



Durability of Interactive Whiteboards The Full Story

May 2011

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INTRODUCTION

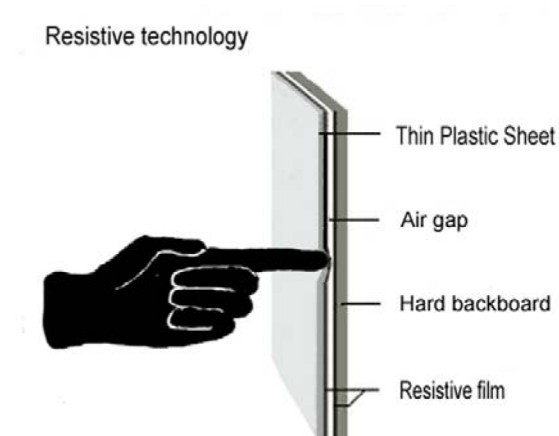
eInstruction offers interactive learning solutions that utilize electromagnetic technology, which provides the greatest set of features and benefits relative to competing technologies. Electromagnetic technology is used in the development of eInstruction's Dualboard™.

The features and benefits of eInstruction products are described below to assist those making decisions about purchasing interactive learning technologies.

TWO TECHNOLOGIES AVAILABLE

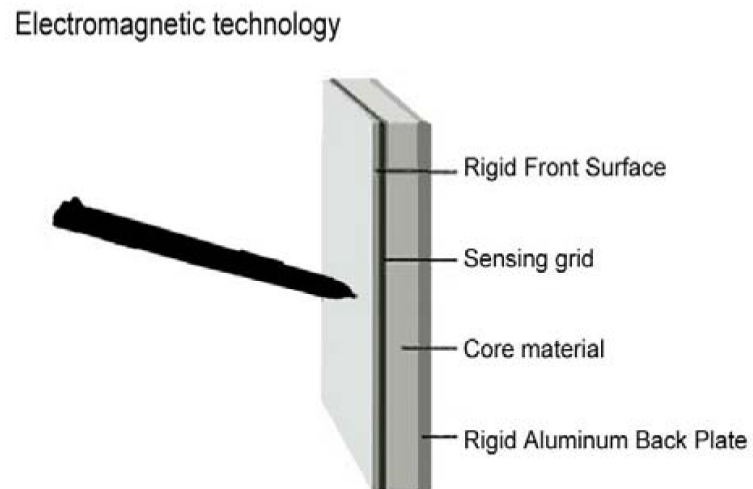
Currently there are two mainstream technologies available for interactive whiteboards. This information is intended to explain the differences between the two technologies and explore the question of durability in depth.

“Soft” Interactive Whiteboards (Touch Sensitive)



Soft boards use resistive technology to detect the presence of an object on the board. A thin sheet of plastic is spread over a backboard with a small air gap between the two layers. The back of the plastic sheet and the front of the backboard are coated with resistive film. When a finger or any other object is pressed against the thin plastic sheet, the sheet moves back to make contact with the backboard. This contact between the front sheet and backboard is sensed and processed as a position on the board.

“Hard” Interactive Whiteboards (Electromagnetic)



Interactive whiteboards that use electromagnetic technology are manufactured by mounting an electrical grid between a rigid whiteboard surface and an aluminum back plate. A battery-powered pen interacts with the electrical grid to produce very accurate horizontal and vertical coordinates at any point on the board.

For a detailed comparison between the functionality of touch sensitive whiteboards vs. electromagnetic whiteboards, see our white paper, [Resolution and Accuracy for Interactive Whiteboards](#).

NO MOVING PARTS

Soft whiteboards depend on the movement of the front surface to locate the position of the touch. Over time, this back and forth movement may cause the front surface to become relaxed and the whiteboard’s ability to record accurate measurements may degrade.

In contrast, hard whiteboards, such as the DualBoard™, do not rely on the movement of the front surface to take accurate measurements. Instead, the position of the electronic pen is measured anytime the pen is brought within a few centimeters of the board surface. The front surface of the DualBoard™ is constructed of a rigid, melamine surface designed to withstand the rigors of the learning environment.

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HARD SURFACES ARE MORE DURABLE

Some manufacturers of soft whiteboards claim that their flexible surface is just as durable as a hard surface. Let's concentrate on the hazards that an interactive whiteboard might face in the learning environment.

Sharp Objects – Pens, pencils, rulers and scissors are the most likely tools to touch the front surface of the whiteboard. A hard surface will resist tears, scuffs and marks better than a soft front surface.

Impact Forces - Objects may strike the surface of the whiteboard and produce a large force. Since it doesn't easily deform, a rigid front surface will better protect the internal components of the electronic whiteboard.

DAMAGE CONTROL

For the sake of argument, let's assume that the front surface of an interactive whiteboard has been accidentally cut during use. The damage on a hard whiteboard will remain a constant size, since the front surface is made of rigid melamine. The performance of the whiteboard will not be affected.

On the other hand, a cut on the flexible front surface of a soft whiteboard will most likely grow worse as pens and fingers are pulled across the board. This will result in poor performance for that section of the whiteboard.

CLASSROOM CHALLENGES

The student environment is filled with frequent tests of an instrument's ability to withstand the "elements." By "elements" we mean the students. Sometimes purposefully....sometimes by accident, they put all educational equipment through the harshest of tests.

That's why you need to adopt a technology that is as robust and student-proof as possible. The Interwrite Board features a rigid front melamine surface that is optimized to reduce glare from a projector and to allow ink from dry erase markers to be easily erased. The rear panel of the DualBoard™ is a thick aluminum plate that provides extra rigidity to the entire board. Holding the board together are four aluminum extrusions that form the rigid frame around the internal components of the whiteboard. These carefully designed components work together to make sure your DualBoard™ provides many years of service.

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QUALITY ASSURANCE

High-value products have been the hallmark of eInstruction for over 30 years. We work hard to make sure that products reach our customers both ready to use and built to last. Here are just a few examples of the work we do to insure your investment in our products is maximized:

- The DualBoard's surface was developed with the help of chemists and material specialists to optimize performance in the learning environment
- Standard shake and vibration tests
- Standard drop test
- Materials used in the manufacture of the DualBoard™ must meet finish standards from ANSI/NEMA Publication LD 3-2000
- eInstruction® products are designed and manufactured under ISO 9001:2008 certification
- Each product is rigorously tested for accurate performance prior to shipping
- All eInstruction® products are backed at minimum with a full one-year warranty. Some products carry longer warranties. Please view the eInstruction® products on www.einstruction.com for further details.

THE CONCLUSION

We know that educational technology funding is difficult to find. That's why we build eInstruction® solutions to provide industry-leading durability. Whether you purchase the DualBoard™, rest assured that the resolution and durability provided by eInstruction® products will protect your technology investment for many years to come.