

Jesse Ross

VTD 404: Human Machine Interface

Dr. Rodger Lew

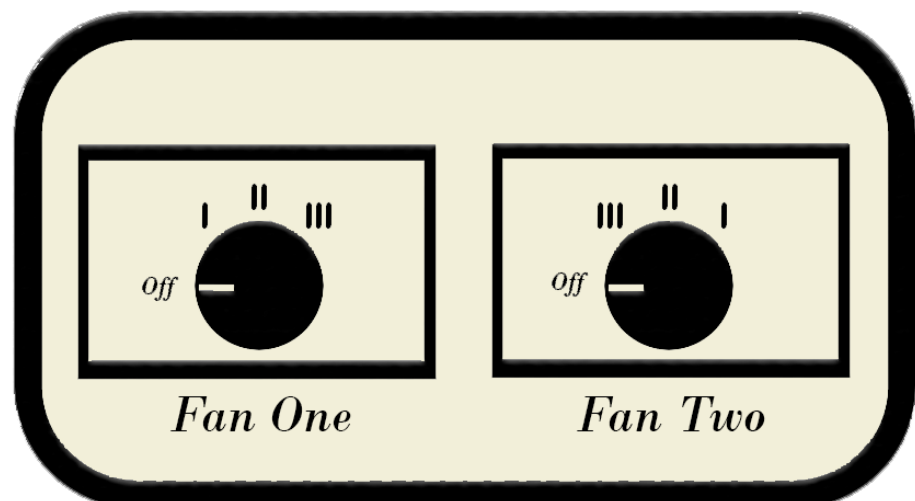
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Evaluate A Bad Design: The Common Desk Fan

Many of us humans rely on everyday items that we, whether we choose to or not, allow to saturate our lives. It is common, in North America, to have a cooling device in your dwelling; regardless of your geographic location. Once more common, many people choose to have an additional fan in the places where they work, play, and sleep. A fan is an extremely useful device that satisfies a group of needs without ever changing its original function! There is, however, one issue: the control knob.

A discussion we had in class regarding the control knobs in automobiles convinced me that I must critique the issue of the common desk fan. As previously discussed, a control knob is understood by the common people to function in three ways. The first two, being an inverse of one another, increase or decrease the value of the targeted parameter concerning the absolute range of the units in question. The third function, while not always present, enables the control knob to be pressed inwards. Executing this function usual enables or disables the first two functions outright. Today, I am focusing on the first two functions of the control knob that is used to control the desk fan. It is noted that this focus may also apply to a box fan's control knob.

Let us take, for instance, that you have just gotten home from work, have tended to yourself, and are now laying down for sleep. You reach



over to the fan on your nightstand and twist the control knob of your fan in the clockwise direction. The knob shifts once, and suddenly you are hit full blast in the face as opposed to a nice gentle breeze. If you or a loved one has experienced this: my feelings go out to you. Fortunately, there is an explanation as to why the day's dust is in your eyes.

After researching my questions, it was founded that Fan Two's control knob far outweighs Fan One's control knob in terms of quantity. I argue the reason is due to the efficacy of the product the knob controls. Assuming both of these nobs control desk fans, and that both of them are spun by a motor; Fan Two would last much longer AND cost less to use than Fan One.

The reason behind this pertains to the healthy use of an electric motor. Initially, the motor's capacity must be at maximum before the speed can be adjusted. Therefore, for the fan's actual speed to reach, let's say, a third of the motor's maximum capacity; you must turn the fan to full power before reducing the speed of the motor. When comparing this to a control knob in an automobile (volume, A/C, heat), none of them function like Fan Two's control knob does, yet Fan Two's knobs are industry standard for small motor appliances. A vehicle's appliances function this way because human factors dictate this to be the default understanding of a control knob. So why is my bedside knob any less important?

In all honesty, the most frustrating part is that I would rather have a more convenient appliance than a slightly more efficient appliance. Yet if I were to weigh these on a scale: the change in convenience versus the change in efficiency; I can imagine the benefit of the fan lasting longer would outweigh not having to make two more clicks clockwise.

