Developments in electro-combat from the US/DK

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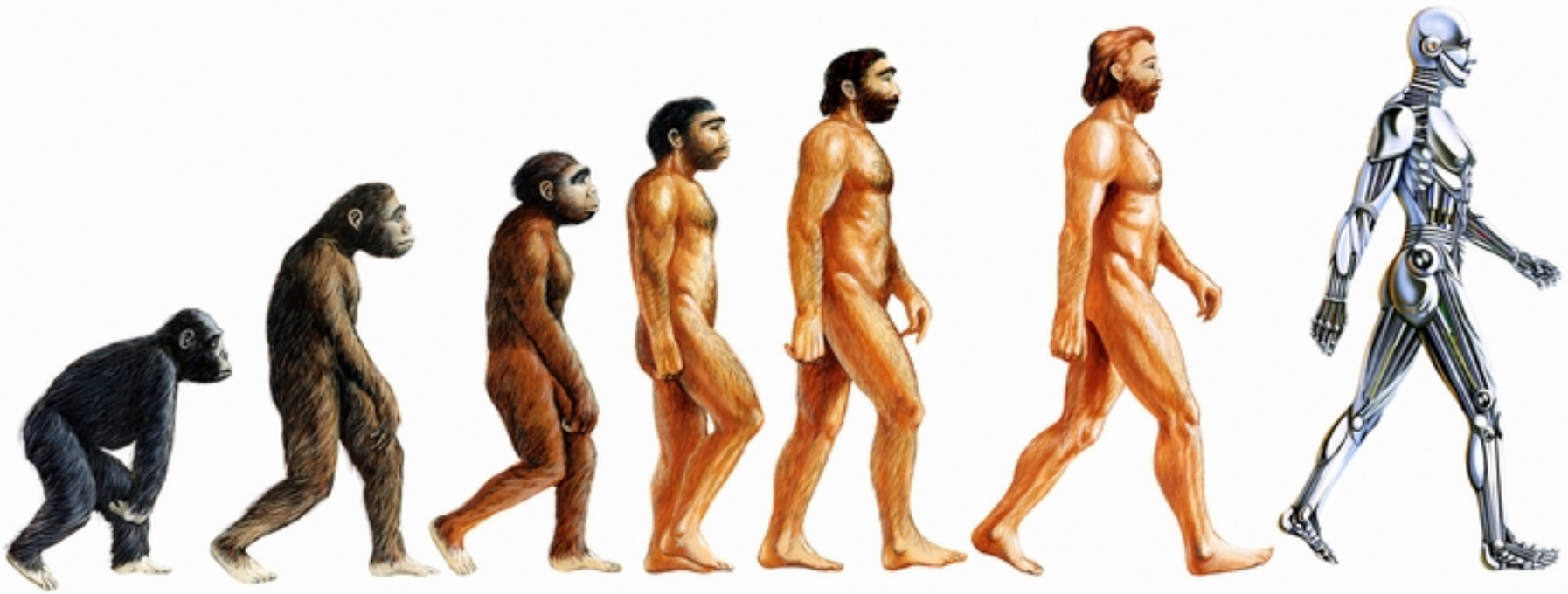
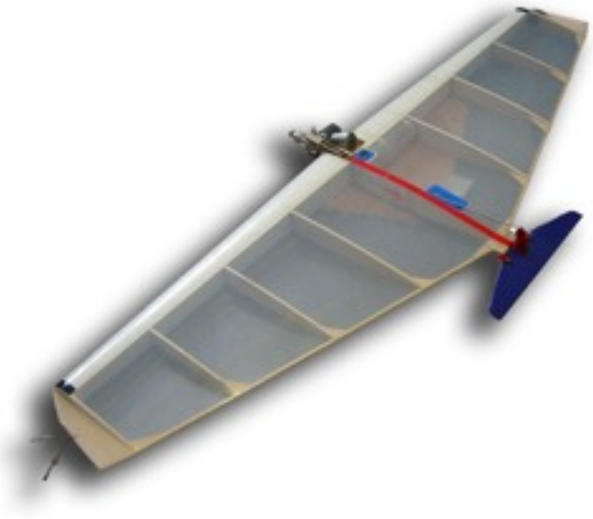
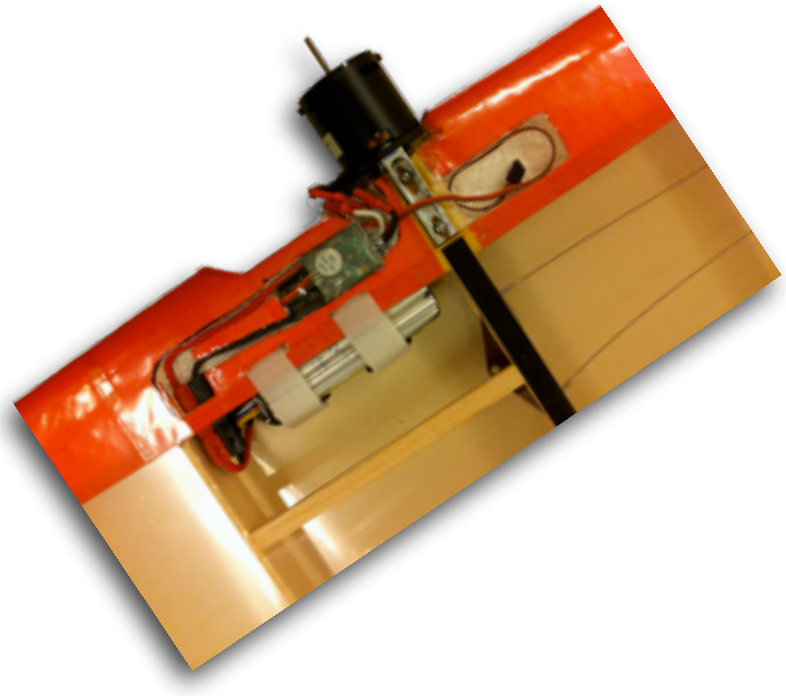
Electro-combat: something *new* or something *different*?







