Rural Startup Creates Innovative First Down Marker with AU EDA Assistance

Victory Game Clocks, located in Roanoke, AL, designs and manufactures electronic products for professional, college and high school sports – primarily, portable digital clocks and scoreboards for football and basketball practice fields, coliseums and stadiums. The uniqueness of the clocks are the innovative wireless controllers that are designed to provide ease of operation, greater reliability and mobility.

With a history of sports equipment innovation, VGC created the concept of a LED (Light Emitting Diode) version of the Down Marker used on the sideline of a football field. The marker shows the down and the yard line the football rests on, to the stadium attendees. Currently, football Down Markers use a hand-held pole with a sliding plastic window on top of the pole with painted numbers to show the yard line location and display the next “down” – 1st, 2nd, 3rd or 4th down. Existing Down Markers use numbers that are painted onto the plastic or metal plate and are manually “flipped” when the down changes and can be mechanically unreliable.

Since VGC already makes electronic circuit boards for their digital game clocks, it was a logical conclusion that they could manufacture a digital football Down Marker with LEDs controlled with electronic circuit boards. The challenge was it didn’t exist! Could the new sports equipment be built light enough for a person to run up and down the sidelines of a football field, could it be equipped with light-weight batteries that would last throughout a football game and could the LED lights be seen from the upper decks of a football stadium and could it be manufactured and sold at a competitive price?

Through program marketing efforts, Hutch Hammond (Vice President of Operations, Victory Game Clocks) heard about Auburn’s EDA University Center program and discussed its needs with he program’s director, David Mixson. The project was a great fit for the program’s mission and a meeting followed with the Director of the School of Industrial and Graphic Design. The concept was given the green light to become a class project (Studio Project) for Professor Randall Barlett’s Industrial Design INDD 3120 semester class.

Initially, 16 students created over 100 potential designs which were whittled down to 8 designs after research and interviews with assistant football coaches and referees. At the end of the semester, the 16 students in teams of two, created 8 prototypes identifying the specific materials and expected costs to be used in production. Hutch Hammond was able to find material and parts suppliers and make some display units. VGC has begun selling the digital units and they have been featured on ESPN during the 2016 college football season. Mr. Hammond stated that “he thought he was an Auburn University fan before participating in the studio, having met David and spending time with college students and seeing the fantastic work they do, he’s an even bigger fan!”