



Aoyama Gakuin University Space Club
ARLISS2006

Aoyama Gakuin University

- i CAN fly -

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Member



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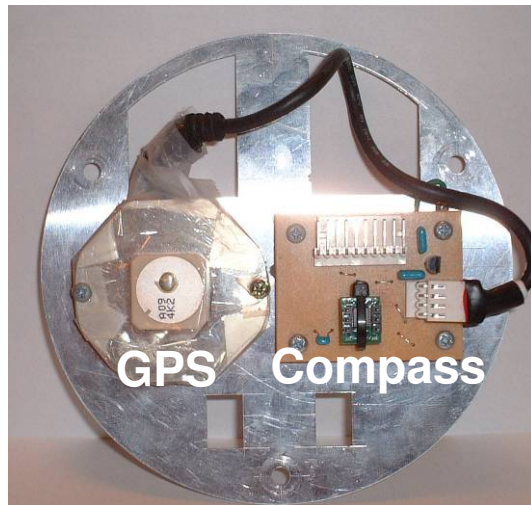
i CAN fly



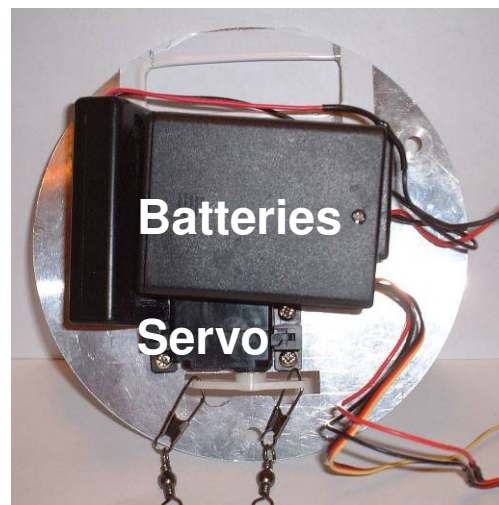
- Open-class CANSAT
- Flyback Exclusive



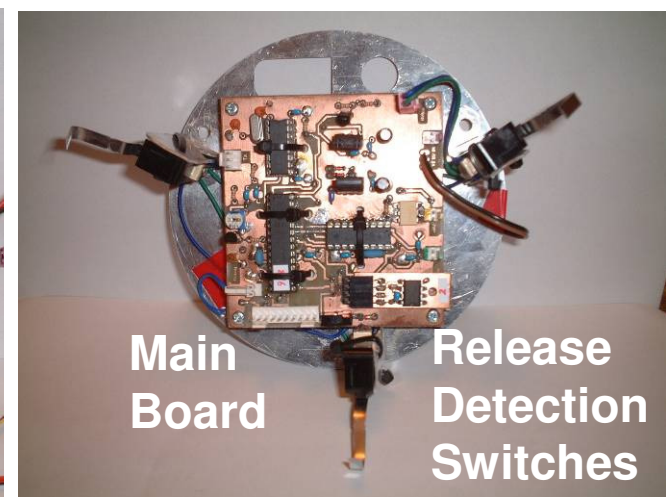
Layers



Top Layer



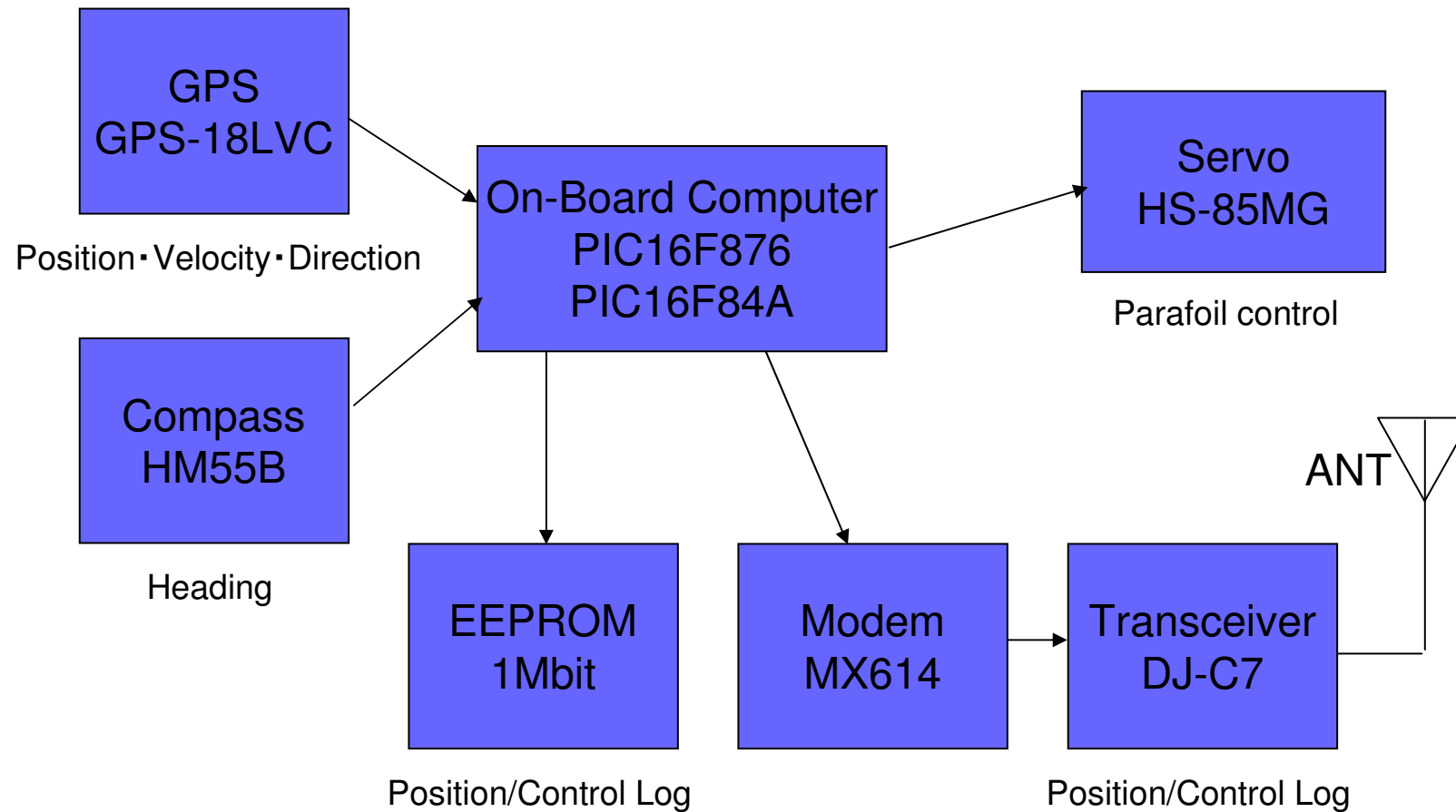
2nd layer



3rd layer

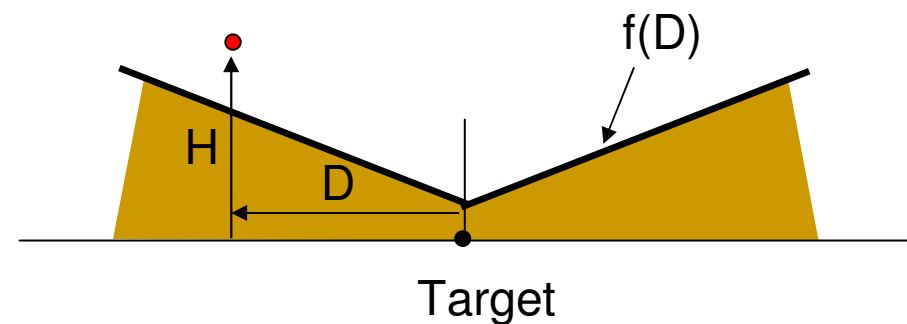
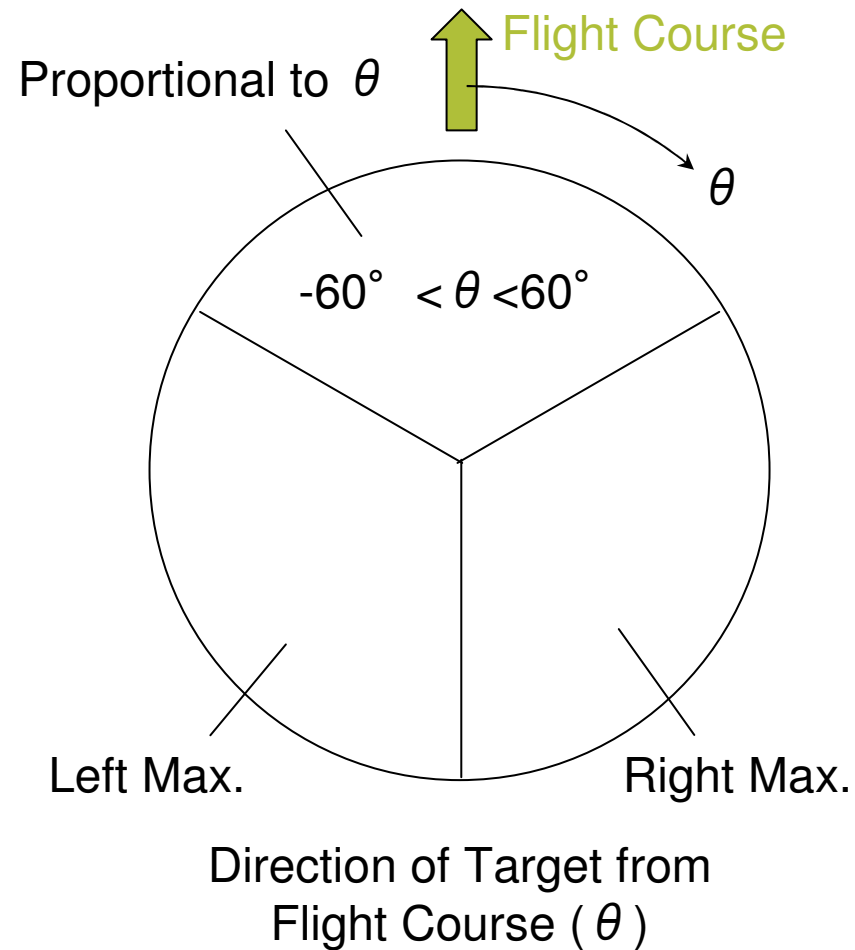