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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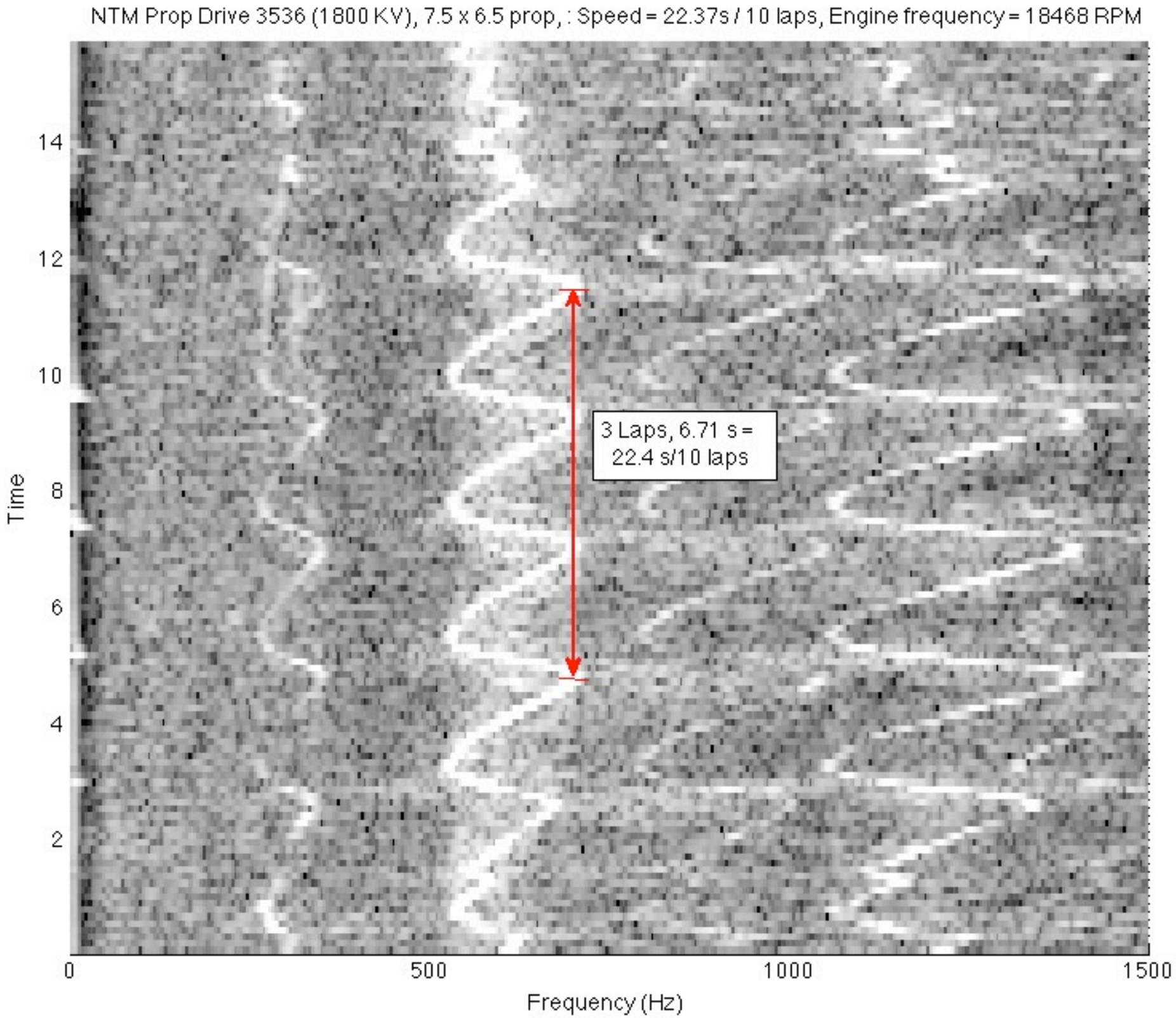
Price: $18.33 (3 plugs, or 1/12 Fora)
Speed: 22.4 s/10 laps

