A 3-D printing pen for professionals handles special materials, lets users fine-tune work

September 3 2016, by Nancy Owano

(Tech Xplore)—At first sight drawing objects in the air has you rubbing your eyes in disbelief and then you realize you are looking at a 3D pen in action.

As James Vincent in *The Verge* said, "who doesn't want a souped-up glue gun that can draw 3D structures in midair?"

Now there is news of a 3D pen which is purposely designed not just to delight the masses but to be used as a seriously professional tool, and it is called the 3Doodler PRO. The pen is targeted for architects, engineers, designers, artists. It's a tool for prototyping and tactile design.

Bridget Butler Millsaps in *3DPrint.com* commented that "Architects in particular should find the high-speed fan handy as it allows for a solid plastic structure to be printed, or painted, in the air in one movement. This should prove to be helpful in making blueprints—whether they are indeed airborne or on a surface."

In a video guide, the company noted the pen's on-off switch on the side of the pen with the other side carrying its fan speed switch and control port. The power port is on the back of the pen. This is where you plug in your (included) power adapter.

Its makers are promoting this as an advanced 3D printing pen; outstanding features include a new range of materials to work with and its pen controls. Three variables adjust the flow of materials. Temperature control, extrusion speed, and fan speed.

The company said with adjustable dials, "you control both speed and temperature and the LCD display ensures you always know exactly what temperature you're using. The built-in, high-speed variable fan also gives you control over how quickly materials cool."

Also, *Dezeen* said "The company has upgraded the pen's outer casing to a carbon-fibre shell, and created additional nozzles and a portable battery pack."

There is much to be said about the new materials. *Dezeen* said "The 3Doodler Pro pen works with a range of new materials, including polycarbonate and nylon. It also handles plastic-based composites of wood, copper or bronze." *Dezeen* said the composites after they are extruded can be sanded or polished.

The Verge explained more about this, using the wood filament as an example. "So, in the case of the wood filament, there are actual bits of wood chips embedded in the plastic. Speaking to The Verge, 3Doodler's co-founder and COO Daniel Cowen said that this means that not only does the filament smell like wood, it also feels like it. 'Because real wood is used the finished items can be sanded or stained,' says Cowen."

An LCD display on the pen lets you monitor the temperature and speed settings.

The pen has a battery pack for untethered use.

The new pen is priced from $249.

More information: 3doodlerpro.com/

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