



WAR GAMES

5 Toys for Big Boys: Best in Show From the World's Largest Weapons Fair

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From grenades and rifles to drones, fighter jets and tanks, the 2011 Defense & Security Equipment International show (DSEi) held every two years in London had it all.

The show featured the latest and greatest from 46 countries and nearly 1,400 defense shopkeepers. While the camouflaged Vespa and the gold-plated machine guns scored points for creativity, they don't exactly measure up to big boys toys. So what earned our best in show nod?

A Truly Amphibious Assault Hovercraft

Every DSEi features a water demonstration on the River Thames -- and the Griffon 2400TD stole the water show this year. Navies grapple with tides, which leave a very brief window of opportunity to land. The solution? The amphibious capability provided by a hovercraft, which isn't limited by tides and can get onto the beach and beyond. The Griffon 2400TD is like a robust, flat-bottomed boat that hovers a meter or so above the water - essentially flying above the surface. That cushion of air means it doesn't rock as much as a boat would, providing a very stable platform for weapons.

It can travel at 45 knots across not just water but land, mud, swamps, rapids and sand, unlike conventional vessels. Thirteen meters long, it can carry a crew of two plus 16 war fighters. In addition to being arguably the most environmentally friendly craft out there, the Griffon 2400TD can operate in terrain where others can't, from the high Arctic to the jungles of South America. Next in the pipeline for Griffon Hover works is a game-changing hybrid, the company says -- a very cool innovation.

Protective Bubbles for Soldiers

Radio-controlled improvised explosives, or RC-IEDs, are currently one of the enemy's weapons of choice. To stop them and keep soldiers safe, electronic countermeasure equipment (ECM) is all the rage. But delivering it to soldiers on the front lines with sufficient power -- and without reducing their agility and maneuverability -- has proved a challenge. Enter Thales' Storm-H. Complex very next-generation technology, it essentially creates a protective invisible bubble around a soldier, preventing bad guys from signaling an IED to detonate within its safety zone. With a wide range of jamming capabilities and easily wearable (the device is the size of a radio), the Storm-H extends protection to each individual soldier on tactical operations.

The Storm-H is versatile as well: It can easily be programmed to thwart any threat from the 20-MHz to 470-MHz range -- up to eight waveforms at the same time -- and it adapts waveforms to new and emerging threats.



The Robot Squad

For the first time at DSEi, there was an unmanned floorshow -- and Marshall Land Systems' little trio of robot vehicles took centerstage, simulating a patrol in Afghanistan calling in unmanned ground vehicles (UGVs in military speak) and robotics.

Weighing in at about 110 pounds, Questar, a nimble rugged reconnaissance robot can climb 40 degree slopes and cruise at about 19 miles per hour. It can clear a route for patrols with Niitek ground-penetrating radar, but it can also be equipped with a range of sensors from chemical, biological, radiological, and nuclear detectors to light detectors (called LIDAR) and explosives sniffers.

Trakkar, capable of carrying a 550-pound payload, can also be equipped with a range of sensors; this second little guy features a very cool "follow me" technology that lets it trail its operator. It can be pre-programmed or instructed on the fly not just to follow but to "catch up" or "return to the last rendezvous point."Cool fact: It uses an auxiliary fuel-cell generator to top up its own battery.

Marshall Land Systems' small but mighty "throwbot" EyeDrive rounded out the robot dream team. Kitted out for 360-degree views with five video cameras -- and an additional camera with a laser pointer and tilt/zoom capability -- it can also carry disruptor charges for counter-IED missions.

A Chameleon Tank

And the winner is ... the invisible chameleon tank, aka Adaptiv, by BAE.

Adaptiv -- an armor encasing that looks and feels as one imagines a dragon's scales to -- turns tanks into chameleons, allowing them to disappear into the environment behind them or even look like a snow drift, trash can or soccer mom's station wagon.

A system of more than 1,000 5.5-inch hexagonal tiles made of thermo-electric material gives the tank its cool capability, which can confuse an adversary into thinking it is looking at something it isn't. Hesitation can give the warfighters a few more seconds -- which may be the difference on the battlefield.