Extract speed and RPM from sound track

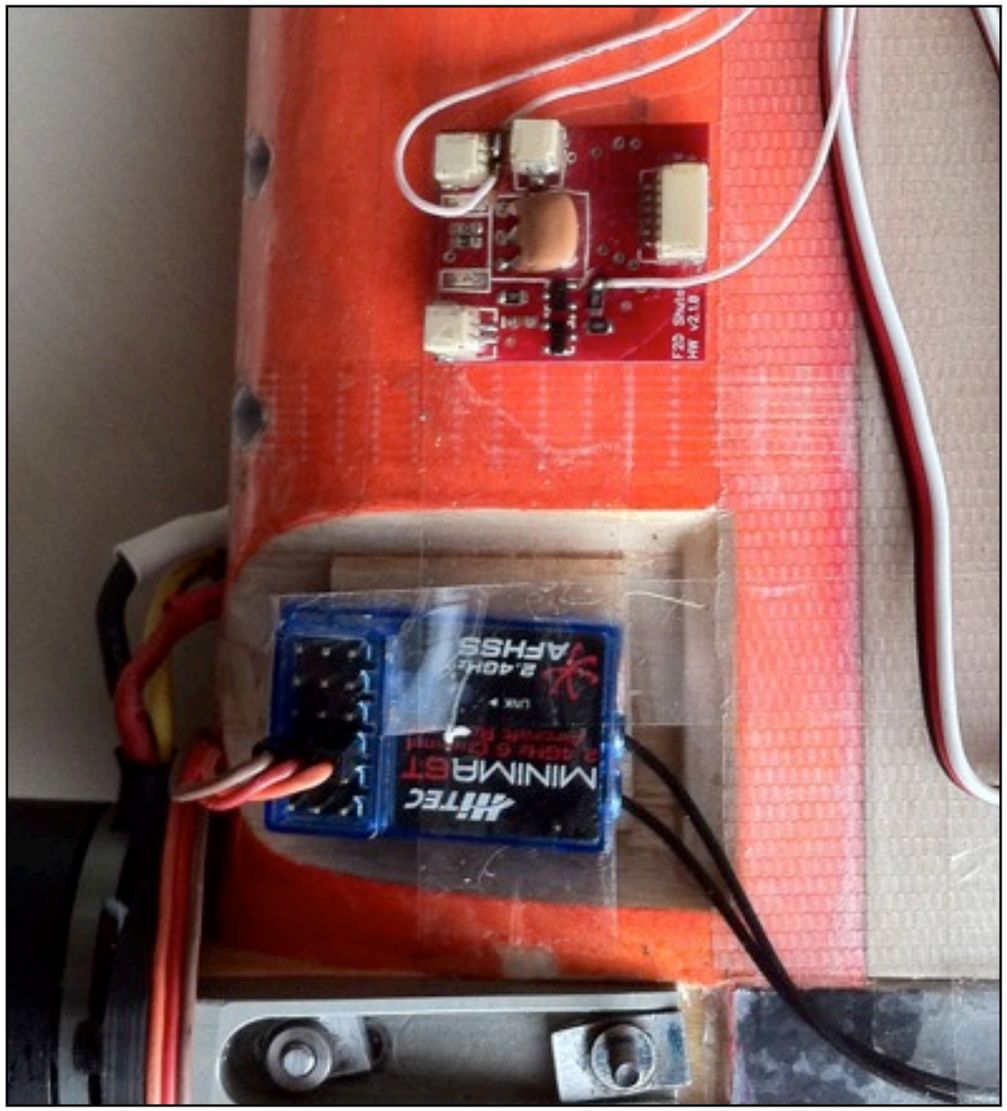


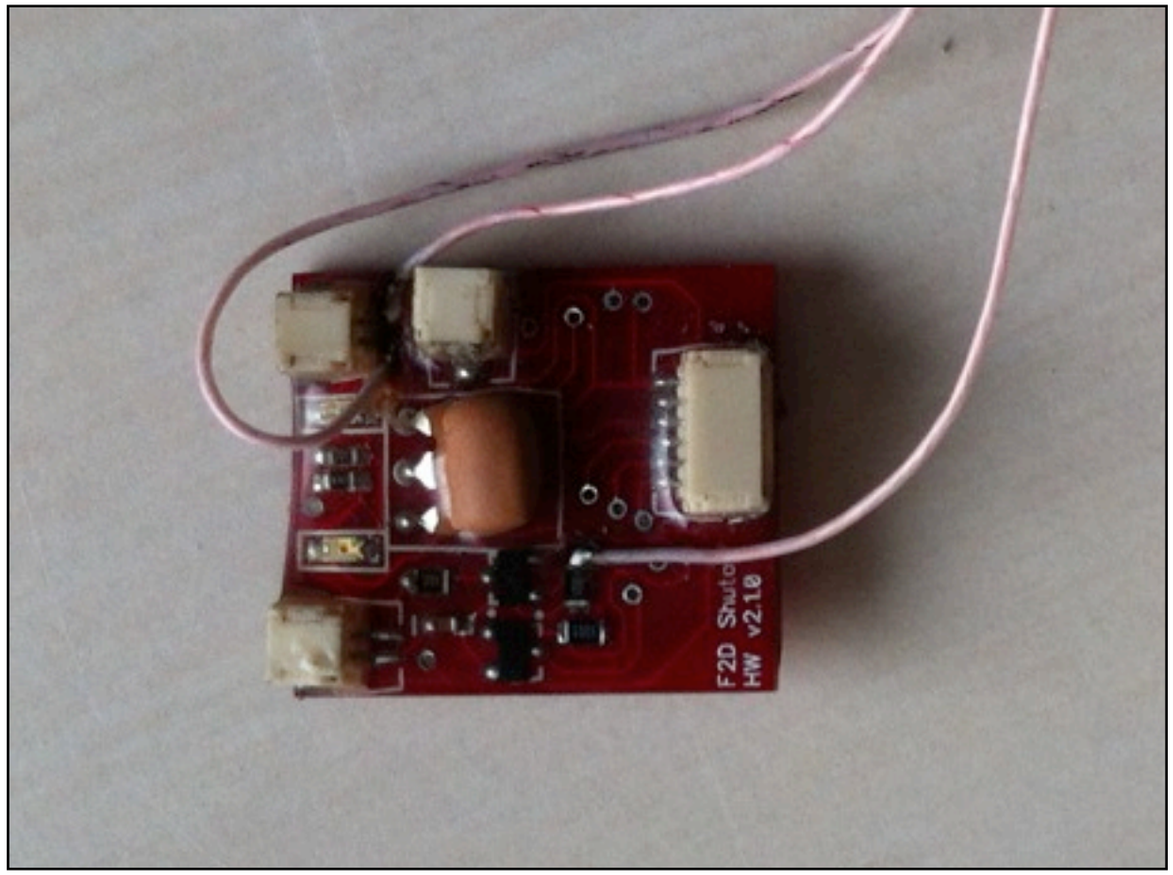
Wide variety of prop shapes, dimensions tested

