



Tech Biz

Office of Technology Transfer and Commercialization

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GEM Power Demonstration is Just the Ticket for Redlands PD

Using a novel technology that lets batteries “pull” a charge on an as-needed-only basis from another direct current power source, Redlands firm GEM Power LLC has passed a rigorous field trial with the Redlands police department. GEM Power provided three prototype charging units to Redlands PD and over a 30-

day period officers used the chargers in their squad cars and in the station to keep their portable radio batteries reliably charged at all times.

According to Redlands police Lieutenant Bill Cranfill, “This new charging system

is rugged, reliable, fast and even looks like it will add to battery life, because it never over- or undercharges. Our officers now want units in all our squad cars.”

This compact DC-DC unit can be mounted in police and fire vehicles and can charge a variety of electronic gear carried by the first responders, using the vehicle’s battery as the source.

The “Intelligent Battery Charger” works by adding a computer chip and a sophisticated software program that pro-actively checks the battery every two seconds to check on its condition and provide additional charging as needed. Rather than having the charger “force feed” the battery, the GEM Power system lets the battery itself control how it’s charged. This typically results in several key benefits: (1) charging is faster, up to twice as fast as with so-called “rapid chargers”; (2)

batteries never get either overcharged or undercharged; and (3) as a result of the perfect charge level, batteries last up to three times longer than with traditional rapid chargers or trickle chargers.

Lunar Rocket Almost Ready to Blast Off!

All payload recovery system tests have been completed successfully for Lunar Rocket and Rover. The final “Decelerator” which will bring the payload back from 27 miles up has been assembled. As this issue of TechBiz goes to bed, one booster stage test for the rocket has been held, using the new 55° launch angle mandated at Cape Canaveral that effectively reduces the maximum altitude from about 50 miles to 27 miles. This will also increase the heat, as the entire mission will take place in thicker atmosphere.

The final launch window should be opening soon, and OTTC will announce this on our Web site as soon as we have the information. The payload will now splash down even farther from the Cape than was originally planned, and could well end up within the mystery-shrouded area of the Atlantic Ocean known as the Bermuda Triangle. Stay tuned!



A few of the over 500 sixth (L) and eighth (R) grade Oak Middle School students who worked on the Decelerator that will be launched from Cape Canaveral and recovered near (or in?) the Bermuda Triangle.