

Course notes, week 49

Outdoor autonomous flight tests

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1 Practical notes

This week you will be conducting your autonomous flight tests at the Test Field, which means that you must rebuild your drone if it broke last module. You need to make sure that:

- Your drone is calibrated and tuned.
- Your drone receives a GPS-fix.
- Your telemetry link is working.
- Your drone logs flights.
- Your logs can be turned into path plans.
- Your batteries are fully charged.
- Your transmitter is fully charged.

When we are done flying and testing, we will head back to the Hangar, where you will end the day by disassembling your drone and cleaning up the hardware. You will then hand all the equipment back to us.

2 Agenda

(8:15) Departure from TEK to SDU UAS Test center.

8:45 Pick up guest cards at HCAA's main entrance in the reception.

- **Remember** an ID card with a picture.

9:00 Preparation of drones, including indoor final drone setup, calibration and tuning (if necessary).

9:45 Walk to the Test Field and perform autonomous drone testing.

- If you don't have a route prepared:
 - Fly the drone manually in Position mode.
 - Record a track log via telemetry during flight.
 - Convert the track log into a route plan.
- Send the route plan to the drone.
- Fly the route plan autonomously, while recording a new track.
- Compare the route plan from the original and new track (make a plot in which you overlay the two flights).

11:30 Pack up and walk back to the Hangar.

12:00 Disassembly and returning of hardware.

We'll drive back to TEK when you are done with disassembling the drones.