

Blind-Drivable Vehicle Demonstrated

EAO Corporation, a leading global supplier of Human Machine Interface (HMI) Components and Systems, was featured in NBC Today Show coverage of the NFB Blind Driver Challenge highlighting the development of the first full-sized blind drivable vehicle. The specially outfitted vehicle involved in the highly technical challenge was TORC Robotics' ByWire XGV, a roboticized Ford Escape Hybrid with integrated emergency safety systems, featuring EAO's Series 84 Emergency Stop (E-Stop) switch.



The National Federation of the Blind (NFB) challenged research universities and technology companies to design a car that would allow a blind person to drive with the same freedom as a sighted person. To meet this challenge, researchers from Virginia Tech's Robotics and Mechanisms Laboratory (RoMeLa) partnered with TORC to adapt its ByWire XGV, a mobile robotics research platform, and some of its advanced perception and navigation technologies to work with its non-visual interfaces: the DriveGrip and SpeedStrip. With the help of RoMeLa's vibrating gloves and seat pad, the driver receives instructional cues as to how to operate the vehicle. The driving decisions that a typical autonomous vehicle would carry out by itself were instead communicated to the blind driver, through the non-visual interfaces, who has full control over the vehicle and made all active driving decisions.

With safety being paramount in such a challenge, TORC's integrated SafeStop wireless emergency stop system, which provides remote pause and disable functionality, is used to safely bring the vehicle to a controlled stop at the push of a button. Manual stop buttons are also mounted inside and outside the vehicle for additional safety, as well as the SafeStop's handheld transmitter unit. EAO's Series 84 E-Stop switch was selected for this critical function.

Series 84 E-Stops offer a unique low back-of-panel depth at just 19 mm maximum, possible illumination, single "mono-block" construction, and a twist-to-release actuator. These product attributes allow for greater flexibility in applications ranging

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from handheld pendants to machinery and medical equipment. EAO's Series 84 E-Stops are rated at 3A 120VAC and 1.5A 240VAC, and are protected against oil and water to IP 65 standards. Series 84 E-Stops meet international safety specification ISO 13850 and comply with EN IEC 60947-5-1 and EN IEC 60947-5-5 requirements.

For more information on the blind drivable vehicle, and to see EAO's Series 84 E-Stop in action (at 3:26), please view the Today Show clip:

<http://today.msnbc.msn.com/id/26184891/#41934725> [1].

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