

Wind shear brings a hand-thrown RC glider to 448 mph.

[Video \(55:59\)](#). Amazing!

The video leaves me (Jon Claerbout) in awe.

I put together a simpler explanation of how in the presence of wind shear it is possible to run a radio-controlled glider to reach near-supersonic speeds. Here you go:

Consider two layers of air, each layer flowing at a constant speed.

Imagine a controllable frictionless glider (no air drag).

With no penalty, the glider can reverse its horizontal flight direction.

Forget the ground speed.

Consider only the speed of the glider compared to its surroundings.

Upon crossing a layer boundary, either a headwind or a tailwind is encountered.

Crossing into a headwind increases the wind noise.

Increasing the wind noise means locally flying at a higher air speed.

The plan is to jack up the speed until you approach Mach 1.

Increasing the speed won't happen if you never reverse direction,

Keeping your belly towards the interface, reverse direction when crossing.