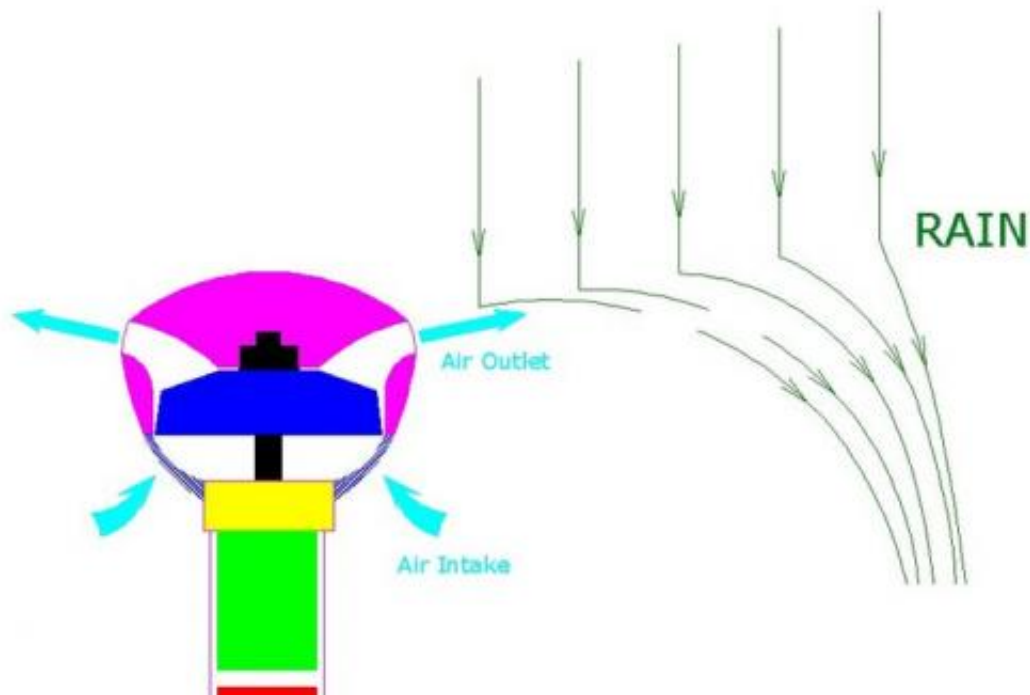


# Air Umbrella R&D evolves as shield from pelting rain

October 15 2014, by Nancy Owano

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A Chinese R&D team have invented an Air Umbrella which can blast water away from the umbrella's owner. They explain how their invention deflects rain: "Air is everywhere on the earth. The flowing air can change the moving path of the object. The faster the air moves, the greater the energy is. The jet airflow can isolate some objects. So when we make use of the airflow, we can protect ourselves from the rain

drops. Then the airflow forms an umbrella without a visible cover."

Components are lithium battery, motor, controller and master switch. Nick Lavars at Gizmag said the "[umbrella](#) uses a [lithium battery](#) to power a motor and fan, which creates a cycle of [air](#) flowing through its tip to deflect the drops and form the protective layer." The South China Morning Post said that Wang Chuan and his friends have been [working](#) on the patented technology for about two years. The device that they came up with for using [air flow](#) to shield users from pelting rain had its roots in their working with postgraduates from Nanjing University of Aeronautics and Astronautics and then going out to test various types based on the idea, on rainy days. One of the samples worked to their liking and they then went to some graduates from Beijing University of Aeronautics and Astronautics to improve the design. "All of our tests and experiments were conducted under circumstances of heavy rains," they said. They also said, "If the wind is not very high, the air umbrella can still deflect the natural wind and rain and work well."

Their Air Umbrella is not yet ready for primetime; the team says it is still in the stages of R&D. They have turned to Kickstarter for crowdfunding. The umbrella is targeted for December 2015. They already surpassed their funding goal of \$10,000. having garnered at the time of this writing \$32, 506. The lowest price available at the time of this writing is \$118 for the umbrella-a with charger. (The creators said they have three different models in mind: A 30 cm, 500 g device, umbrella-a, for females, with 15 minutes of [battery life](#). A standard model, 50 cm, 800 g, with a battery life of 30 minutes, and the scalable model—50 cm shortened and 80 cm when extended, weighing 850 g and also with battery life of 30 minutes.)

Responding to a FAQ section about whether the battery life is rather short, they answered, "Generally speaking, the products are more suitable for the urban citizens or people who has a car." They were aware

of the noise factor and addressed it. They worked to increase the air flow and reduce the speed of the motor, they said, and "sometimes you can just hear deep voice of air flow. To make it better, we added some material to absorb and reduce the noise. So the noise of the rain is much bigger than the air umbrella when it works."

Their umbrella may be fine for the person who owns the device but won't the rain be blown over to people nearby? In their FAQ section of Kickstarter, they said, "Big and fast raindrops will be blown to a near distance while those small and slow raindrops will be blown to a farther distance. Generally speaking, most raindrops will be blown to 50 to 70 centimeters away. If two persons are more than two shoulders away from each other, they will not affect each other. Also, nearby pedestrians will also take umbrellas if it is raining heavily. In this way, the rain will not be blown to other pedestrians. If nearby pedestrians do not take umbrella and close, they will be affected more or less, but they will get wet in a rainy day if not taking umbrella anyway."

**More information:** [www.kickstarter.com/projects/1 ... 3275397/air-umbrella](http://www.kickstarter.com/projects/1...3275397/air-umbrella)

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