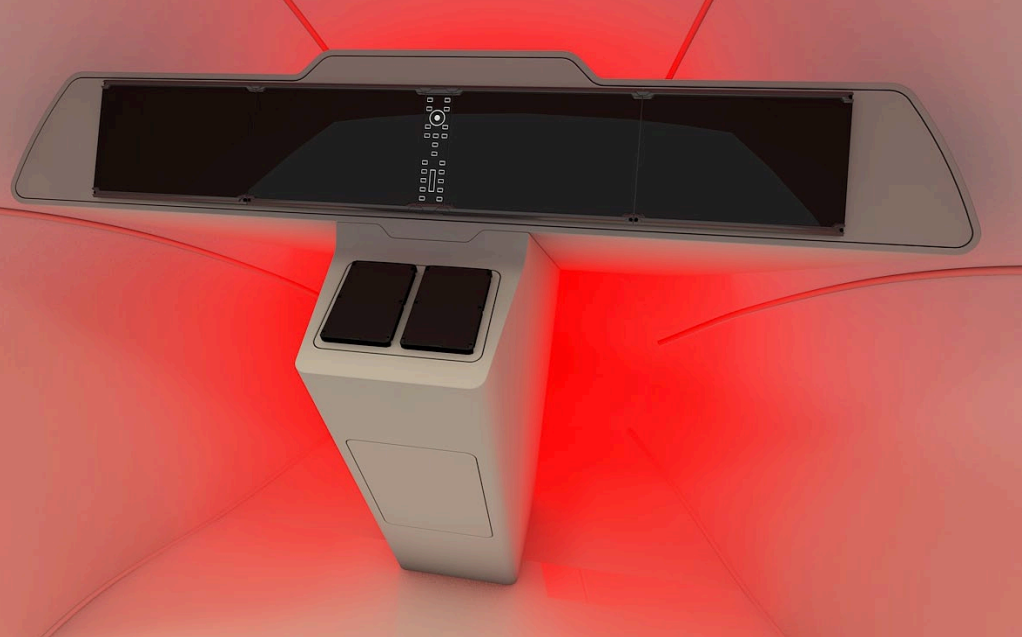
Touch the future

Concept of a multi-touch cockpit

Barco presents a revolutionary prototype cockpit display, showing what we believe future cockpits can look like. The concept revolves around one composite, flush glass display, and two stand-alone control units with a multi-touch screen, to replace the multitude of displays present in cockpits today. In this way, Barco seeks to reduce the complexity pilots are currently facing, thus improving aviation safety.

BARCO

Visibly yours



Technical specifications:

Touch LCD displays in flush setup

- Size: 15.4" size (16 x 10 aspect ratio)
- Resolution: WSXGA+ (1680x1050)
- Touchscreen technology: projected capacitive touch
- Single and dual-touch gestures: single click, long press, double click, drag, two-finger pan, pinch
- All interfaces of panel assembly: optimised to have minimal display reflectance
  - Rspec = 0.6%
  - Rdif = 0.10%
  - HAC (150 fL) > 6.5 (@2,000 fL / 10,000 fC)
- Hand stabilisation by means of mechanical ridge above/below display area
- Compatible with (thin) aviation gloves

Touch Screen Control Unit

- Size: 6.75"
- Display resolution: 800 x 480 pixels
- Video interface: DVI
- Touchscreen technology: projected capacitive touch
- Touchscreen communication interface: EIA-422

The full touchscreen cockpit

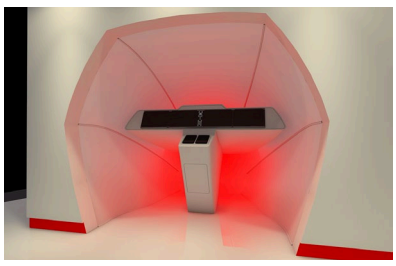
The design of the new cockpit display focused on two main pillars: revolutionize the input interface as well as the display concept. The idea that Barco's avionics R&D team and research partner Delft University of Technology (TU Delft) came up with is to develop one large unified iPad-style screen with a unified multi-touch display, which allows a more intuitive operation. The concept comprises four bright Liquid Crystal Displays (LCDs) in a flush design. The displays are equipped, top and bottom, with fingerrests to provide the hand with extra stability to operate the touchscreen under turbulent flight conditions. Complemented by Barco's Touch Screen Control Units (TSCU), this means the complete cockpit is equipped with touch screen technology. As a proven technology in aircraft, LCD displays ensure high brightness and excellent contrast images, even in direct sunlight.

The smart version of the displays will come complete with Barco's unique Modular Open System Architecture (MOSArt). MOSArt, a unique asset of Barco's avionics displays concept, allows integrators to implement their own applications, such as synthetic vision enabled primary flight, navigation, engine monitoring and flight management applications, on the Barco platform.

Reducing complexity to raise safety

Barco's concept, which is inspired by popular touchscreen tablets, provides pilots with a complete overview of all the information they need, with just the touch of the finger. Unlike today's cockpits, in which pilots need to control and monitor several displays and then piece together the data to get a real-time picture of the situation, the intuitive operation of the touchscreen helps raise the efficiency of the pilot and co-pilot and, consequently, enhances safety. This vision fits perfectly with Barco's mission to find solutions that help pilots fly safely to their destinations.

Barco will present the concept, which was realized as part of the European ALICIA project, at the 2012 Farnborough International Air Show and then fine-tune it, based on feedback from cockpit integrators. The display is planned for introduction in civil aircraft, in the first instance, via cockpit integrators. Certification is planned at a later stage.



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