Project Case Study No. 29

SmartGlass drives in Top Gear…

Top Gear Live is a live arena show of the award winning TV program Top Gear. The live show features breath-taking stunts, remarkable special effects and epic driving sequences. The live show is home to an array of pyrotechnics, a bombardment of noise and a spectacle of motoring.

A collection of the finest cars from all over the globe grace the arena floor. Jeremy Clarkson, Richard Hammond and James May host the live show with their cheeky approach to motoring and humour whilst some of the world's best precision drivers perform awe-inspiring stunts live in the arena.

"This show is like nothing we have done before. It will have some very very special, special effects," Jeremy Clarkson.

Ever since it made its live debut on the World Stage in 2008 Top Gear Live has been seen by over 1,000,000 fans and is continuing to push the boundaries of car theatre.

Top Gear Live 2010

For the 2010 show, Top Gear producers wanted to create the ultimate car to star in the finale of the live show. After much debate regarding model, materials, specifications etc. they decided on an almost impossible concept.

"A car will come out and become invisible" Richard Hammond.

The producers were faced with a problem. How would they design a car which could change state instantly and give this magnificent illusion? What type of materials would allow them to create this?

It was decided that a switchable glass would be used to make up the bodywork of the car which could switch on and off simultaneously giving the effect of changing visible/invisible states.

The interior of the car was visible when in its clear state showing the famous "Stig" and his female sidekick; when the glass switched to its "invisible" state the passengers could not be seen.

Client: Top Gear Live Shows
Operator: Sub Zero Events
Show Schedule: 2010/2011

SmartGlass International

SmartGlass International was approached to quote this project at the early design stages and to investigate whether the concept would be viable.

SmartGlass International is the leading worldwide manufacturer of electronically switchable glass and provides the perfect solution to this design problem. SmartGlass can be used in almost every glazing application as it is available in a number of different shapes and can also be curved making it suitable for a range of different applications specializing in the hospitality, healthcare and commercial sectors.

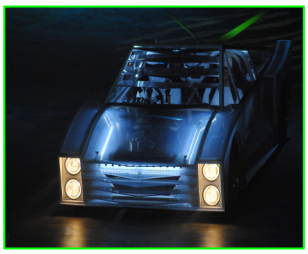
LC SmartGlass

LC SmartGlass is one of the trademarked electrochromatic glass products available from SmartGlass International.

LC SmartGlass panels are bespoke manufactured using a lamination process which encapsulates a PDLC film between 2 or more glass sheets. When a minute electrical current is activated, users can immediately switch the LC SmartGlass from clear to private (opaque) and vice versa precisely meeting the proposed design brief.

In this case, polycarbonate replaced traditional glass to make up the panels. The panel sizes were much smaller for this application than usual and required much more detailed wiring so that each individual panel would switch at the exact same time on the car. Another design problem would be the convertible roof feature which would be manufactured entirely of SmartGlass.

This was a challenge for the SmartGlass team, but through careful testing of the materials they found the ideal solution. The panels would be aligned and connected in such a way to allow the roof to lift up without the connection being lost so that the panels would switch simultaneously during this particular action scene of the show where the roof rises up to release a passenger from the car. A similar system is used when fitting SmartGlass panels into a folding door system.



SmartGlass International is thrilled to work on such a remarkable and exciting project.

Visit SmartGlass International online to view all of the latest projects and subscribe to the monthly SmartGlass newsletter.

Contact us: info@smartglassinternational.com
www.smartglassinternational.com