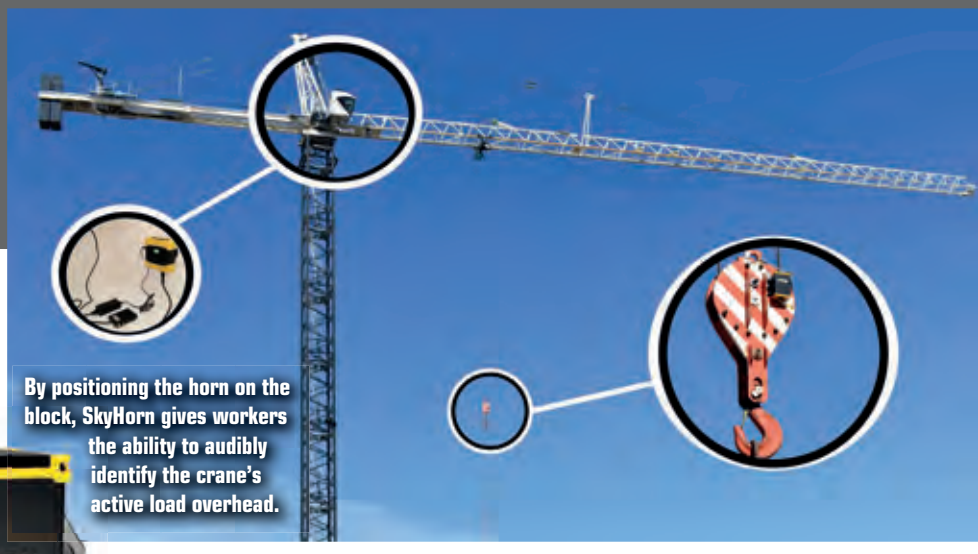
Sound the alarm

A crane warning horn that is attached to the hook-block, SkyHorn offers a new approach to jobsite safety.



By positioning the horn on the block, SkyHorn gives workers the ability to audibly identify the crane's active load overhead.

From the operator working in a tower crane cab 20 stories in the sky to iron workers securing steel girders at height to riggers working on the ground, communication is a critical factor in jobsite safety.

Crane warning horns have long been an important tool in warning workers of impending hazards. Traditionally, crane warning horns are located at the operator's cab.

Robert Burke, founder and CEO of SkyHorn, has developed a crane warning horn that attaches to the crane's hook block, which he said is an optimal location for warning riggers, workers and bystanders of the crane's overhead load position. Burke identified major problems with horns located near the operator's cab.

First, the distance of the physical horn is far from the active load. It's difficult to hear a horn due to the distance and compounding noise. Even when the horn is heard, there's no way to audibly determine the location of the load on the hook. This presents a communication flaw and a scenario of ineffective warning.

While whistles can be a form of increasing awareness, they are not in the operator's control. Whistles can cause everyone to stop their work, but they do not effectively warn workers of what's overhead.

"We believe the operator's control of the horn, through the use of a foot-pedal, is more effective at communicating warning at the load position," Burke said.

By positioning the horn on the block, the SkyHorn gives workers the ability to audibly identify the crane's active load and overhead throughout the day," Burke explained.

Family heritage

Burke's interest in construction safety comes from his family heritage. He proudly hails from a three-generation concrete construction family.

"By leveraging our history and knowledge of the industry we came to the idea of SkyHorn," he said. "My brother, a tower crane operator, wanted a way to alert workers and riggers on the deck of his crane's load position. From this, we began testing."

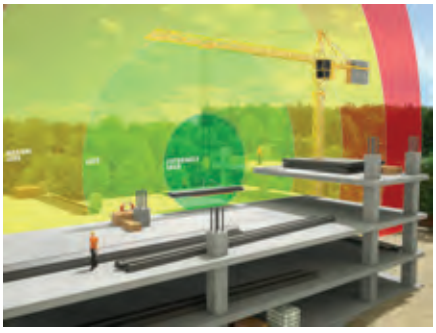
Testing the SkyHorn was an important part of product development. It was tested on more than 25 cranes and 15 jobs within the Washington D.C. area. The goal was to develop a product that was safe, simple to use and install, have a long battery life and to be cost effective.

"With high praise from operators, foremen and safety personnel, we began to supply contractors for testing and feedback," he said. "This process highlighted further areas of concern. For example, the work deck can be chaotic with material and littered with operator blind spots. In addition, workers on the deck are task focused with their attention often being in front of them or downward on their task; this leaves little time and ability to be aware of what's happening overhead. Next, from the crane operator's viewpoint, there is a hazardous blind spot that occurs below the load and obstructs his view of what, or who, may be under the load. SkyHorn is effective in alerting in these situations."

There are also jobsite obstructions, from the perspective of the operator: columns, shear walls and the leading edge create a hazardous situation for workers to walk out from behind or from underneath these obstructions while the load is hoisting down, due to the load-blind-spot or the obstructions causing a blind spot, Burke explained. SkyHorn can also reduce the time a load hovers overhead, Burke said.

"While there should always be a rigger in position to guide a load down, sometimes the operator must wait or radio for a rigger to tell him the load is, in fact, overhead," Burk said. "This creates a dangerous and unproductive hover-period. SkyHorn makes it possible to alert those underneath to bring the load down and improve jobsite workflow."

While the SkyHorn is applicable to tower crane operations, the product can be used effectively on crawler cranes, rough terrain cranes, gantry cranes and quay side container cranes, the company said. ■



The diagram shows the SkyHorn's impact on audible awareness on a jobsite.