



# The AMA History Project Presents: History of the WINDSOR PROPELLER COMPANY Since 1978



Written by JS (08/2010); Reformatted by JS (08/2010)

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*Jay Smith wrote the following, published in the About Us section of Model Aviation magazine, September 2010 issue.*

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## **About Us: Windsor Propeller Company**

Fred Jamieson started Windsor Propeller Company in 1978. He became interested in aeromodelling through his family; his great-grandparents opened the first toy store in San Francisco, California, and his grandparents got him into modeling.

Fred's stint as a drag racer helped open the door to a long career in aviation, because drag racers were being recruited as pilots. His jobs included Navy test pilot, commercial airline pilot, crop duster, and helicopter test pilot.

While flying full-scale helicopters in Canada in the 1970s, Fred began carving propellers from maple in the wintertime. In the following, Windsor Propeller Company President Teresa McTernan describes the process that took a day.

"He originally made propellers from maple. He would say he could see the propeller in the block of maple.

"He would then use his grandfather's spoke shave and some wood files and carve one half of a propeller. The propeller would just start to come out of the wood. He was amazing in the way he could carve in pitch."

Half of the propeller was carved, so that both sides were the same. Then a machine traced a pattern it could reproduce as a full propeller, to be used in an injection-modeling machine.

Upon retiring from full-scale flying, Fred founded Windsor Propeller Company. This was a result of his seeing increased interest in his propellers, combined with an urge to further explore what was possible. He called the new propellers "Master Airscrews." (Airscrew is a different term for propeller.)

Fred had a vision and a goal, which was to make other people successful, and he felt strongly enough about it to risk his life's savings. He named the company "Windsor," after the town in California where he lived.

Fred investigated injection modeling and became a self-taught machinist and mold maker. He started out fabricating small 1/2A propellers and marketed them to hobby shops. He also attended flying events and contests to get his propellers into modelers' hands and eagerly looked for feedback on how to improve the designs.

One major improvement was made in 1980, when Windsor Propeller Company began selling fiberglass-filled nylon propellers, and the new "airscrews" didn't suffer from the brittleness associated with earlier variants.

I eagerly asked about the process that is used to make a propeller. Teresa explained that it starts with writing a program to design the mold. Then a milling machine employs that program to cut the cast. A bit of finishing work is completed to make the mold ready for use, and then it is tested.

A propeller cast is made in halves. It is loaded into an injection-molding machine, which handles the amount of plastic along with the temperature and pressure that is forced into the mold. Depending on the size and type of propeller, it takes 30-90 seconds to complete.

Then the propeller is run through a series of tests that include static thrust, balance, and durability. An engineer reviews all of the data, to ensure that the product conforms to a set of specifications and standards.

Once satisfied with the propeller, it is given to a group of enthusiastic beta testers. They put it through some real-world use, mounted to the front of a variety of aircraft.

When Teresa started working for Windsor in 1982, the company consisted of approximately 15 propellers, and the five employees worked in one building. That decade saw a lot of growth, both with the hobby and within the company. Fred continued to design all of the propellers, first carving them by hand, and then using a computer.

One of the projects he was most excited about was a three-blade propeller; he wanted it molded with the hub. The design was more challenging, but the hugely successful Master Airscrew three-blade propellers have proven to be one of the company's best sellers. They are even popular with electric-power pilots, even though they were designed for glow engines.

By the time of Fred's death, on February 2, 2009, his company had gone global. It had grown to nine employees, greatly expanded its product offerings, and was producing approximately 250,000 propellers each year.

Teresa said the following about Fred's accomplishments.

"He took propeller making to the next level from where he found it as a young man flying model airplanes into adulthood. He contributed to it and improved it. He was a wonderful man to work for."

The company is now in the capable hands of its employees, many of whom have been with Windsor for more than a decade.

I asked Teresa what she was most proud of, and her response was:

“I am proud of our company being committed to keeping it going for as long as people want to buy Master Airscrew propellers. We are inspired by Fred’s life and want to keep his dream alive.”

When we ended our interview, I reflected on Teresa’s enthusiasm for the company and our hobby, as well as on the following comment she made regarding modelers.

“I have never met more regular, decent people than in modeling. Unbelievably nice people make working for the company awesome.”

I couldn’t agree more.

-Jay Smith

Sources:

Windsor Propeller Company  
Box 250  
Rancho Cordova, CA 95741  
[www.masterairscrew.com](http://www.masterairscrew.com)

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