Wood is light weight, easy to reshape

APC electric: 18 g
Custom wood: 8 g

Motor control and e-shutoff combined

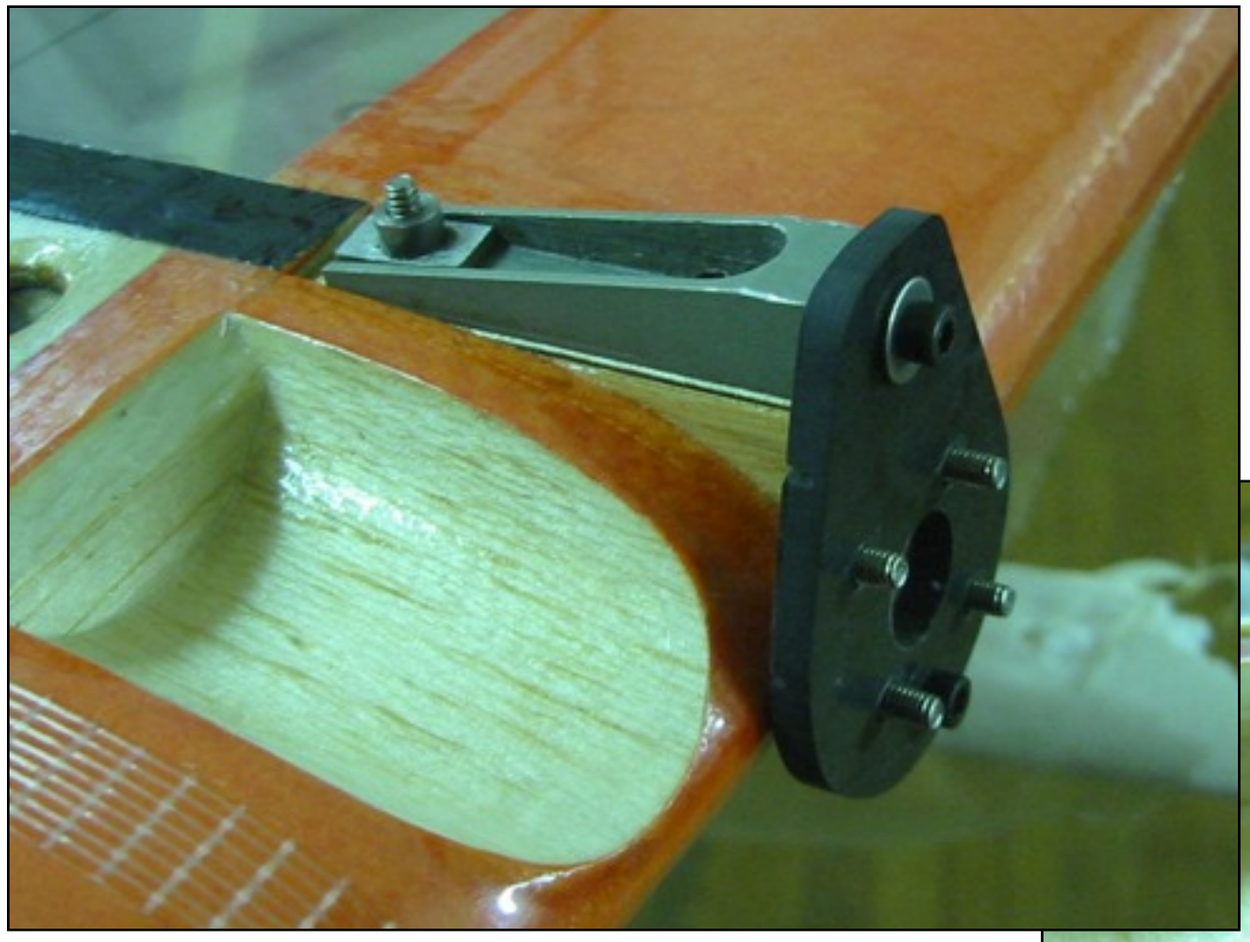


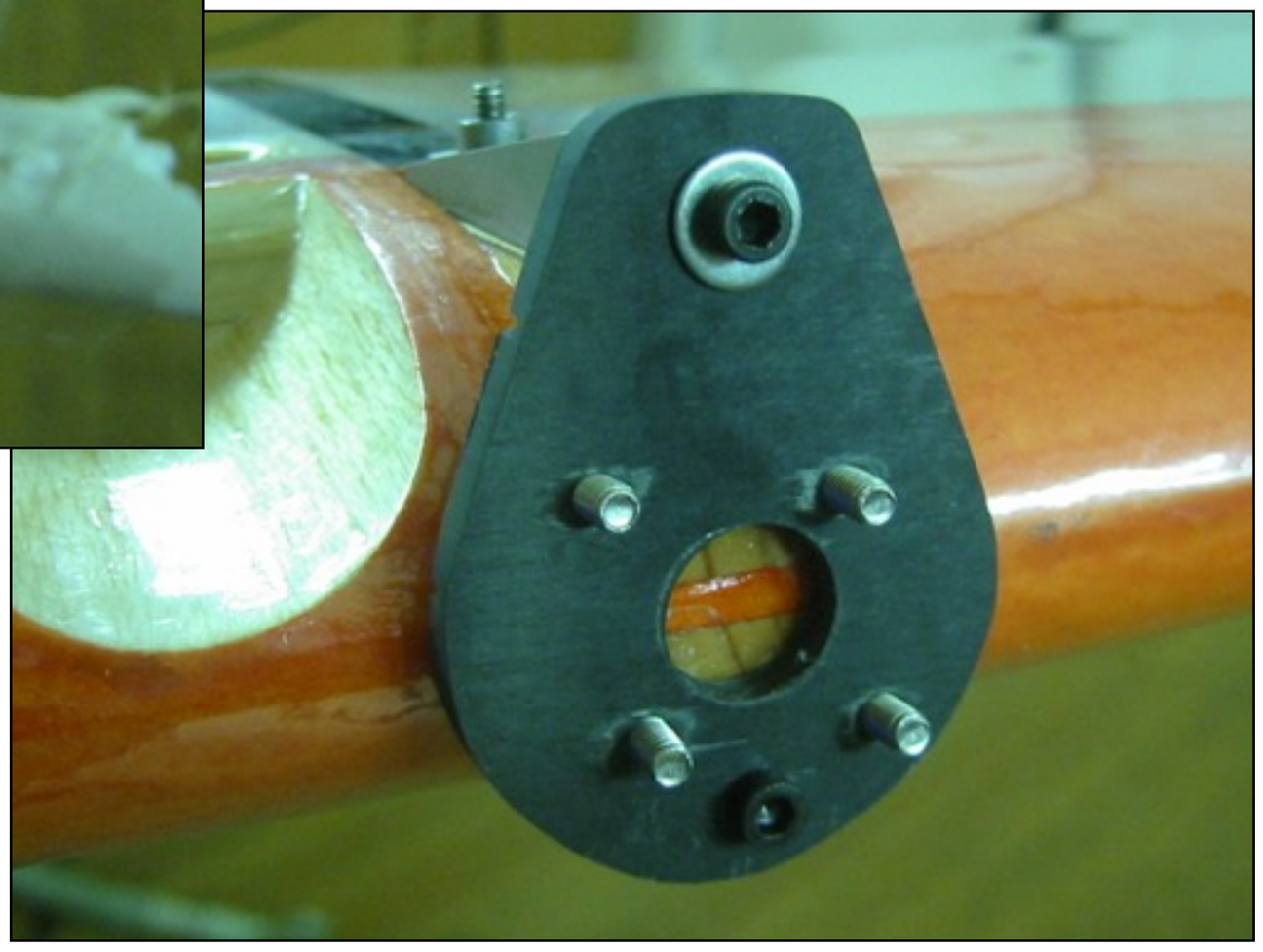


