**iRobot 710 Warrior is ready for action**

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*iRobot* is a company which is well-known for its *Roomba robotic vacuum*. It has developed several useful robots like 110 FIRSTLOOK, 210 NEGOTIATOR, 510 PACKBOT, and so on. In this line up, the company has now included the updated version of Warrior 700 robot called as *710 Warrior*. It is capable of carrying heavy payloads, traveling on rough terrains, and climbing stairs.

iRobot 710 Warrior gets a *rough* and *sturdy* design with a size measuring 35 inches long, 18 inches high, and 30.25 inches (with stair climbing flippers) or 21.25 inches (without flippers) wide. This robot weighs *157 kilograms*, including the flippers and battery. It can carry payloads of above 68 kilograms (150 pounds) and travels at a maximum speed of 12.90 km/h (8.0 mph).

This military robot is equipped with a *two-link heavy lift manipulator*, which can extend up to 75 inches. It weighs 54 kilograms (120 pounds) and lifts loads of up to *100 kilograms* (220 pounds). Additionally, the robot can be fitted with *Anti-Personnel Obstacle Breaching System* (APOBS) and wide variety of accessories.

iRobot 710 Warrior is designed for performing several *dangerous tasks* like:

* Explosive Ordnance Disposal (EOD)
* Route Clearance
* Reconnaissance and Surveillance

The 710 Warrior incorporates an *Operator Control Unit* for controlling the robot remotely. It is powered by the *iRobot Aware 2 software*, which provides simple training, design, and support. The operator can monitor the robot directly using *cameras* up to a distance of 800 meters. This robot can also be fitted with several *optional devices* like compass, GPS, and obstacle avoidance sensors.

The *performance* of iRobot 710 Warrior is shown in the below video:

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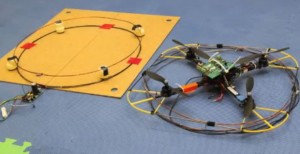
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## Nimbus lab quadrotors can power devices wirelessly

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Brent Griffin and Carrick Detweiler of Nimbus Lab at University of Nebraska-Lincoln have designed the quadrotors for charging the electronic devices wirelessly on the fly. According to them, when the quadrotors flies, it will send up to five watts at 25 centimeters, and it will be a great source for powering the light.

The researchers have recently presented their invention “Resonant Wireless Power Transfer to Ground Sensors from a UAV” at the IEEE International Conference 2012 on Robotics and Automation.

The research team says that “We are investigating systems and control algorithms to optimize the power transfer from the Unmanned Aerial Vehicles (UAV) to the remote sensor node. In addition, we are investigating energy usage algorithms to optimize the use of the power in networks of sensors that are able to be recharged wirelessly from UAVs.”

This great invention could be helpful for activating sensors in the remote areas. It includes sensors at the bridges (for structural inspection), and underwater sensors (for transferring data and recharging).

The researchers have planned to develop their project by teaching the quadrotor to maintain a steady fly at an optimum space for sending the power to a receiver. Moreover, they expect to make the quadrotors to produce more power.

The below video shows you the quadrotors ability to power the light wirelessly:

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## Quadrocopters to construct six – meter high tower

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Robot designer Raffaello D’Andrea and Architects Gramazio & Kohler have planned to build a six – meter high tower completely by the flying robots known as ‘Quadrocopters’. France’s FRAC centre in Orleans will host an exhibition from 2nd December, 2011 to 19th February, 2012 under the title “Flight Assembled Architecture.”

The tower that is to be built by quadrocopters will measure 6.0 meters (19.70 feet) height and 3.5 meters (11.50 feet) diameter. It will be made within the airspace of 10 x 10 x 10 meters (32.80 x 32.80 x 32.80 feet). This tower will be of twist style and contains 1500 polystyrene foam bricks.

The quadrocopters are designed to act together for performing several functions such as carrying the bricks, and constructing the tower. Every single quadrocopter is capable of travelling in the pre – programmed flight paths at high accuracy with the help of inbuilt sensors and custom electronics. A control room provides the commands to these quadrocopters wirelessly. To prevent two or more quadrocopters from collisions, the fleet management technology is used. This technology also allows the flying robots to perform vehicle calibration, charging, and automatic routine landings & take offs.

Watch the below video to see the different moves made by the quadrocopters.

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