Developments in electro-combat from the US/DK

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Electro-combat: something *new* or something *different*?
Outline

1. Summary of development (so far)

2. Adapting electro-components to an F2D model
Battery: LiPo 4S (14.8 V), 1300 mAh, 65 C

\[
\text{(Power)} = (\text{Voltage}) \times (\text{Current})
\]

\[
\text{(Heating rate)} = (\text{Current})^2 \times (\text{Resistance})
\]
Motors (Hobby King)
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Price: $18.33 (3 plugs, or 1/12 Fora)
Speed: 22.4 s/10 laps
Extract speed and RPM from sound track

NTM Prop Drive 3536 (1800 KV), 7.5 x 6.5 prop,

- Speed = 22.37 s / 10 laps, Engine frequency = 18468 RPM

3 Laps, 6.71 s = 22.4 s / 10 laps
Wide variety of prop shapes, dimensions tested

Wood is light weight, easy to reshape

APC electric: 18 g  
Custom wood: 8 g
Motor control and e-shutoff combined
Adapting electro components to F2D models
Mounting system
Mounting system
Mounting system (ESC)
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Second generation battery mount
Second generation battery mount
Second generation battery mount
Second generation battery mount
Summary

Electro-combat models are clean, can be quiet(er)

Faster than top F2D model, with off-the shelf parts

Running time ~1.5 minutes, biggest area to improve

Weight goal: comparable to F2D model with full tank

Could be a valuable *training* tool
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