Adapting electro components to F2D models

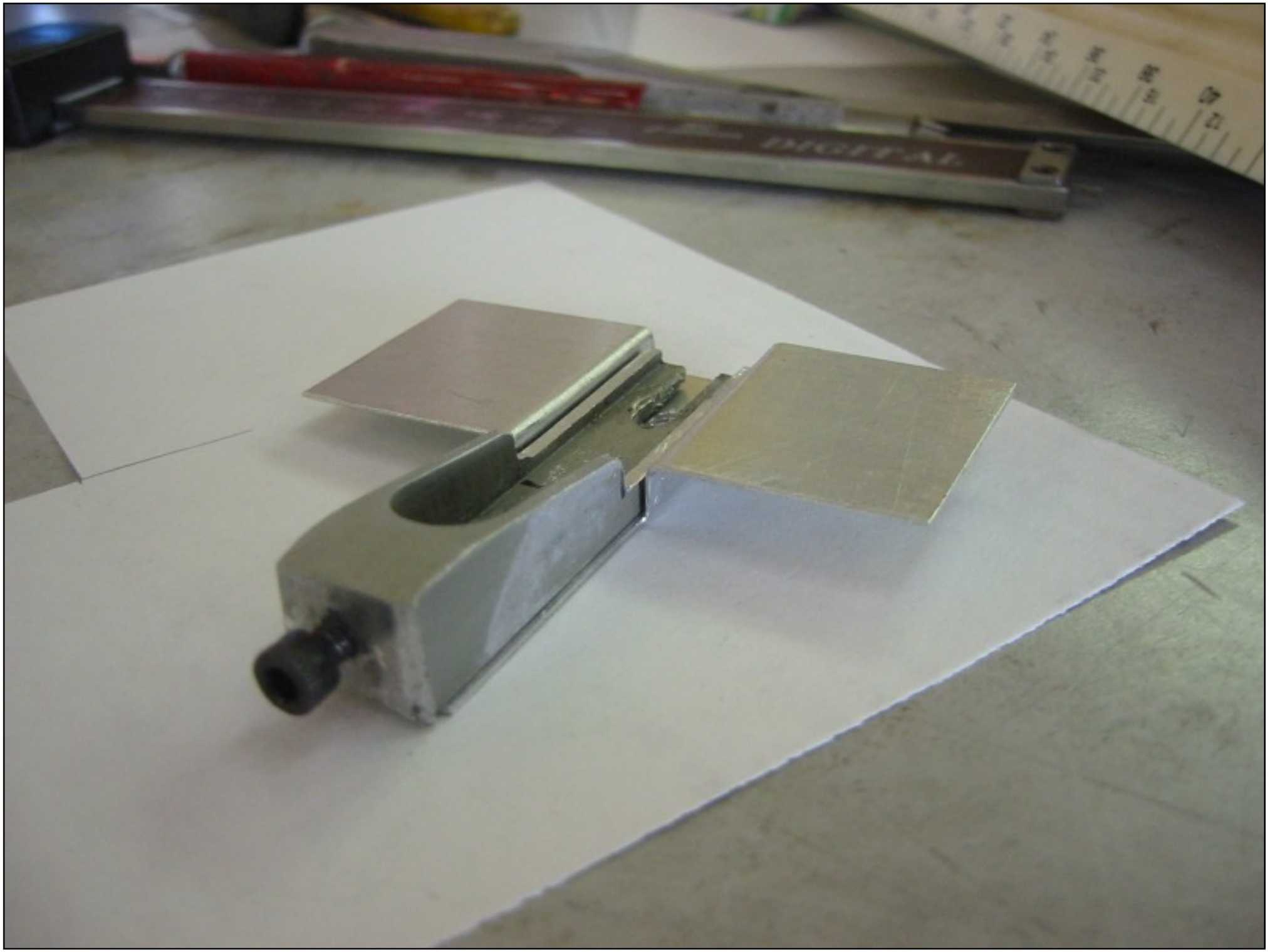
Mounting system

Mounting system





Mounting system (ESC)



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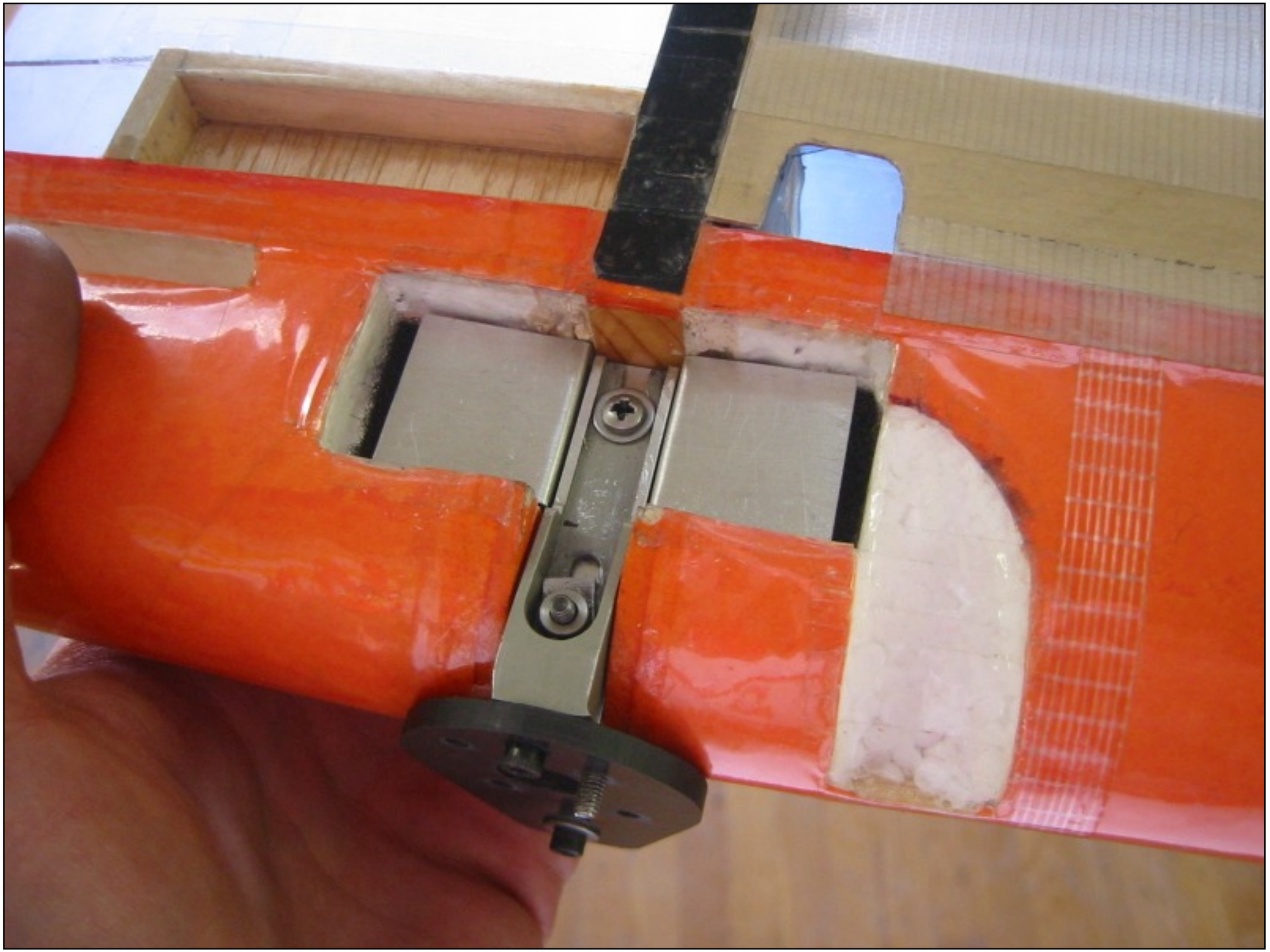

