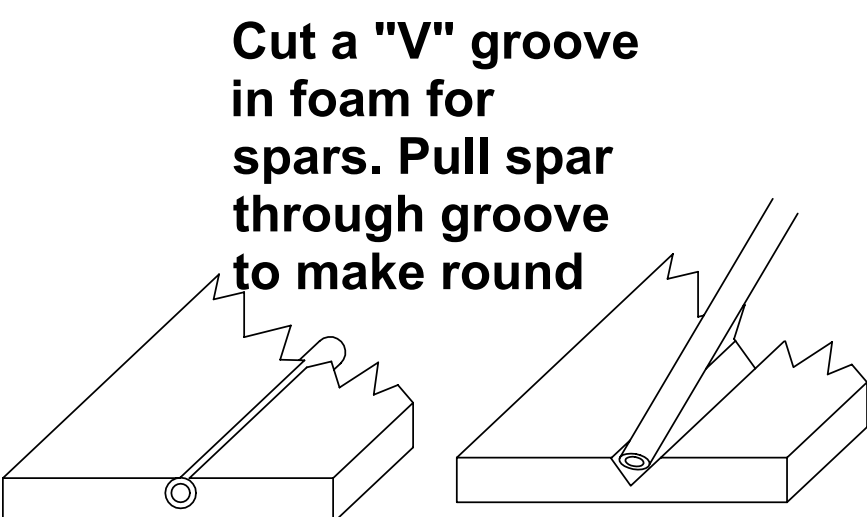
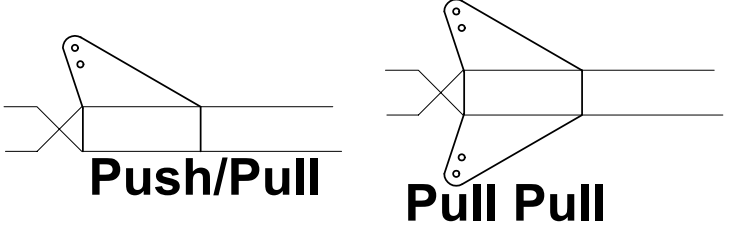


**Notes on the fuse:**  
If you are going for all out light weight, consider leaving out the fuse spar. The side plates are strong enough, but the plane will not be quite as tough. Make sure to use 15-30 minute epoxy or shoogoo for the main parts...5 min and foam CA are not strong enough, and will crack under the torque.



Cut Control horns from 1/32" ply or a plastic coffee can lid.



CG

All hinging for control surfaces can be packing tape or actual hinges. I prefer robart hinge points epoxied in place for the added longevity and control freeness.

Whole plane is Red, white "ORACLE" markings, black raven, with yellow trim on raven's edges.

CG

GWS 12-6 Slowflyer Prop

3/8"x3/8" Hardwood motor block  
Groove block to fit carbon rod.  
If using GWS 350 Drive, mount block on Carbon rod so that the prop/drive shaft is in the same location as shown on plans.

Motor stick instillation.  
You will need to adjust the position of the Carbon rod and motor mount for your motor/gearbox combination. The carbon rod may be in a different location, that is OK.

Canopy drawings for details only.

Elevator Servo (HS-56HB Shown)

6mm Depron tail surfaces

4mm Carbon Spar

6mm Depron Fuse Rails

Aileron Servo (1 Each side)

Rudder Servo (HS-56HB Shown)

LiPo Battery

2100(3s2p)

Hacker B20-15L shown

1/64 ply gear mount plates

Suggested CG Starting Point

Molded Carbon Fiber Gear

Use Cotterpin to adjust tension on pull-pull system.  
Mount using Dubro EZ Connectors

1/64" ply doublers on both sides of fuselage (see side view)

Molded Carbon Gear Legs

Vacuum Formed Wheel Pants

1.75" DIA

6mm Depron Fuse

Carbon Tail wheel bracket

1/16" wire wheel axel/steering arm  
(Bend 90 deg. at the top to form a control arm. Use clamp on ball link to attach to rudder control horn)

Mount Battery Pack with 1" Velcro strap.  
Also use adhesive Velcro on the side of fuselage and back of pack to secure in place.

### Motor/Battery Info

Motor Gearing Prop Battery Amp Draw Thrust  
GWS EPS350C DS (6.6:1) GWS 12x6 2s1p Lipo 9.5 17.1 oz.  
GWS EPS350C DS (6.6:1) GWS 11x4.7 3s1p Lipo 11.5 24.3 oz.  
Hacker B20-26S 4:1 Planetary APC 11x4.7 3s1p Lipo 11 amps 22.1 oz.  
Hacker B20-31S 4:1 Planetary APC 11x4.7 3s1p Lipo 7.7 amps 18.6 oz.  
Hacker B20-15L 4:1 Planetary APC 11x4.7 3s2p Lipo 19.5 amps 38.5 oz.  
Hacker B20-15L 4:1 Planetary APC 11x4.7 2s1p Lipo 10.8 amps 20.6 oz.  
Hacker B20-18L 4:1 Planetary APC 11x4.7 3s1p Lipo 11.7 amps 27.7 oz.  
Hacker B20-18L 4:1 Planetary APC 12x6 3s2p Lipo 19 amps 36.7 oz.  
Razor RZ300 GWS/5.3:1 GWS 11x4.7 2s1p Lipo 8.8 amps 15.7 oz.  
Razor RZ300 GWS/5.3:1 GWS 12x6 2s1p Lipo 9.9 amps 18.5 oz.  
Razor RZ300 GWS/6.6:1 GWS 11x4.7 3s1p Lipo 12 amps 26 oz.  
Razor RZ350 GWS/6.6:1 GWS 12x6 3s1p Lipo 12.4 amps 27 oz.  
Razor RZ350 GWS/6.6:1 GWS 11x4.7 3s1p Lipo 8.7 amps 21.2 oz.  
Razor MicroHelix v2 GWS/6.6:1 GWS 12x6 3s1p Lipo 8.9 amps 22.8 oz.  
PJS 3D 500 Direct APC 10x4.7 3s2p Lipo 16.4 amps 21.9 oz.  
PJS 3D 550 Direct APC 10x4.7 3s2p Lipo 13.8 amps 20.7 oz.  
HiMax HA2015-3600 GWS/5.3:1 GWS 12x6 3s1p Lipo 8.7 amps 20.5 oz.  
HiMax HA2015-3600 GWS/6.6:1 GWS 12x6 3s1p Lipo 6.5 amps 18.5 oz.  
HiMax HA2015-4100 GWS/6.6:1 GWS 12x6 3s1p Lipo 11.2 amps 26.4 oz.  
HiMax HA2015-4100 GWS/5.3:1 GWS 11x4.7 3s1p Lipo 11.6 amps 25.2 oz.  
HiMax HA2015-5400 GWS/6.6:1 GWS 12x6 2s1p Lipo 10.2 amps 17.8 oz.  
HiMax HA2025-3236 3.6:1 Planetary APC 11x4.7 3s2p Lipo 14 amps 29.3 oz.  
HiMax HA2025-3236 3.6:1 Planetary APC 12x6 3s2p Lipo 17 amps 32.2 oz.  
HiMax HA2025-4236 4.3:1 Planetary APC 11x4.7 3s2p Lipo 20.2 amps 38.1 oz.

## Specs: Turbo Raven 3D

Weight	10.5-15.5 oz.
Power	24-39 oz.
Radio	4-5 Chanel
Area	295.4 in2
Loading	5.4-7.3 oz/ft2
WWW.3DFOAMY.COM	

**3D FOAMY**

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Designed and Drawn by Levi Jordan  
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