



## **PATTOS PLACE**

Sydney

[www.pattosplace.com](http://www.pattosplace.com)

## **CHALLENGE**

Cost-effectively produce scale models of legendary racing cars.

## **STRATEGY**

Find an affordable 3D printer to make cost-effective moulds.

## **RESULTS**

Pattos Place slashed its costs by switching from plastic-based 3D printing to Mcor's paper-based 3D printing.

A set of moulds costs one-fourth of the previous cost.

The company saves more than \$180 per set.

Car bodies are more accurate because the paper 3D printed moulds don't distort, as plastic moulds do.

The company can afford to stay in the car-body business.

Clients love the results.



## *Affordable 3D printing saves high-performance slot car business*

Long before auto racing came to video games, there were slot cars. And now, even long after the video games made their splash, there are still slot cars with rabid enthusiasts around the world.

Slot cars are remotely controlled model cars – 1/64 to 1/24 scale – that race along electrified tracks. Pegs underneath the cars fit into slots that guide them around the circuit. One slot car enthusiast is Bruce Paterson of Sydney, a retired teacher who is proprietor of the world's leading source for model car decals, Pattos Place. Pattos Place decals make homemade cars look exactly like full-scale vehicles of auto racing lore. The company also creates finely detailed scale models of legendary car bodies – Aston-Martins, Corvettes, Ferraris, McLarens, Vipers

and many more. Paterson has created more than 1,500 different car styles and 9,000 different decal sets.

### **Work got expensive**

Paterson, who fell in love with slot cars as a child in the 1960s, does this work for love, not money. And money is why the body side of his business almost went defunct.

His car bodies are made of PETG plastic, the kind often used in soda bottles and food packaging. It is heated until soft, wrapped around a car-shaped mould and allowed to cool into permanent shape.

Although he originally hand-carved his moulds, he graduated to 3D printing, which creates moulds from 3D



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- Bruce Paterson, Proprietor, Pattos Place

computer-aided designs. “The 3D printing got very, very expensive because of the plastic materials I had to buy,” he says.

His 3D printer was complicated. It used liquid plastic resin, an expensive material that is cured with ultraviolet light. A single set of four moulds – one each for 1/24, 1/32, 1/43 and 1/64 scale – cost him more than \$250. It was expensive enough to drive him out of the business.

### **Paper-based 3D printing turned things around**

Just as Paterson was about to close his body shop, he discovered 3D printing from Mcor Technologies, which manufactures 3D printers with the world’s lowest operating cost. Its operating cost is low because the build material is far less exotic than UV-curable plastic: it’s ordinary business paper. (When the paper is bonded together, the resulting 3D printed model is surprisingly tough and durable because it’s essentially wood.) A set of four moulds costs Paterson about one-fourth of the cost of mould sets from the plastic-based 3D printer, a savings of more than \$180 for each set.

“Not only can I stop worrying about the cost of moulds, the thermoformed bodies are coming out truer than ever,” says Paterson. “Paper holds its shape perfectly. Distortion is a well-known but rarely discussed problem with plastic-based 3D printing, which involves heating and cooling. The

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His customers can now buy bodies of the cars they’ve always dreamed about. They paint them the colour they wish and apply Pattos Place’s famous decals to complete the effect. Then they put them on the track and show them off. If they’re lucky, they even win.

“I consider myself kind of a boring person,” Paterson says, “but my ‘boring’ pursuit brings a lot of joy to my fellow hobbyists at a cost that is more than fair and a quality that money can’t buy. The affordability of my tools, like the Mcor 3D printer plays a huge role in letting me continue, and helping slot cars thrive in the digital age.”

*Pattos Place is supported by Mcor Certified Reseller, DGS3D.*

