



# Ability Newsletter

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## Visionboard 2 and Kinderboard Low cost large key keyboards

These two keyboards come from the same company, Chester Hill Technologies. They are virtually half the price of the BigKeys keyboards.

Both have large keys (2.5cm square), built-in Function keys (smaller, oval shaped), USB connection and two built-in USB ports (useful for connecting a mouse device or numeric pad). Both include all standard computer keys.

The **Kinderboard** has consonants, vowels, numbers and punctuation keys that are colour coded. It is \$135.



The **Visionboard 2** has high contrast black-on-white keys or black-on-yellow keys. It sells for \$145.

Keyguards are available for both - these cost \$115.



## Computer Access

### QuadJoy Using your mouth

The QuadJoy is a popular alternative for mouse control. Its main unit is mounted on a sturdy gooseneck and incorporates a sip/puff tube. This means you can control cursor movements and activate mouse clicks without having to move from one device to another.

Another big advantage of the QuadJoy is that nothing is attached to the user (not even a sticky dot). Further, no software is required, so that the device works happily on any computer (Windows or Mac) that supports USB.

What some people may not be aware of is that the QuadJoy can be ordered with several options that will assist in customising the device to an individual's needs. The no-cost options are:

- "Low Lung capacity" which reduces the amount of pressure required when sipping and puffing.
- Reverse sip and puff (this can usually be reversed in the computer's settings).
- Left side or right side mounting.

Several other options cost extra: **Switch jacks** can be included, at a cost of \$70. A **Games** option is also available, enabling the QuadJoy to be used as a games joystick. This costs an extra \$395.

The QuadJoy itself costs \$1,350 (including mounting) - well below the cost of other mouth-controlled joysticks.



QuadJoy



## Computer Access

### Tongue control?

An article by Greg Bluestein from Associated Press appeared recently in a variety of on-line news stories (such as <http://www.technewsworld.com/story/64319.html>). It concerns Georgia Tech's Tongue Drive System, which uses a tiny tongue implant coupled with sensors inside the mouth to act as a joystick. The device, he argues, "could prove more functional than sip-and-puff devices and less expensive than sophisticated eye tracking systems".

The tongue is a "flexible, sensitive and tireless option. And like other facial muscles, its functions tend to be spared in accidents that can paralyze most of the rest of the body, because the tongue is attached to the brain, not the spinal cord".

A Palo Alto, California-based company, newAbilities Systems, has already designed a nine-button keypad placed on the roof of the mouth to control electronics. The Georgia Tech system centres on creating a virtual keyboard instead of a physical one. It does that through a magnet about 3 millimetres wide that's placed under the tip of the tongue. The magnet's movement is tracked by sensors on the side of each cheek, which sends data to a receiver atop a rather bulky set of headgear. It is then processed by software that converts the movement into commands for a wheelchair or other electronics.

There's still plenty of development work to be done, but early signs are promising. "You could control not just your chair, your TV, your computer, but your entire life," said one observer. "And it's all one system."



## Wireless Microphone

# Revolabs xTag Bluetooth USB Microphone

There have been considerable developments in alternatives to headsets for speech recognition. Array microphones were a great leap forward. This microphone, a lapel style linked by Bluetooth to a USB base, held a lot of promise. It was well rated on the Nuance web site. We tested it on a MacBook Pro running MacSpeech Dictate (speech recognition software for the Mac which uses the Dragon speech engine). Its recognition accuracy was good and it was easy to position.

However one problem we noticed is that the Mute button has to be pressed each time the microphone is taken from its cradle, to bring it out of the Mute state. This will be a problem for people without hand function. Once out and in use, it operates without any button presses.

The xTag has a rechargeable battery that provides eight hours of talk time after each full charge. The unit will be charged any time the microphone is in the Charger Base and USB cable is connected. The xTag recharges to 85% capacity in approximately 45 minutes. A fully charged battery provides up to 8 hours of talk time.

The xTag is a plug-and-play USB device that is instantly recognized by all operating systems and is immediately usable out of its box. It does not require any software drivers for configuration.

What we especially liked about this device is the flexibility in positioning. It can be worn on the user's shirt pocket, lapel or on a lanyard. It can provide high quality full duplex audio for use with a computer for speech recognition or VoIP.

The cost is \$465 inc.



# Computers

## Back to Mac

### A Journey

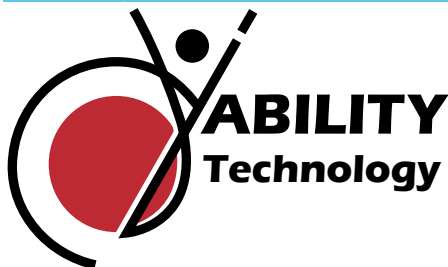
I began my computer journey with a Mac back in the 1980s - a MacPlus. I gave them away in the 1990s when they were plagued by OS problems. A few months ago I decided to go back. Why?

