

Water Level Measurements Using a Laser and a Photodiode

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A device was created to detect water levels in local sewers using a laser and a photodiode. This device could be used to inform the city, during a storm or water leak, the status of the water levels in the sewer system before it floods. There are many methods to take water measurements including ultrasonic waves and radio waves. A laser flag was engineered using a photodiode, a laser and a 1" lens to focus the reflection of the laser into the diode. To test the device, various methods were employed. Clear water was used first in order to standardize the experiment and later other solutions were mixed to simulate sewer conditions. In addition, the lighting environment was altered. Further testing would include work on a receiver, transmitter system and user interface as well as cost analysis.



Delmar Domino is majoring in Electronics Engineering at Maui Community College. He is also in the Air National Guard and has a job in the communications field. He was in JROTC all 4 years of high school and held certain leadership positions. Delmar enjoys playing sports, staying active and is willing to learn new things.