

Do it yourself guy builds train detector to automatically shut bedroom window

September 16 2011, by Bob Yirka



(PhysOrg.com) -- In a nice display of can-do thinking leading to positive action, a guy by the name of Ed Rogers has devised a device that automatically shuts the window in his bedroom whenever a train passes by, reducing the noise significantly. He has posted a video on YouTube explaining how he did it.

To start out, Rogers first installed a linear actuator (a [mechanical device](#) for moving an object) connected to a part he printed off using [MakerBot's](#) Thing-O-Matic, which was then connected to wires that

snaked around to just next to his bed, enabling him to flip a switch to shut the window. But that he found, wasn't quite enough, as he explains, the trains pass by (at very slow speed) at all hours of the day and night. Thus, he needed something that would "see" the train coming and close the window for him automatically, so that he could continue on with sleeping unabated.

To make that happen, he installed a web camera in the window which he connected to a master controller comprised of an [Arduino](#) (prototyping platform), a communications board he put together himself and a bridge to even the voltage between the Arduino and the actuator.

Watching the video, it's clear the end result is quite impressive. As a train pulls up outside, the window starts moving, from one side to the other till it closes completely, effectively damping the noise from the train, making things much quieter in his bedroom.

The problem with posting such a video though, is everyone who watches it will not only have comments on what was done, and how they gauge the results, but ideas for how it might have been done better, or how it might be improved. Particularly other electronics wiz types who wonder why he didn't for example, use a microphone to capture the noise of the train instead of a web cam, or who think that if he'd used some sort of other drive train he could get the window to close much faster.

Still, the video demonstrates the technology leap that has occurred over just the past decade or so and how it's being used by inventive people all over the world in innovative ways, and also how people are using social media technology to share their findings with everyone else.

More information:
via [Technabob](#)

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