
Topic this week. Floating Platforms. Portfolio

Detailed design of floating scatterers. First pass using Tea Light candle wax and the aluminum tea light holder as a mold is below. No battery included, and it takes 5 to 6 volts. Also, with the enclosed prototype board and all through-hole parts, it is just less than neutral bouyant...it sinks slowly. But the electronic/microwave part works, it draws 840uA from a 5.0 volt supply.

Wednesday this week we will do water tank testing using the portable system.

The Midterm exam is next week. There will be three problems:

1. Nearly identical to the homework problems you have already done, where you are given two distances, a size of the scatterer, antenna gain and/or effective area etc. and are asked to calculate the signal to noise ratio at the receiver.

2. Given a block diagram of the system, you will write a paragraph describing what the modulated scatterer does to make it uniquely detectable at the receiver.

3. Write one page, with perhaps sketches, describing your contribution to the class project.

The exam is 2 hours, in class, no notes, reference materials or calculators. Format is an opportunity to demonstrate your understanding of this material to an interested, outside party, as if in a technical interview.