

ERGONOMICS OF TABLETS

vers. 2.0

An Ergonomic Solutions white paper by
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INTRODUCTION

Tablets are becoming increasingly common in both workplaces and the public domain, such as for customer use in retail stores and airports. This market is expected to continue its rapid growth, so understanding the ergonomics of tablet use is an important consideration for ergonomists, employers and facilities managers.

Postural guidelines and best use practices are well established for traditional computing devices; desktop and laptop computers. Musculoskeletal issues are addressed and the risks to user health minimised by legislation Regulations and Guidance documents. Devices with new touch technology are inadequately covered by established guidelines and legislation and so can present health risks and accessibility challenges for users..

And, why is it important?

There are ethical, moral, financial and legal reasons for Retailers to ensure accessibility in all aspects of their stores. In retail an inaccessible store creates problems – and not just for disabled or elderly customers. Accidents are more likely to happen if a store relies on steps up to the entrance, has internal staircases, or cluttered and narrow spaces.

While ensuring accessibility for everyone is recommended for ethical, moral and safety reasons, it is also subject to specific legislation;

- European Union – The European Accessibility Act
- United Kingdom – The Equality Act
- United States – Americans with Disabilities Act
- Middle East – Convention on the Rights of Persons with Disabilities (CRPD) and its Optional Protocol
- Australia – Disability Discrimination Act

Ensuring accessibility in retail also makes good financial sense. For example, in the UK, disabled customers have £80bn-worth of spending power; for retailers to exclude such a significant market is a big mistake. Similarly, at £320bn a year, the over-50s now account for around 47% of all UK consumer spending. These consumer groups are often underestimated but actually represent some of the most powerful consumers in the UK.

RETAIL ACCESSIBILITY

Payment locations:

One of the biggest pain points in a retail store is the point of payment – be it a checkout, cash desk or small express payment point. To ensure accessibility at payment points in a store consider the following:

- **Height.** Provide a counter surface that is 760mm from the floor surface. This will be suitable for wheelchair users or customers who are shorter in height. There should be 700mm clear space under the counter to allow for wheelchair users to approach frontwards.
 - Consider height and reach together – any equipment that a person interacts with that is obstructed – has an associated reach distance eg by a counter edge, other piece of equipment etc, should be lower

than one that is not obstructed.

- Ensure that there is adequate clear floor space for a wheelchair user to approach and leave a location.
- **Lighting.** Ensure counters are bright and well lit; this makes it easier for visually impaired people to use payment equipment or lip read if necessary. Face to face service is important for many customers – a clear unobstructed view of the employee serving can ensure better comprehension and make lip reading easier if required.
- **Counters** should be clutter free so that there are no obstructions for customers to lean or reach over.
- **Portable payment terminals** should be located so they can be easily reached by all customers – and removed from the counter if required.
- **Induction hearing loop.** Provision of a hearing enhancement system to assist people who wear hearing aids can be beneficial. Signs should clearly indicate the availability and location of the hearing loop, and staff will need training in its usage.
- **Auditory voice prompts and tactile buttons** will help visually disabled users access kiosk terminals or information signage.

Adjustability:

An excellent way to help ensure accessibility is the provision of adjustable equipment. This will benefit both employees, and customers. Frequently used equipment – touch and display screens, pin payment devices, and scanners can all be mounted so that they can be adjusted in terms of height, reach, tilt or rotation. This kind of flexibility will allow users to move equipment to avoid any reflection from ambient light or place the device in a more convenient, comfortable location for use.

Ensuring optimal ergonomics at workstations for employees is critical due to the long hours of interaction they typically have with work equipment. Being able to adjust the equipment to the best position to suit each user greatly reduces discomfort, fatigue and poor posture.

Navigating the store:

It is important for all customers to be able to move easily around retail stores; everyone should be able to browse, move around the shop floor, inspect goods and take them to payment locations.

- **Routes and surfaces.** To ensure easy movements around a store, from and to the entrance/exits, payment counters, facilities, and service counters, clear unobstructed routes should be a minimum width of 1200mm. Adequate space to move around the store will allow access of wheelchair users and those with assistance dogs.
- Routes must be kept clear of hazards or product displays and subject to good housekeeping to ensure they remain clear.
- Flooring should be even, level and non-slip.
- Changes in level should be avoided, where possible, as they create a potential trip hazard to both able bodied and disabled customers. Where necessary changes in level should be easily seen, with clear signage and lighting. Steps and ramps should have handrails and non-slip highlighted edges.

Product placement:

- All stock should be neatly displayed and safely stacked on shelves. Items should not overhang the edges of shelving where they can be caught by people passing. Clutter free space will ensure easy movement around the store for all customers.
- Products should be within reach of wheelchair users and users with short stature. Fast selling, popular items can be stacked vertically so that they are accessible to everyone.

Signage:

In store signage will help customers to navigate the store and locate what they need. All signage should be clear and able to be easily understood..

- Messages should be simple and short
- Large, clear, easy read font
- Signage lettering should be a good contrast with background
- Printed on matte materials to avoid glare and reflection

Store environment:

- **Lighting.** Stores must be well lit. This will facilitate easier reading of signage and labels, and ensure customer see steps, ramps, and door handles. Good lighting is essential for easy communication, and in particular, for lip reading.
 - Avoid big contrasts between light and dark – lit areas and shadows.
 - Ensure hazards are well marked e.g .steps, ramps.
 - Fittings – handles, switches, buttons should be a contrasting colour from the background.
 - Adapt signage with braille. Trained staff to help blind people through the store will ensure accessibility for these customers.
- Background noise should not be intrusive or make hearing difficult. Induction loops will help hearing impaired customers communicate and eliminate background noise.
- To help customers with hearing loss all messaging announced over loudspeakers – for example, promotions or customer notices – should also be clearly communicated in other ways. Implement hearing loops and ensure that all staff are speaking clearly when conversing with customers.

Not ensuring accessibility for all people can result in legal repercussions, but also damage to reputation and image. When we reduce barriers we help people with disabilities to fully participate in society on an equal basis with others.

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ABOUT ERGONOMIC SOLUTIONS

Ergonomic Solutions is the leading global provider of innovative and ergonomically designed technology mounting, mobility and security solutions for a wide range of static and mobile technology hardware at the Point of Sale, Point of Payment and Point of Service. Over 20 years of deep understanding of the evolution of technology hardware, ensures that the latest generation of our mounting solutions enables technology to provide a combination of best practice in customer experience, and demonstrable return on investment in a wide range of static and mobile applications.

Our services include design and development for customised solutions, and our influential Ergonomics Consultancy has advised many of the world's leading retailers. In addition, we are also an active participating member of the PCI Security Standards Council. Creators of SpacePole, Ergonomic Solutions is the global market leader, having supplied over 5 million unique SpacePole installations – and in the retail sector we supply over 60% of the global top 50 retailers, making our technology mounting solutions the preferred choice.



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