

Problem Statement

Design and develop a creative and innovative product for a particular commercial building that must run on 24 volts of DC power and 100 watts.

Mission Statement

Product Description: *A new and innovative idea was to plug in speakers and administer a wireless PA system.*

Target Market: *Commercial buildings for mostly schools but could also be used in a hospital or office.*

Product Positioning: *Our product brings environmental cultural and economic benefits.*

- *The use of DC power saves energy and thus the environmental.*

- *The cultural aspect of our design is the fact that it is a new innovative product in the current.*

- *Our product is also economical because it is reasonably priced and uses minimal electricity.*

Key Design Features: *Structurally capable of being suspended from the ceiling*

- *Wirelessly connected to the computer control system.*

Goals in Design: *To attach with upmost stability*

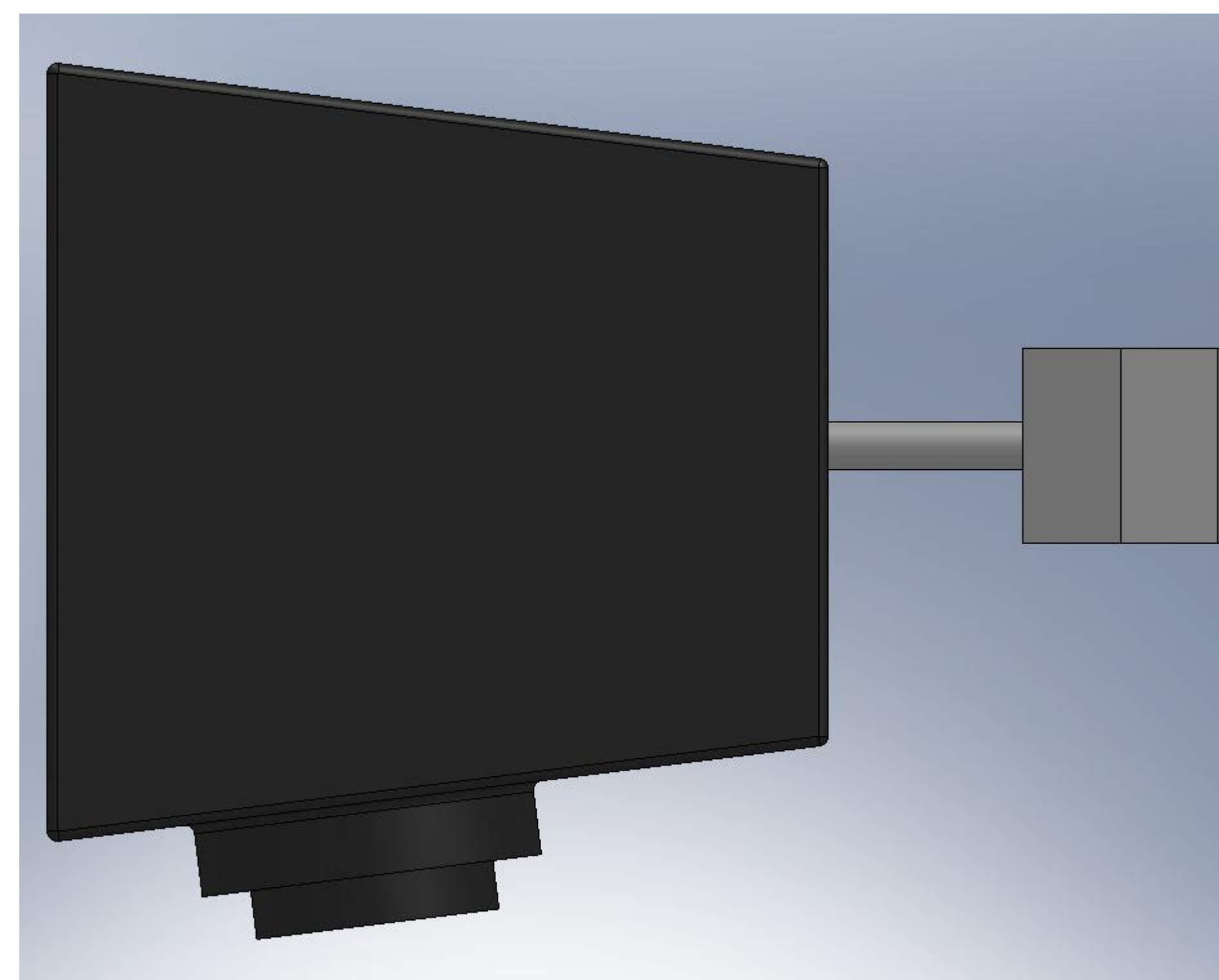
- *Easy to sync to one another and to computer control system*