Windows is, in a sense, a victim of its own success. I found myself spending an increasing amount of time fishing out viruses and spyware – time I could better spend on other things. It seemed that whenever a new “service pack” was released, let alone a new version of Windows, we had to wait for drivers and software versions to catch up. These created a nightmare for many of our clients too. Incompatibilities mean headaches and more time wasted. Windows computers seem to get slower and slower as time goes on, as they have to manage so many different functions and updates. Even on our Windows network, my Mac boots up quicker and locks onto the server faster than my HP running Vista did. It shuts down quicker as well. When I put in my USB key I don’t get an array of messages about what I want to do, or requests to “insert the next disk of a multivolume set”, or have the process hijacked by a photo program... it just appears on my desktop, without fuss.

From an aesthetic point of view, there has never been a Windows-based computer as stylish as the Mac, and that goes back even to the models of the 1980s. Macs look good. And as I have to look at it most of my waking hours, it might as well be pleasant to look at.

I have some programs that are Windows only. So I can either run Windows in parallel with the MacOS, which is quite slow, or else start up using “Boot Camp”. That gives me a choice of starting up in Windows, running at full speed, or the MacOS. This is my preference. It gives me, in effect, two computers in one.

- Graeme Smith





## Mobile Phones

### Switch-Adapted Mobile

This is a standard Bluetooth speaker/microphone unit for your mobile phone that has been switch adapted so you can make and answer calls using one switch and voice dialling (this is a necessary feature of the phone you supply).

(All credit to Novitatch in South Australia, for continuing to develop and market Bluetooth adaptations for mobiles, in spite of the frustration of supplier model changes and variations. For this reason the model you get may look different to this one, which is based on the Pilot-Mini.)

Plug a single switch into the Bluetooth unit. It connects to your phone using a Bluetooth (radio) signal.



Operation is simple:

- \* Press the switch once to answer the phone, and again to hang up.
- \* When the phone is not ringing, press the switch once to enter voice dialling mode. Say a name to dial a phone number.
- \* When the phone is not ringing, press and hold down the switch for about 3 seconds to redial the last phone number.

It works with most mobile phones that have Bluetooth compatibility and voice dialling. You must first "pair" your phone to the device.

It comes with an internal rechargeable battery. Three chargers are included: mains power, computer USB and car charger. The cost is a very reasonable \$199.



## Mobile Phones

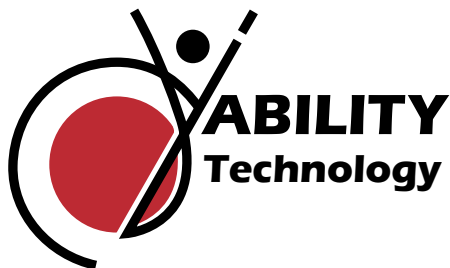
### iPhone - A Review

We have been testing the Apple iPhone for the past month. The device is easy to set up and use. The touch screen enables intuitive access to software and functions, although customisation is limited – e.g., you cannot change the size of the buttons. The touch screen keyboard takes a little getting used to, but that doesn't take long. As the keyboard disappears when not in use, the rest of the large display is available for other activities. The iPhone is also an iPod, so it carries your music, photos and even movies. It has Wi-Fi and 3G, and can be easily set up to receive emails from a server or from Gmail and other providers. I like the fingertip access to weather information and to Google maps – very handy when travelling. The built-in camera is just OK – the lack of a flash or zoom makes it handy only for snapshots in good light.

There are two main limitations to the device, both of which should be rectified soon. The first is the Notes facility. It is great but it doesn't sync with any desktop software. The best you can do is email it to yourself. But two-way synchronisation of Notes is what I regard as a key requirement of a PDA. There is a nifty 3rd party program called Evernote that works well - for Mac, Windows, iPhone and Windows Mobile. It is also free.

The second issue concerns MobileMe, Apple's "cloud in the sky" that synchronises desktops, notebooks and iPhones. It is generally conceded that MobileMe was released before it was ready. The system made a complete hash of my contacts lists and resulted in frightening messages on my computer: "780 contacts are about to be removed from the Address Book. Do you agree?" It also resulted in annoying duplications of contacts and calendar events. My advice is to backup whatever you plan to sync beforehand.

A huge amount of software is available or soon will be available for the iPhone. There are some features of my Palm that I still miss, but the iPhone takes the whole concept to a new level.



# Cameras

## Switch-Controlled Cameras

These cameras from Novitatech are bundled with a specially modified Infrared Remote that can be used to remotely trigger the camera shutter and take photos. The user can access both the shutter and zoom functions with a single switch. A switch that best suits the user need to be purchased separately, as does a suitable mount for the camera.



The IR emitter cable allows the remote and switch to be mounted behind the camera within reach of the user. The interface can be supplied with one of the following Pentax Cameras: Optio-S10; Optio-S12; Optio-A40.

Operation is straightforward:

1. Press and hold switch activated - a zoom signal will be sent every 2 seconds while switch remains activated - the camera steps through three zoom settings - wide, medium & telephoto
2. Release the switch when the desired zoom setting is achieved
3. Press switch briefly to activate the shutter  
(switch press of a short duration)
4. The Camera Remote Control will beep each time an infrared signal is sent to the camera

Prices for the modified cameras are:

- Optio-S10-SSI \$458
- Optio-S12-SSI \$588
- Optio-A40-SSI \$699





# Games

## RJ Cooper Games Adapters

While many games are available for computers, the big move has been to dedicated games devices, such as the Playstation, X-Box, Game Cube and Wii. But while access devices abound for computers, very little is available for these other platforms.

