

by Alan J. Pierce, EdD

Cellphone Protective Cases

The student Egg Drop Technology Challenge requires technology and engineering students to build a system that will keep an egg from breaking when it's dropped from a considerable height. Manufacturers' of protective smartphone cases are all involved with this same kind of tech challenge. The difference is they are treating your phone as the egg.

At this year's CES I had a chance to see many of the newest designs that have been built to protect your phone. Here is a quick review of some of the best.

LifeProof (<http://www.lifeproof.com/en/>)

MSRP iPhone 5 nüüd case \$89.99

In my humble opinion LifeProof is still the best case to purchase to protect your smartphone from everything that life can throw at it. They make cases for just about every smartphone but, when this review went to press, they did not make a case for the Samsung Note II or III. The techies at LifeProof found out that many people didn't like placing their phone's screen behind a layer of clear plastic. So they designed a waterproof case where the screen is not physically locked behind a plastic shield. They call these new cases their nüüd line. See photo 1. Their products are so good that LifeProof was purchased by Otter Box, the waterproof case king, for an undisclosed amount of money.



nüüd for iPhone

Photo 1

Ballistic Cases <http://www.goballisticcase.com>

MSRP SG MAXX \$50.00, Jewel \$20.00

The engineers at Ballistic have built a line of cases that dissipate the g-forces that are created by a fall. When dropped most smartphone screens break when the fall ends with a corner hit. This happens because the g-forces generated by this type of fall cannot be dissipated over a large area. The Ballistic solution is called HexTec™. HexTec™ is not a material but rather an engineering design that provides six sided protection by placing shock absorbing materials all around your phone. As part of their system they added extra shock absorbing materials at all four corners of their cases. To protect the front of your phone, the HexTec™ design adds a raised lip to handle the shock of a fall where the phone lands flat on its face. I examined the company's SG MAXX and Jewel cases and

they both provided this all around type of protection. Both cases had the same HexTec™ design. The significant difference between the two cases was:

- The SG MAXX has a two layer protection system. The first layer is a full body soft silicone rubber covering. To give it a hard structure they added a partial hard polycarbonate external shell. See photo 2. This case includes a non glued clear plastic shield that will protect your screen from scratches. They indicate that it can protect your phone from a 7 foot drop.
- Their Jewel case is completely molded out of a harder silicone so in a higher fall it probably would not be able to absorb as much g-forces as the SG Maxx. See photo 3. They indicate that it can protect your phone from a 6 foot drop.

The name of this company is Ballistic but don't let the name fool you, they are not making smartphone cases that are bulletproof. Having judged hundreds of egg drop contests I do see the benefits that could be derived from their HexTec™ design. It should give your smartphone extra protection if it is dropped.

Other Cases

You can find Smartphone cases that are made out of metal, plastic, leather, silicone or a combination of these materials. Price does not actually predict how well the case will protect your phone. Protecting your phone requires a case that can absorb energy or spread the energy from a fall so it is not concentrated at one location. Your car has many shock absorbing systems and restraint systems all designed to absorb the energy from a crash. You need a case that can do the same thing.

Remember case manufacturers only guarantee their cases, not your phone. They advertise their cases saying it will protect your phone from whatever life throws at it. When shopping for a case just give some thought as to how the case will absorb energy if your precious phone happens to be inside it when you drop it.

Alan is co-author of *Introduction to Technology Glencoe McGraw-Hill 2010* and a *TechDirections Magazine* Columnist . Visit www.technologytoday.us for past columns, reviews, and resources.



TOUGH JACKET MAXX™

Photo 2



JEWEL

Photo 3