Block Diagram





Control Algorithm



IF $H > f(D)$
THEN Spiral Flight
Kill Height

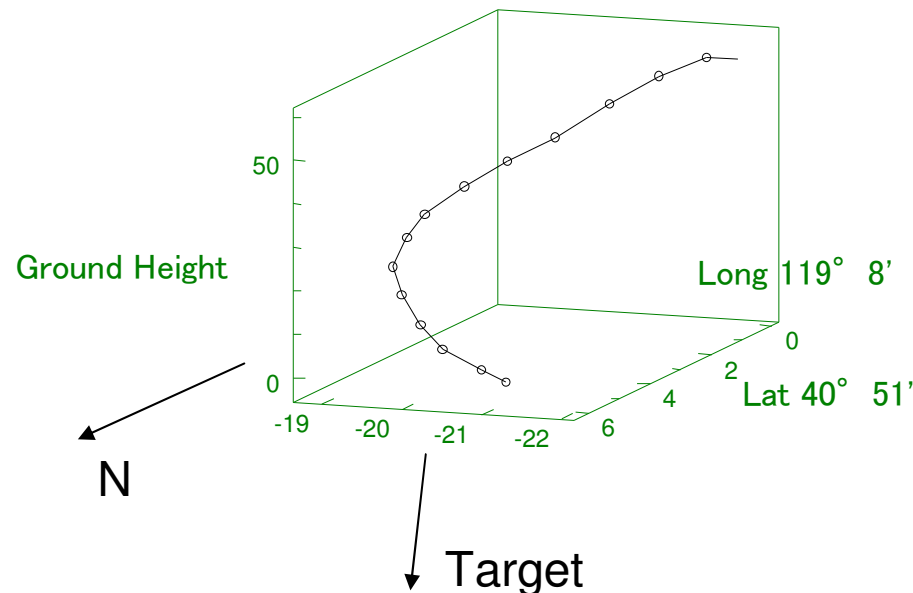


Success Levels

- Minimum
 - ❑ Parafoil Deployment
 - Medium
 - ❑ All functions working properly
 - incl. Positioning, Control, and Data Transmission
 - ❑ Flight log recovery
 - Maximum
 - ❑ Landing within 15m from target
-



First Flight (by Erik)



- Not ejected until 800ft(~240m) high from ground
 - Secondary ejection system worked
- Controlled Flight
- 2250m from target



Second Flight (by Jamie)

- Deployment Succeeded
 - Could NOT detect Beacon after deployment
 - Supposed to start transmission just after deployment
 - Detected Beacon near the Railroad
 - approx. 9km East from Launch site
 - Succeeded to decode the coordinate
 - Found on slope of the hill
 - approx. 13km East from Launch site
 - Transmitter Battery already DEAD
-



13km from Launch Site





Second Flight

■ What happened

- Power was not turned ON at deployment
 - Detection Switch might got stuck with PET film
 - NO-Control / NO-Log Flight
 - Turned ON by shock of landing
 - 30minutes after launch
 - Started beacon transmission
-



Conclusion

- Gave proof of...
 - ❑ Proper circuit operation after launch
 - ❑ 2-hour operation

 - We need...
 - ❑ More reliable release detection
 - ❑ Ways to fly against wind
 - ❑ Ways to drop altitude immediately
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- We would like to thank
 - Prof. A. Koichi Hayashi
 - Erik
 - Jamie
 - All of you!
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