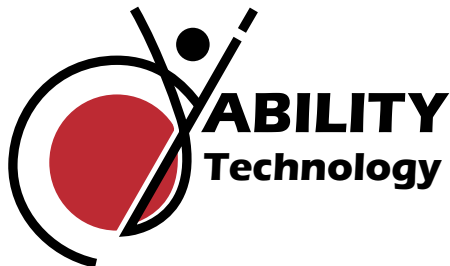
RJ Cooper in the USA makes a range of adaptations for most of these devices. Some allow for collaborative play (where another person moves the main controller while the person with a disability uses a switch to control some of the buttons).

For independent play, options include **button augmentation** (5/8" diameter versus standard 3/8") and **joystick extensions** (add 1" of height and can be 'gripped', if desired). You need to order the controller and specify which adaptations you wish to be included. The controller range from US\$29 - \$49, while the adaptations are US\$20-\$30. Shipping of course would need to be added.



Get more information at <http://rjcooper.com/game-controller/index.html>

Physical access is one important issue - but another vital concern is game suitability, especially for people with TBI. This has been an area of interest for us at Ability for some time. On the following page you will read some exciting news about a new project on this very issue.



## New Projects

### Ability Projects

An important part of Ability's work is research. Assisting individuals will always be the centre of our work, but it is also important to explore wider issues that affect groups and communities. Our research over the years has covered areas such as environmental control, speech recognition, employment and remote support.

Recently we have commenced two exciting new projects:

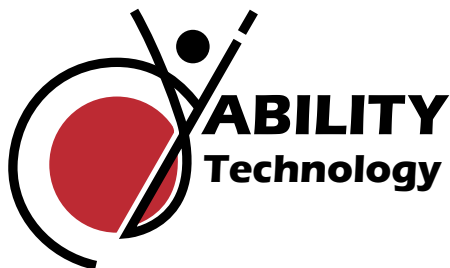
#### **Friedreich's Ataxia and AT**

Ability has been commissioned to undertake research into the assistive technology needs of those who suffer from this condition. The research will include a literature review and the compilation of a computer-based resource that individuals and family members can access.

#### **Computer Games for Young Adults with Traumatic Brain Injury**

This project involves researching and evaluating the suitability of mainstream games for devices such as the PlayStation, X-Box, Game Cube and Wii, as well as computer games, for young adults with TBI. While some games have customisation features that increase their suitability, many others do not. Many games are too fast and/or complex... potential users can easily become frustrated and disillusioned, and abandon this recreational avenue. Yet people who work with young adults with TBI know how significant computer and electronic games options can be for this group.

This research will culminate in a section on our web site that gives individuals and families advice on the suitability of particular games.



# Sales

## Bargains - for Our Readers only

Ability Technology has a small sales section that runs on a non-profit basis. It enables us to supply equipment (mainstream and specialised) to our clients and other groups around the country.

We do our utmost to ensure our prices for specialised products are lower than you would pay elsewhere.

As a special reward to you, our Newsletter readers, we thought we would offer some "specials" exclusively for you. These will apply only until the end of November, so be quick:

### Special #1: BigKeys Keyboard Not \$295 but **\$269!**

These keyboards are great for people with vision problems, fine motor difficulties, tremor or cognitive disabilities. This special price is for the upper case versions.



### Special #2: CST Trackball Not \$155 but **\$139!**

These trackballs (formerly known as Microspeed) have a built-in locking button (for drag functions) and work on any operating system that accepts USB.

These specials are until 30 November only! Put "Special #1" or "Special #2" on your order.



## Ability Activities

### Sorry!

We apologise for the delay in this issue. We have had a very heavy workload and have been short-staffed. We've tried to make up for it with a bumper issue this time round.

### Staffing

We are pleased to announce that Susie Rich is about to join our team. Susie has been working as an OT in the UK for the past 4 years. Prior to that she worked at the Brain Injury Unit, at the Royal Rehabilitation Centre, Sydney. She will start with us in November.

### ARATA

Graeme Smith and Gemma McDonald attended the recent conference of the Australian Rehabilitation and Assistive Technology Association (ARATA) in Adelaide. Together they presented four papers, on Assistive Technology at Work, Remote Computer Support Options, Computer ECU Options and Outcome Measures for ECUs. Nearly 200 assistive technology devotees gathered in Adelaide in September for the biennial ARATA National Conference.

One significant benefit of a conference such as this is the sharing of ideas, the workshops where people exchange solutions they find to particular problems. There is also a smattering of policy and research papers and some training themes.

ARATA members in NSW will coordinate at least two workshops each year, where this process can continue. The first will be held at the Northcott Society in Parramatta, in March 2009; this will be followed by a gathering at Ability Technology in Seaforth, in September/October 2009. If you would like to be informed about these gatherings then please send an email to [info@ability.org.au](mailto:info@ability.org.au).

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