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## Features

### The Techno Maestro's Amazing Machine

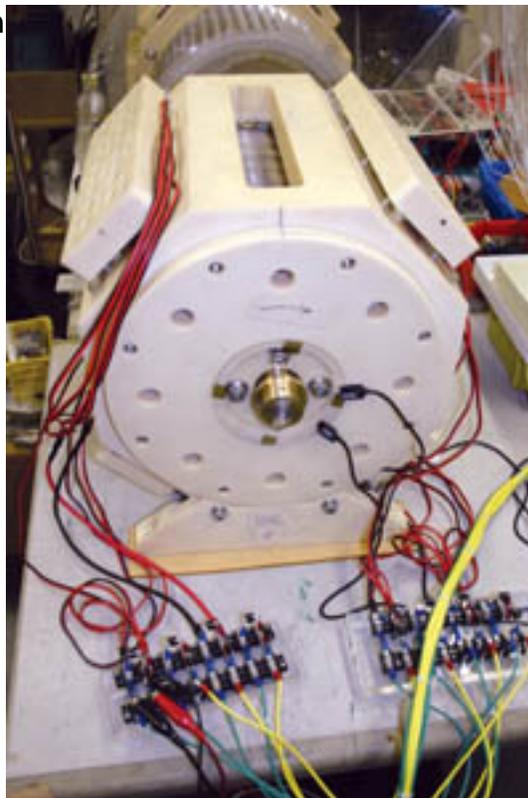
**Kohei Minato and the Japan Magnetic Fan Company: a maverick inventor's breakthrough electric motor uses permanent magnets to make power -- and has investors salivating**

by John Dodd  
Send feedback to  
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When WE first got the call from an



excited colleague that he'd just seen the most amazing invention -- a magnetic motor that consumed almost no electricity -- we

### Sidebar How it Works

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were so skeptical that we declined an invitation to go see it. If the technology was so good, we thought, how come they didn't have any customers yet?

We forgot about the invitation and the company until several months later, when our friend called again.

"OK," he said. "They've just sold 40,000 units to a major convenience store chain. Now will you see it?"

In Japan, no one pays for 40,000 convenience store cooling fans without being reasonably sure that they are going to work.

### The maestro

The streets of east Shinjuku are littered with the tailings of the many small factories and workshops still located there -- hardly one's image of the headquarters of a world-class technology company. But this is where we are first greeted outside Kohei Minato's workshop by Nobue Minato, the wife of the inventor and co-director of the family firm.



The workshop itself is like a Hollywood set of an inventor's garage. Electrical machines, wires, measuring

instruments and batteries are strewn everywhere. Along the diagram-covered walls are drill presses, racks of spare coils, Perspex plating and other paraphernalia. And seated in the back, head bowed in thought, is the 58-year-old techno maestro himself.

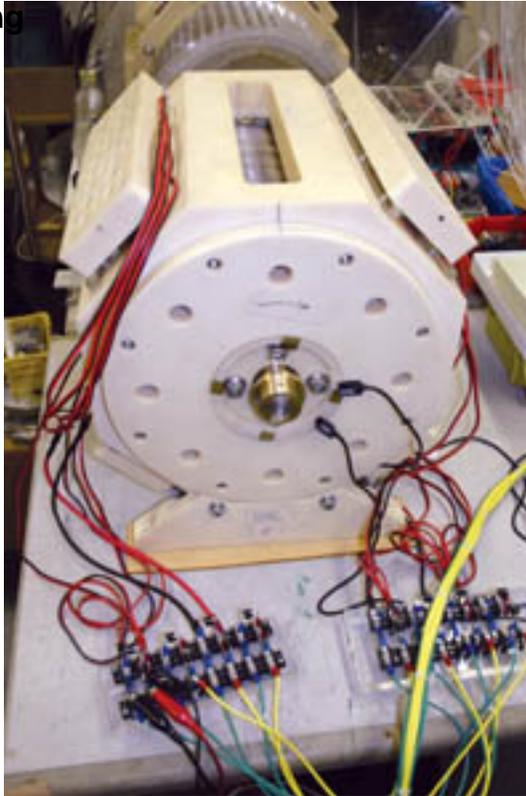
Minato is no newcomer to the limelight. In fact, he has been an entertainer for most of

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his life, making music and producing his daughter's singing career in the US. He possesses an oversized presence, with a booming voice and a long ponytail. In short, you can easily imagine him onstage or in a convertible cruising down the coast of California -- not hunched over a mass of wires and coils in Tokyo's cramped backstreets.

Joining us are a middle-aged banker and his entourage from Osaka and accounting and finance consultant Yukio Funai. The banker is doing a quick review for an investment, while the rest of us just want to see if Minato's magnetic motors really work. A prototype car air conditioner cooler sitting on a bench looks like it would fit into a Toyota Corolla and quickly catches our attention.

**Seeing  
is**



**believing**

Nobue then takes us through the functions and operations of each of the machines, starting off with a simple explanation of the laws of magnetism and repulsion. She demonstrates the "Minato Wheel" by kicking a magnet-lined rotor into action with a magnetic wand.

Looking carefully at the rotor, we see that it has over 16 magnets embedded on a slant -- apparently to make Minato's machines work, the positioning and angle of the magnets is critical. After she kicks the wheel into life, it keeps spinning, proving at least that the design doesn't suffer from magnetic lockup.

She then moves us to the next device, a weighty machine connected to a tiny battery. Apparently the load on the machine is a 35kg rotor, which could easily be used in a washing machine. After she flicks the switch, the huge rotor spins at over 1,500 rpms effortlessly and silently. Meters show the power in and power out. Suddenly, a power source of 16 watts or so is driving a device that should be drawing at least 200 to 300 watts.

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