

Aircraft

Characteristics

- Wingspan: 50.20 in
- Length: 29.75 in
- Empty weight: 0.800 lbs
- Max payload fraction:
73.33%
- Motor: E-flite park flyer 370,
1360 kV brushless
- Aspect ratio: 8.98
- Planform area: 292.38 in²
- Dihedral angle: 10°



Goat Works

James Blair

Ethan Connors

Paul Crosby

David Irwin

Keegan Mehrstens

Carlos Sarria

Advisors:

Professor David Olinger

Professor Simon Evans

Goat Works

Team #321

"Tina"

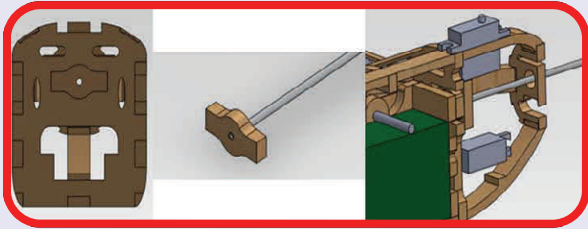


Worcester Polytechnic Institute

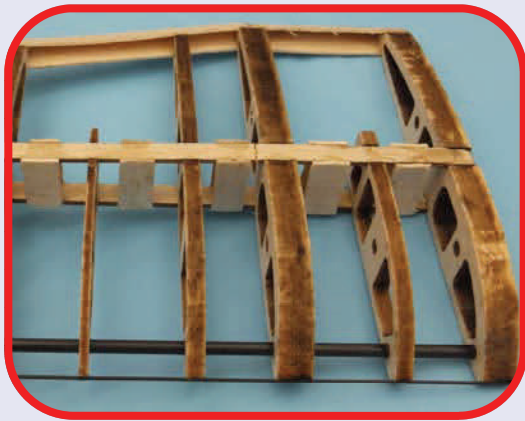
100 Institute Road

Worcester, MA 01609

Innovations

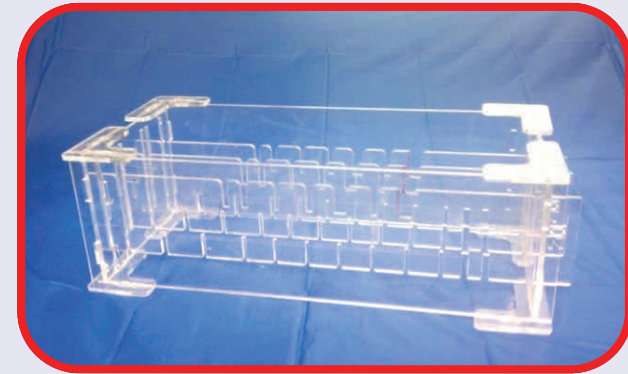


- Collapsible boom tail
- Simplified four piece assembly
- Detachable wings
- Shear webbing in wings



Manufacturing

- Parts were toleranced to ensure accurate fabrication
- Team developed jigs for precise construction
- Manufacturing turnaround time of less than 8 hours
- Cost per plane: \$333.64
 - \$71.41 without electronics



Predicted Performance

- Predicted raw flight score: **105.6**
- Test flight operational availability: **87.5%**

