandelier that represents environmental controls like light switches, heating and appliances.

Point to the telephone, and a key pad is displayed on the screen so the operator can dial and use a speakerphone. There even is an electronic file to keep names and telephone numbers, Saffo said.

Many physically impaired people "are terrified" of computers, Saffo said. But his headset equipment is so easy to use that most are comfortable with the operation after about 20 minutes of training.

The best part of the invention is that once physically handicapped people become accustomed to operating the system for their physical needs, they can use the regular offerings of a computer, including word processing, graphics and most commercially available software, he said.