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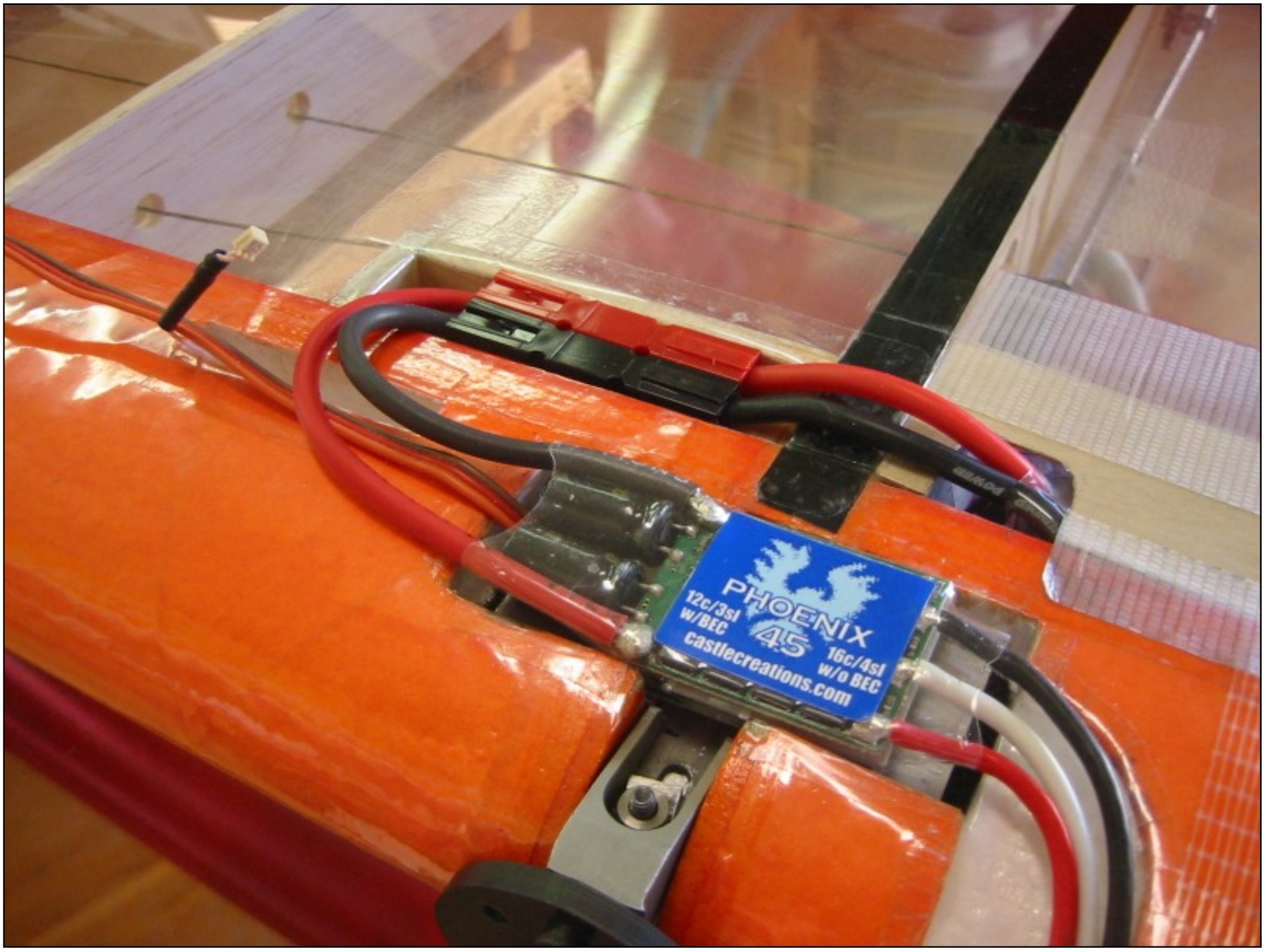
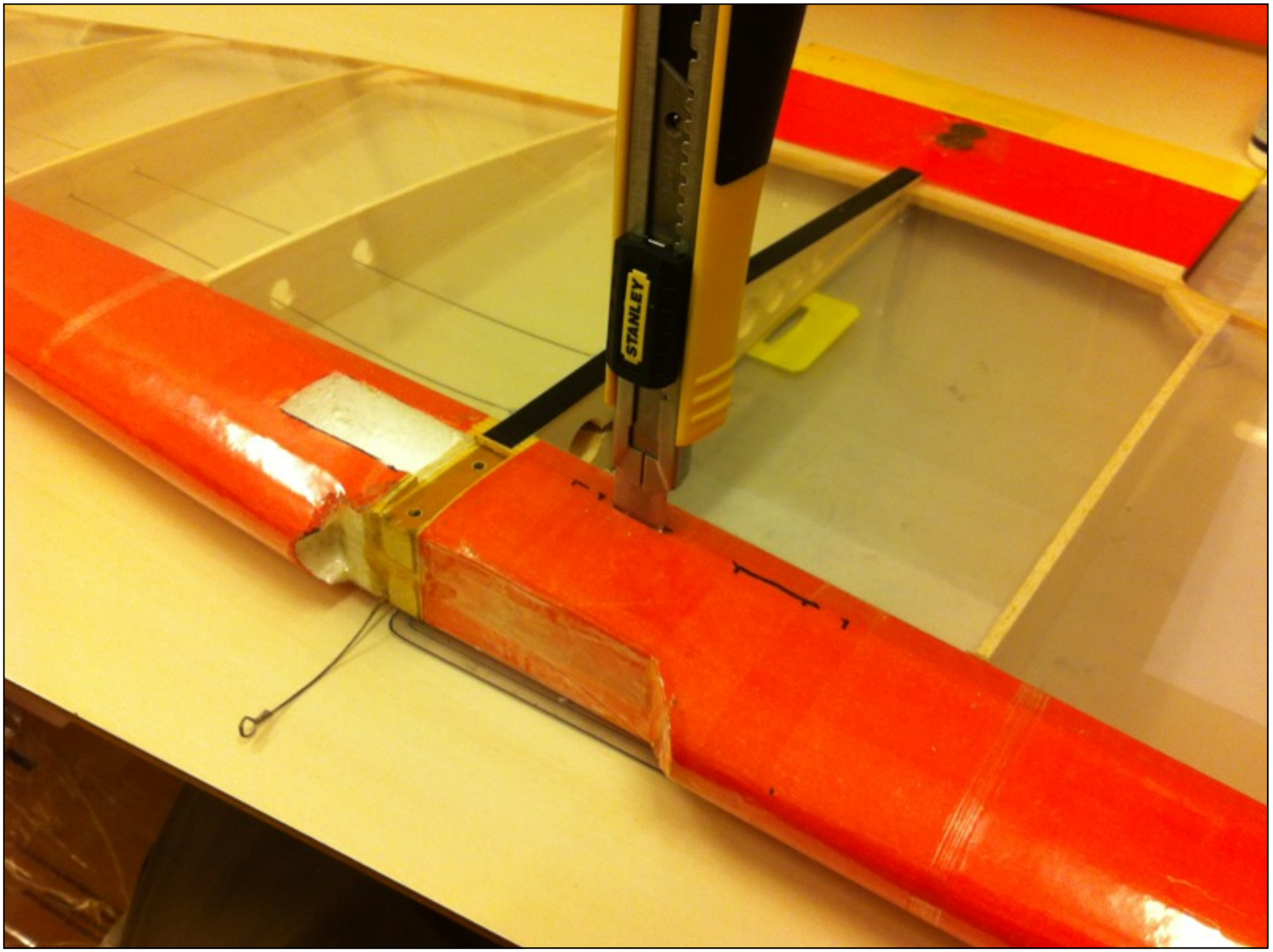


