Computer Keyboards in Public Safety:
Mission Critical Applications Require Fit for Purpose Solutions

In-Vehicle Keyboards

Recent technological advances have introduced many new electronic devices into police cruisers. Although most of these devices are computer controlled, they weren't designed to work with each other. Consequently, a typical police cruiser is full of displays and input devices, all competing for the officer's attention. [i] Law enforcement uses various computer mounting strategies to address the constraints of computing in a cruiser.

1. Center console-mounted
2. Dash-mounted, like newer passenger vehicle displays
3. Passenger seat-mounted

Any of these strategies may require the officer writing reports while parked to twist their upper body at a 45-degree angle, to face the keyboard. This could cause a dispatch to the chiropractor!

As the cruiser computing market shifts from laptops to rugged devices, it is vital to consider the ergonomic design of peripheral technology like keyboards and touchpads to maximize the technology ROI with a minimal cabin footprint. [ii] A recent article In Police1 magazine discusses what new recruits expect in their in-vehicle computing environment. Computer-mounted keyboards improved. Officers can now move, swivel, tilt and tip the keyboard into a position that is perfect for them. No more bending, twisting, leaning or reaching, which leads to back and posture issues. These ergonomically designed keyboards reduce wrist drop, are water-resistant, and are dirty car partner resistant (they can be wiped down and sanitized). [iii] These specifications align perfectly with Man & Machine's "Fit for Purpose" solutions, such as our So Cool, or Very Cool keyboards.

Emergency Medical Services (EMS) use cases create yet another layer to consider. Not only do computers and peripheral devices need to integrate into the vehicle cabin seamlessly, but they must also be able to withstand harsh cleaning procedures to ensure the environment is sanitary for EMS personnel and patients. [iv]

The So Cool keyboard from Man & Machine is designed to be used with standard AMPS or VESA mounting systems and can easily be removed from the mount to place on the driver's lap. The backlight can be adjusted for comfort in any lighting conditions. Typing, even while wearing gloves, is effortless. The sealed oil-resistant waterproof design can stand up to typing with gun oils on your hand, and there is no worry about spills of any fluids, dirt, or crumbs hurting this keyboard. The So Cool keyboard is also completely sealed. It can be terminally cleaned and disinfected using industrial cleaners. Its IP 64 rating means bodily fluids and other bio-load cannot get inside this keyboard. Its integrated track pad saves valuable space inside the cabin of the vehicle.

Call Centers need Answers

911 operator-dispatchers have one of the hardest jobs in the world. They must pick up a phone and talk to someone in the middle of serious trauma—both soothing them and extracting necessary information—while coordinating one or several police, fire, and health departments to arrive on the scene ASAP. An operator may be using half a dozen pieces of unrelated software across three to six computer screens, using multiple keyboards, and mice, while simultaneously manning a radio to connect to help on the ground. [v]

Cities across the United States are struggling with a growing public safety problem of a shortage of people willing to work high-stress jobs answering 911 emergency calls. The problem is taking a toll on emergency operations, as short-staffed teams work overtime shifts in a scramble to make sure there's enough dispatchers to answer calls. Turnover costs cities tens of thousands of dollars to recruit and train new people. It also comes at a high emotional cost for dispatchers, who handle traumatic situations every day. Many cities are having an absenteeism problem among employees who run 911 dispatch or call centers. These are jobs that need to be manned 24/7. The causes for absenteeism include getting sick while at work. [vi] If one of your operators stays home due to a cold or the flu picked up from a shared keyboard, then that compounds the problem. If you have high absenteeism, it creates a vicious cycle where one person doesn't show up, and then another person must do mandatory overtime. That increases the frustration, burnout, and ultimately turnover as people quit.

Studies have shown that 11% of Public Safety Answering Point (PSAP) operators never clean their keyboards and 20% never clean their computer mice, and 46% sanitize their keyboard less than once per month. [vii]

PSAPs and related call centers have a very specific set of requirements for computer keyboards and mice.

- Is it disinfectable?
- Can it be cleaned at the workstation?
- Is it durable?
- Is it silent?

When the job is saving lives by quickly and accurately dispatching emergency services, you need more than an off-the-shelf keyboard. You need a silent, dependable keyboard that won't cause any auditory distractions. The Man & Machine Very Cool Keyboard offers superior flexibility with a washable design. This full-sized keyboard is the perfect complement to infection prevention protocols. Featuring the familiar tactile feedback of a standard keyboard, the Very Cool can be rinsed, sprayed, and wiped without damaging the sealed electronic components.

Pair the Very Cool Keyboard with the Very Cool Fitted Drape for an added layer of protection (from germs, debris, and pathogens) and a one-wipe clean. The Very Cool Fitted Drape, available in five colors (Hygienic White, Black, Red, Blue, and Yellow), can be cleaned and disinfected with standard hard-surface cleaners, allowing your people to show up and get the job done.

Contact us now at 301.341.4900 and mention this whitepaper or visit our website (www.man-machine.com) for more information about our washable keyboards and mice, and disinfectable silicone drapes from Man & Machine.

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About Man & Machine

Man & Machine, Inc. is a privately held company founded in 1982 and located in Landover, Maryland. The company manufactures Medical Grade™ keyboards and mice for hospitals and healthcare applications that can be properly cleaned and disinfected to help prevent the spread of bacteria and infections. Man & Machine also installs privacy filters and vinyl wrapping for point-of-sale advertising and identification on LCD monitors. Man & Machine has offices in Buffalo, Chicago, Idaho, the Netherlands, Taiwan, and China.

[i] Kun, A. L., Miller, W. T., & Lenharth, W. H. (2004). Computers in police cruisers. *IEEE Pervasive Computing*, *3*(4), 34–41. https://doi.org/10.1109/mprv.2004.3

[ii] Worley, S. (2024, July 26). *What is a police car laptop mount, and how does it help?*. Getac. https://www.getac.com/us/blog/police-car-laptop-mount/

[iii] Lee, J. (2020, October 29). The technology recruits expect to find in police patrol cars. Police1.

[iv] ii

[v] Willson, M. (2021, March 22). Inside the High Stakes World of Designing for 911 Operators. https://www.fastcompany.com/90617212/inside-the-high-stakes-world-of-designing-for-911-operators

vi   Bloomberg. (2020, January 15). How Behavioral "nudges" Can Reduce Burnout Among 911 dispatchers. https://bloombergcities.jhu.edu/news/how-behavioral-nudges-can-reduce-burnout-among-911-dispatchers

vii *3 Steps help PSAPs Beat Cold and Flu call-outs*. Watson Consoles. (n.d.). https://www.watsonconsoles.com/blog/3-steps-help-psaps-beat-cold-and-flu-call-outs