Most Important Questions for the Meeting

- Can you share telemetry logs? - NA
- What kind of missions are these drones typically used for? -

Drone Technical Specs

- What is the model name/type of the drone? - Nano FPV
- What are the dimensions (frame size, prop size, weight with/without battery, with different payloads)? 78mmx78mmx33mm, 40mm props, both being tuned for, 65g without payload, max payload of 30g
- What is the thrust-to-weight ratio? NA
- What are the max speed, acceleration, and deceleration values?

Speeds/acceleration Values do have room to flex, These were pulled directly from the demo drone, values in cm/s

LOIT_ACC_MAX,5

LOIT_ANG_MAX,0

LOIT_BRK_ACCEL,250

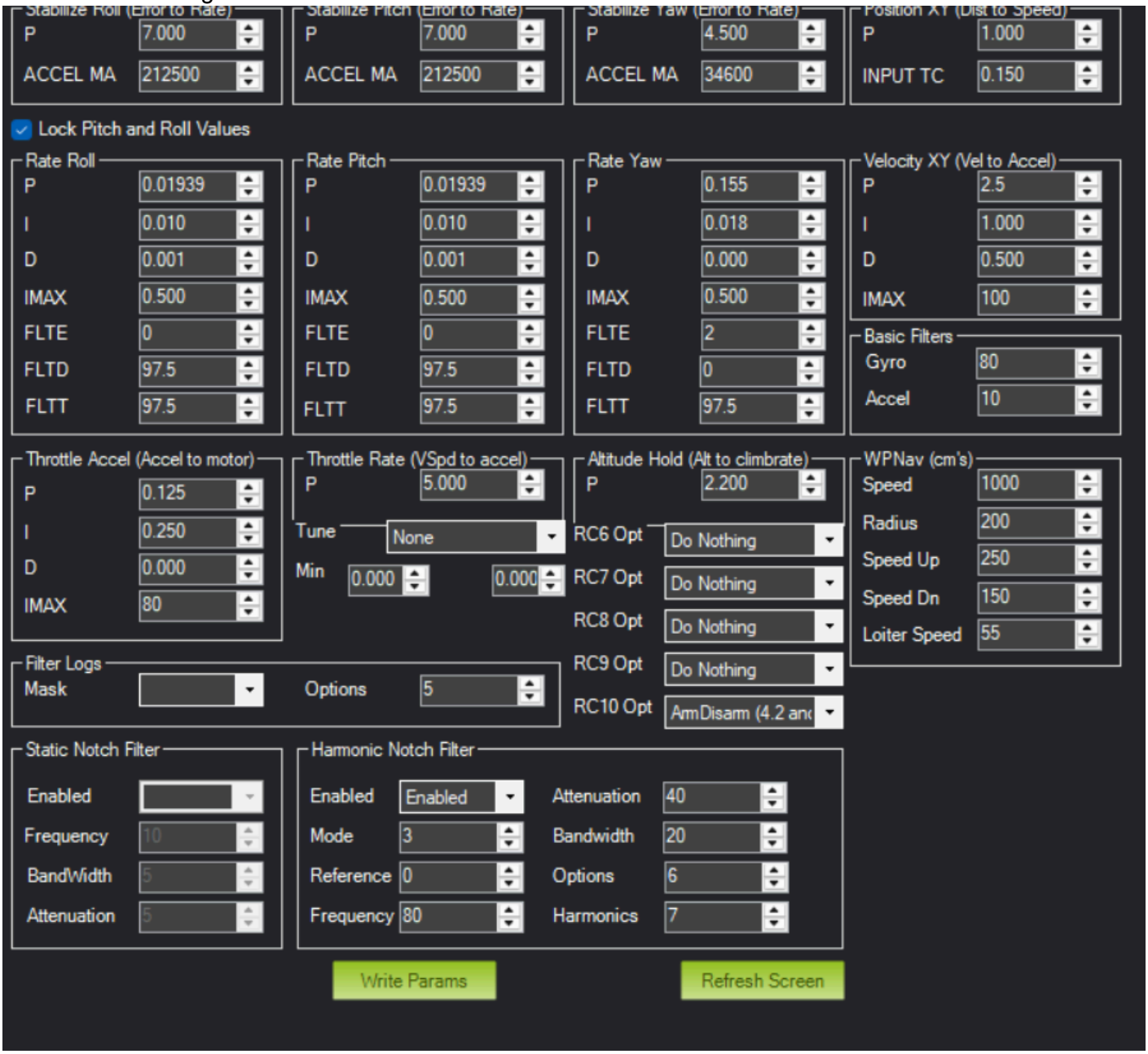
LOIT_BRK_DELAY,0.05

LOIT_SPEED,55

Battery specs (voltage, capacity, typical flight time)? - 350mAh 2s, ~8.5 min

- Motor data (KV rating, torque curves) - 0804 12,000kv, 45W max power, intended for 2s/8.4v
- ESC behavior (braking, dampened light)?

- PID controller configuration?



- Can you share a spec sheet or technical documentation?

Flight Behavior / Physics Data

- What flight mode is typically used? (Acro, Stabilized, etc.) - LOITER mode is typically used, provides optical flow data for X/Y stabilization, and downward facing ToF sensor for a laser altitude measurement.
- How does it behave in wind? How does it recover from yaw spins? - N/A
- How does throttle-to-lift behave under load?
- How sensitive are yaw, pitch, and roll? - Low sensitivity
- Are there any quirks in handling that we should replicate? - There is a horizontal drift if you are stationary and yaw the drone
- Can you provide telemetry logs or sensor data from real flights?

Assets for Participants

- Do you have a 3D model of the drone? (FBX/OBJ/STL)
- Any textures/materials to go with it?
- Any audio assets (motor sounds, propeller noise)?
- Example flight videos?
- Unreal Engine-compatible models or previous projects?
- Can you share input mapping / controller layout diagrams?

Controller Information

- What controllers are typically used with this drone? Proprietary charging/transport controller case, can bind with any ELRS tx. LOITER mode intended flight mode, sprung left and right stick
- Are they USB/Bluetooth compatible? No
- Can we map them to Unreal?
- Can we borrow or demo one at the event?

Use Case & Mission Design

- What are the primary real-world use cases for this drone? - Indoor close range ISR, go look around this corner and in those other rooms at the end of the hall to see what's in them.
- Are there specific mission types you'd like us to simulate? - Through a hallway in a large building or house, open and closed doors through the hallway, rooms to evaluate for their contents.
- What kinds of environmental conditions should we account for? (wind, interference, etc.)

Permissions & Restrictions

- Are there any branding or IP restrictions on using the drone in simulations? - Yes
- Can participants or the event display the drone publicly in demos or social media? - The OBJ file is for temporary use only, no sharing on social media without approval from Tesseract Ventures in writing.
- Can we keep and showcase the best submissions after the event?Only after written approval and consent from Tesseract Ventures.

Tesseract's Involvement

- Would Tesseract like to help judge realism or participate in the event? - Yes, should be established at this point in time.
- Would someone from your team want to speak at the kickoff? No unless more explanation is needed on the system
- Would you like access to the top projects afterward? - Yes

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