Customer needs

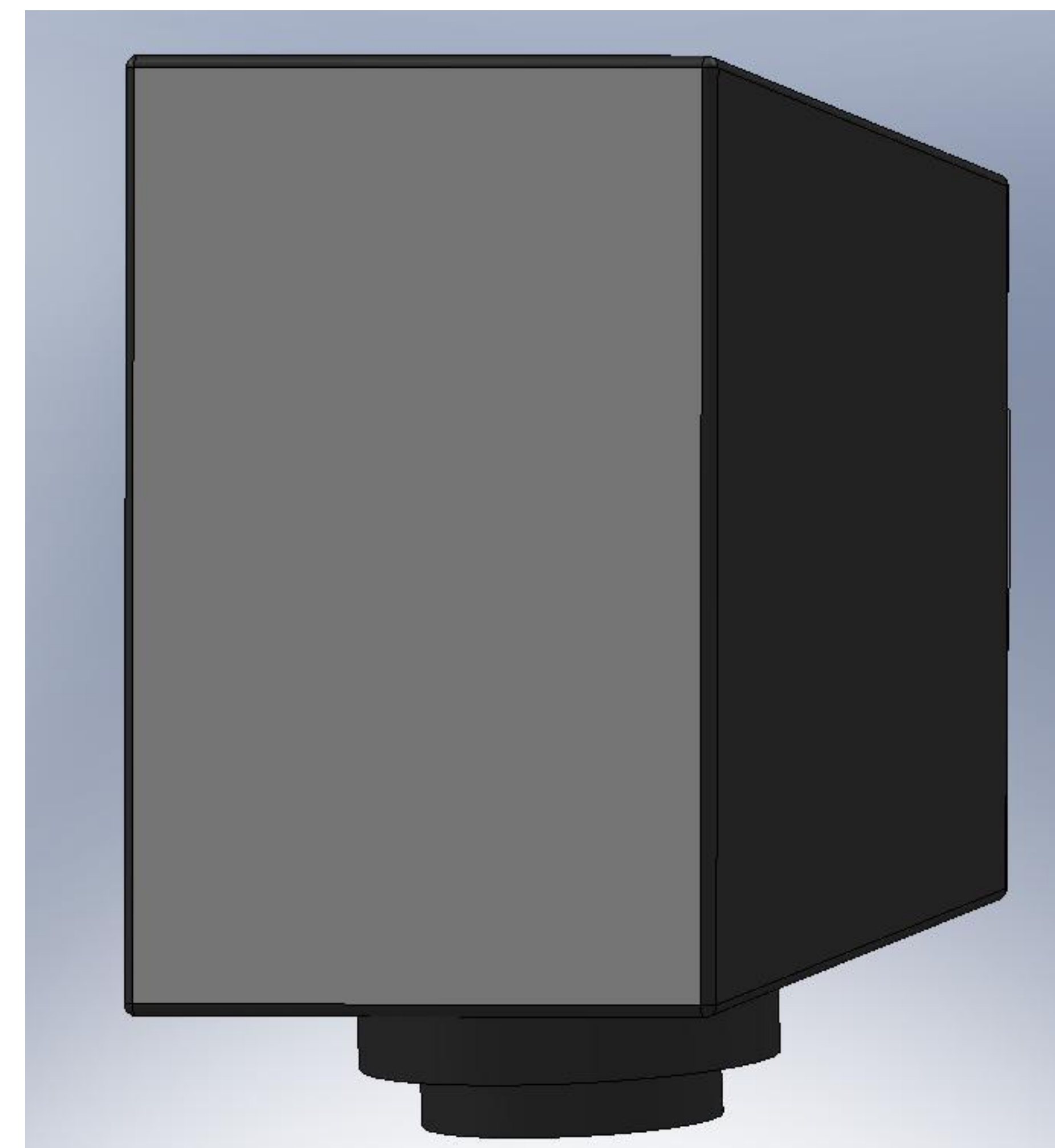
- *is safe*
- *is innovative*
- *runs on 24 volts*
- *has commercial applications*
- *must be based off known technology*
- *must be manufactured in short term*
- *must be environmentally friendly*
- *is secure*
- *is audible*
- *is easy to use*
- *is wireless*
- *must be less than 32 pounds*