Second generation battery mount



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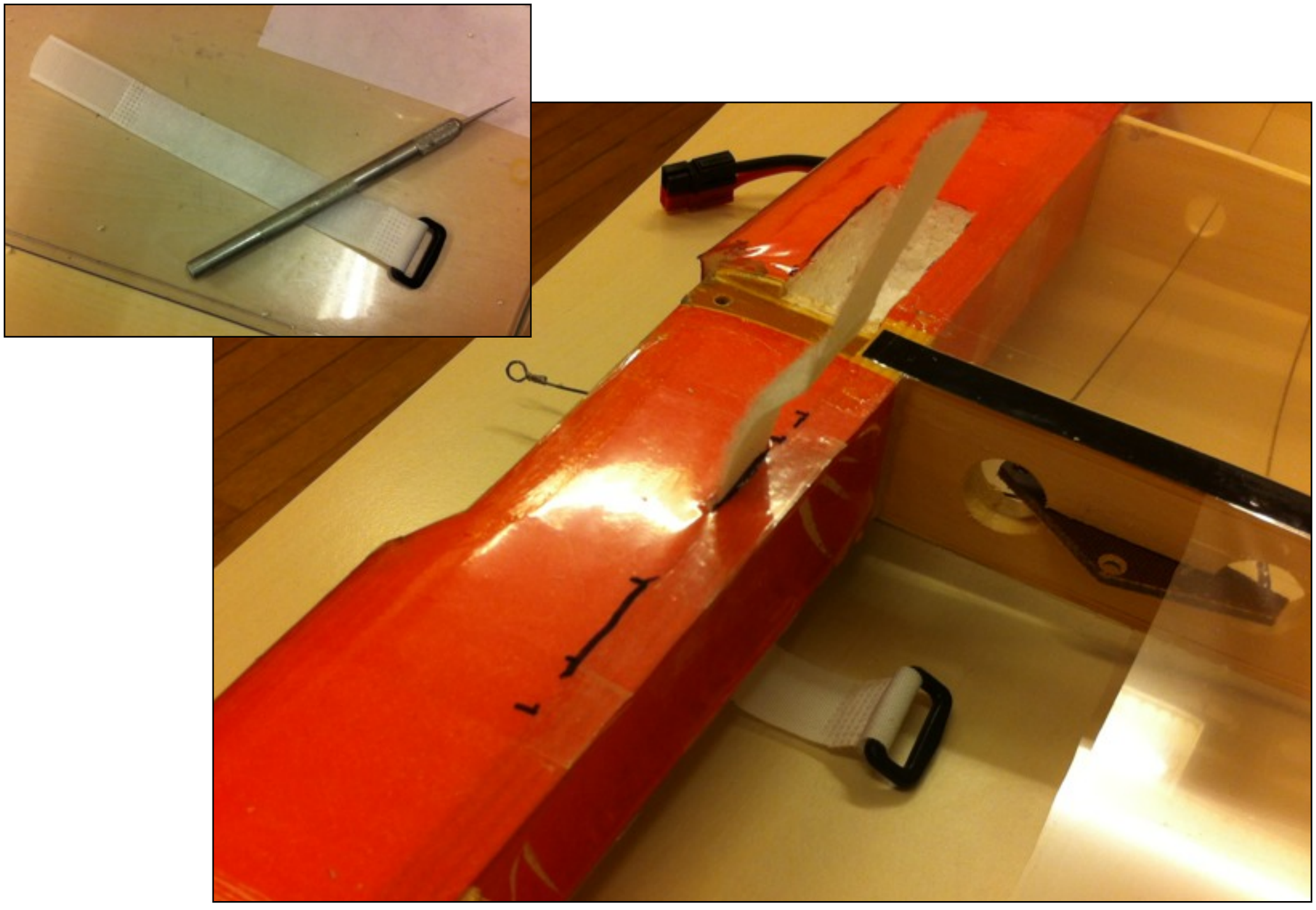

