

DakotaLink provides innovative solutions for individuals with diminished or no vision.



“Gene has diabetic neuropathy and has very little feeling in his fingertips. He has trouble feeling the keys on the keyboard and in being able to tell when his hands are in the right position. His typing was exceedingly slow with many errors and it caused him a lot of frustration”, says Chuck Fullenkamp, Rehabilitation Technician, DakotaLink.

Serving the State of South Dakota, DakotaLink provides “technology solutions for life’s limitations.” This Statewide program is dedicated to enabling individuals with disabilities to maintain independence and inclusion by offering assistive technology solutions. DakotaLink has four demonstration/evaluation centers located in Rapid City, Aberdeen, Pierre and Sioux Falls. Additional staff is located around the state to meet the needs of the rural population.

In a house located in town along side a gravel road, Gene Longden is busy on his computer taking online courses at Dakota State University. He had been a certified teacher before he lost his sight, and he has a below the knee amputation. Now he is taking classes to increase his computer skills in anticipation of future employment.

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When Gene contacted DakotaLink, Chuck Fullenkamp, a member of DakotaLink since January 1999, was asked to help with the assessment and make recommendations that would benefit Gene. Gene’s main applications are the JAWS screen reading software, OpenBook for reading paper documents and books downloaded from Bookshare.org and MS Office.

Chuck was able to come up with a winning solution. He installed a “Big Keys” keyboard with 1-inch square alphabetic keys. He also glued rubber O rings to the F and J keys to help Gene keep his hands in the correct position for typing text. However the “Big Keys” keyboard does not have a numeric keypad. It has non-standard positions limiting access to the control keys and the F1 to F12 function keys. Gene’s JAWS for Windows screen reading program makes extensive use of the number pad, function keys and control keys, so additional accommodations were necessary.



At this point, Chuck introduced the DX1.

Chuck and Gene set up the DX1 to resemble the numeric keypad. “We were able to place the numeric keypad keys far enough apart so that Gene could put his fingers between the rows of keys to find his finger position without actually activating any key until he was ready to use it,” says Chuck.



ABOUT ERGODEX

Founded in 2000, Ergodex is a leader in providing people with dramatically improved ways of interacting with computers and other intelligent equipment. Headquartered in Mountain View, CA, the company is privately held. The company's name is based on two Latin words: *Ergo* (therefore) and *Dexter* (right side, dexterity). Ergodex technology helps people gain the upper hand in controlling increasingly complex application software. Ergodex' new ESP technology is the next logical step in the keyboard mouse continuum. Ergodex technology allows people to interact with computers in ways that are more intuitive, dynamic, and powerful.

Continuing on, "we laid out the function keys across the top of the DX1 in 3 groups of 4 keys. The control keys such as the Tab, Caps Lock, Shift, Ctrl, and Windows key, Alt, Spacebar and Windows Context Key were laid out in something close to the standard layout."

Additionally, Gene wanted to emulate the size of double wide and double high keys by using two keys with the same number placed next to each other. "Gene can more easily hold Shift + Insert or Control + Insert with his left hand while navigating using the arrow keys with his right hand," says Chuck.

"It was really helpful to be able to try out key positions and then move the keys if they were too close for Gene to avoid striking them accidentally," says Chuck.

"With the use of the DX1 and "Big Keys", I have been able to type and navigate the computer and use the Internet," says Gene. Gene has completed two online classes at Dakota State University and is currently taking another class. He continues to add more keys to increase the functionality of the applications he uses including a new profile for Excel spreadsheets to help with his current class. Way to go, Gene, we wish you continued success!