Final Specifications

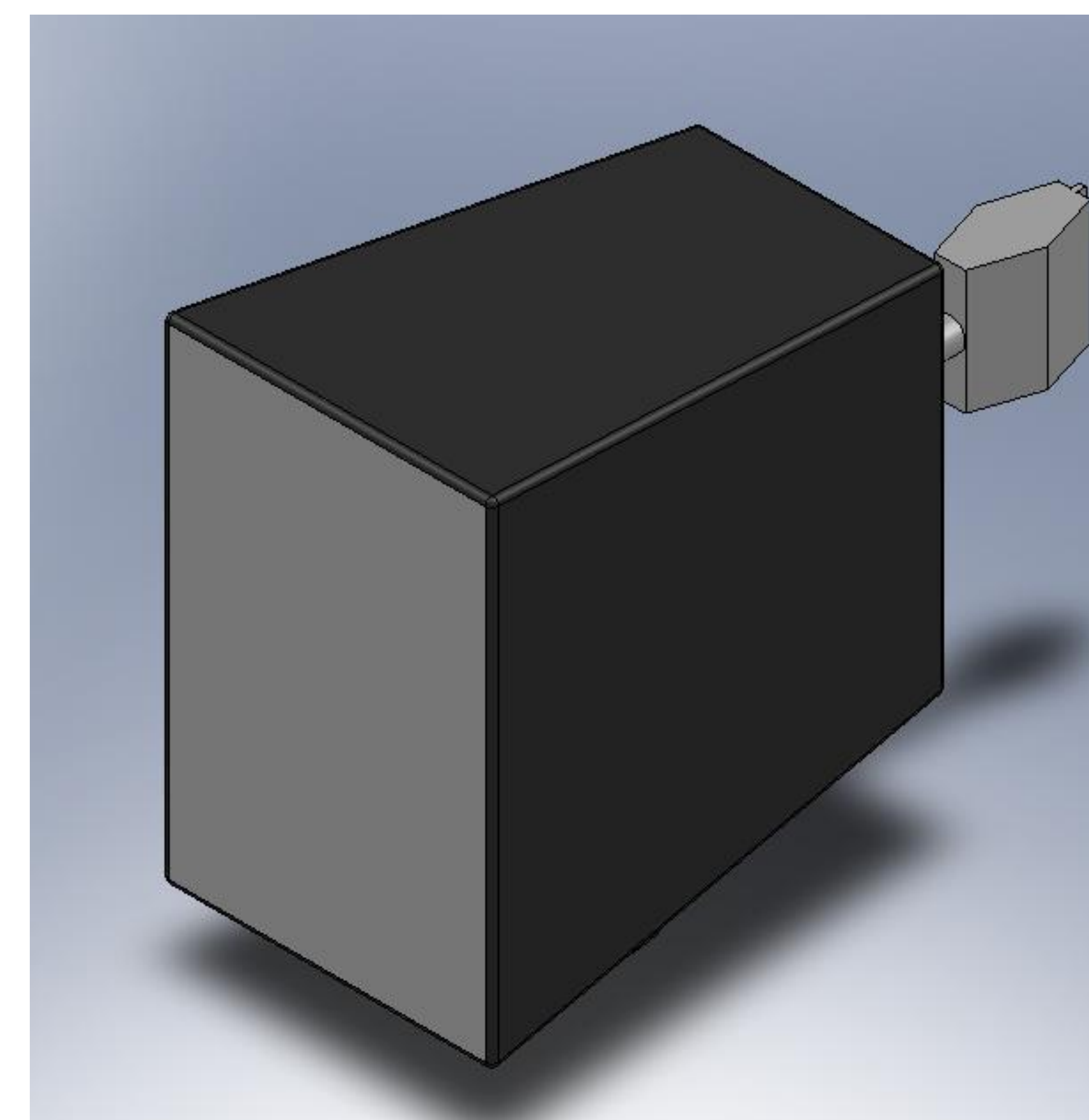
- *Safe and easy to install and use*
- *Use existing tech. in a new way*
- *Measure Voltage*
- *Usage in variety of buildings*
- *Projected length of manufacturing time*
- *Potentially recyclable*
- *Number of people able to gain unauthorized access*
- *Loudness*
- *Functions wirelessly*
- *Weight*



Final Design



After coming up with 6 concepts and scoring them, our final design was our concept 1 which included black with mesh protector, functions wirelessly, smoke detector, voice recognition security and a desktop microphone.



Abstract

Armstrong came up with new suspended ceilings in which they run DC power through them and products that are 24V are able to be plugged into the beams to be powered. Our mission was to come up with an innovative new application to use in the ceilings of a commercial building.

We thought about the different buildings and since we are in school we thought about doing a high school. We thought about the different technologies that schools use and we thought about a PA system because it's popular in a lot of schools and it's installed in almost every room. We thought about being able to plug the speakers into the beams and running the PA system wirelessly through software on a computer. Our final product is a speaker that has a built in smoke detector which sends a signal back to the computer which can tell where the smoke is being detected.

Contact information

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