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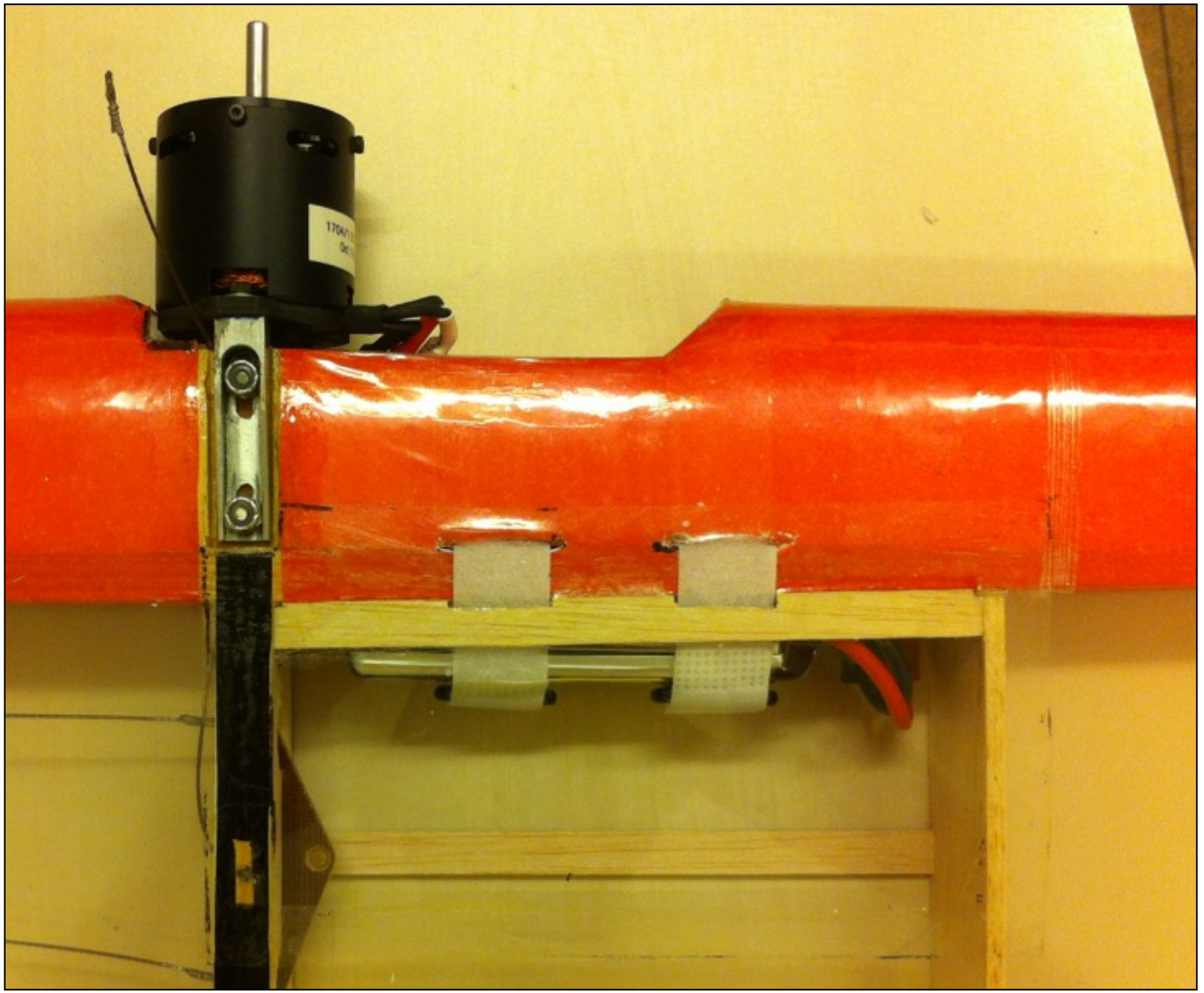

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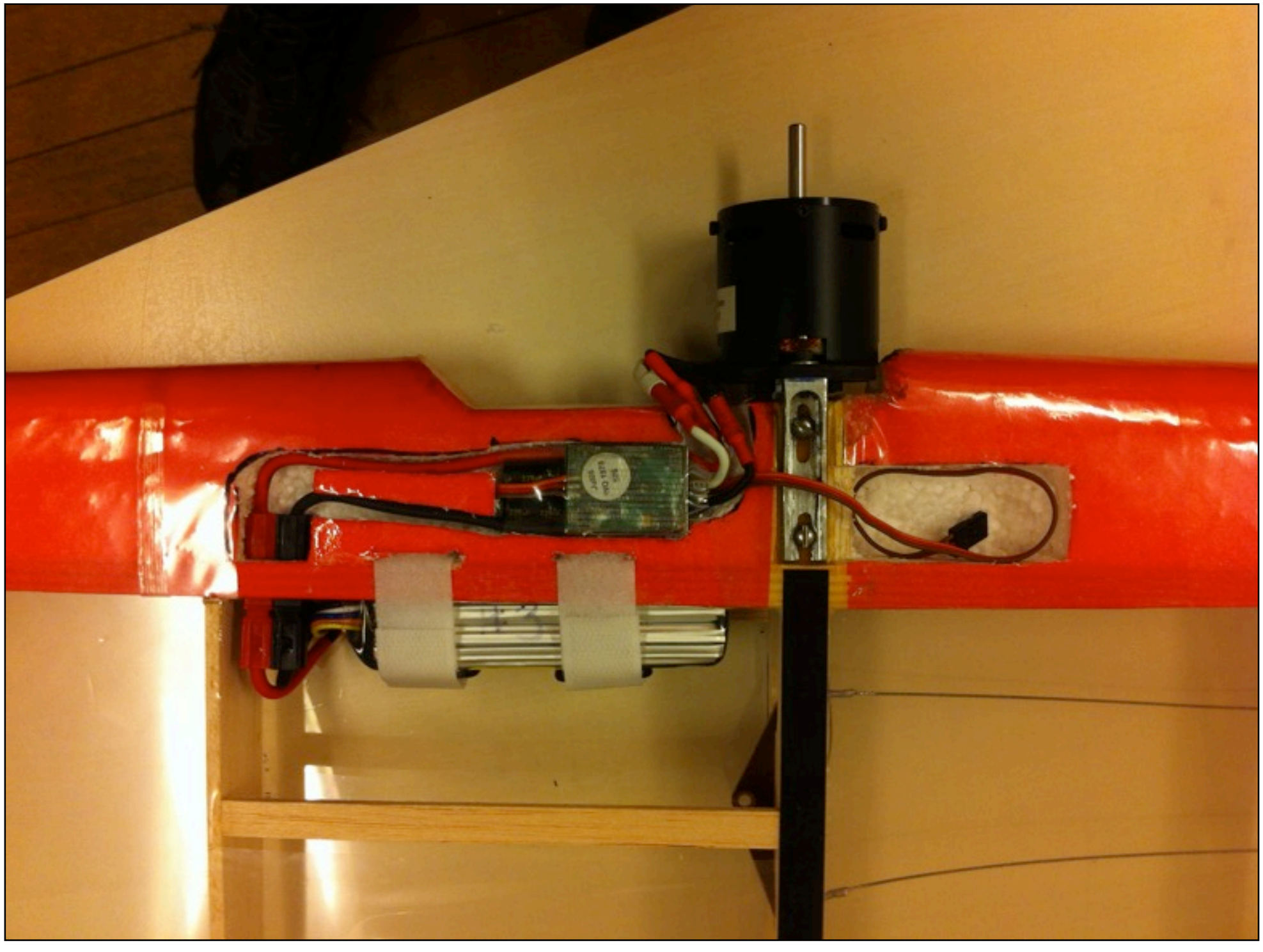

Summary

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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