



Drone Exploring: Career Spotlights

Entertainment — Post

Overview: This session takes a serious look at the drone entertainment industry as a career: drone light-show choreography and programming, FPV racing and cinematography, and live event coverage. Explorers learn about the FAA waivers required to fly swarms of drones over people, the software used to choreograph a show, and realistic pay across roles. Explorers plan a mock drone show mission, including a choreography timeline and safety exclusion zone.

OBJECTIVES

- Understand the roles involved in the drone entertainment industry: show programmer and choreographer, FPV pilot, and event coverage operator.
- Learn what FAA waivers are required to legally fly drone swarms over or near an audience.
- Identify realistic pay ranges across FPV piloting, show programming, and event coverage roles.
- Practice planning a mock drone show mission, including a choreography timeline and safety exclusion zone.

SUPPLIES

- Laptop and projector to show sample drone light show and FPV racing footage
- Printed handouts: Career Pathway — Drone Entertainment Professional and Show Mission Planning Worksheet
- Whiteboard or flip chart and markers
- Optional: printed or digital copy of FAA's free Part 107 study guide ([faa.gov/uas](https://www.faa.gov/uas))

ADVISOR NOTES

- This session is career-focused: use real company examples, real waiver requirements, and real pay ranges rather than a hobbyist framing.
- Emphasize that flying a swarm of drones over an audience requires special FAA waivers beyond standard Part 107, since standard rules limit flights over people.
- Note that FPV racing and drone show programming are two very different skill sets within the same broad industry — hand-flying skill versus software and choreography skill.
- Consider inviting a guest speaker who works in drone show production, FPV racing, or live event drone coverage to share their career path — see Optional Extensions.
- If no guest speaker is available, Advisors can run the entire session using this outline, the Career Pathway handout, and the resource links below.

SESSION OUTLINE

- **Welcome and Icebreaker** (10 min)
 - “Which drone entertainment career sounds more interesting to you: choreographing a light show, racing FPV, or filming a live event — and why?”
- **Regulatory Moment: Waivers for Flying Over People** (10–15 min)
 - Review the FAA Part 107 Remote Pilot Certificate: minimum age 16, required knowledge test.
 - Explain that flying dozens or hundreds of drones over a live audience requires special FAA waivers beyond standard Part 107 rules, plus extensive safety planning and rehearsal.
 - Discuss why redundancy (backup batteries, backup drones, fail-safe landing behavior) matters so much for shows performed live.
- **Mini-Lesson: Careers in Drone Entertainment** (15–20 min)
 - Roles: drone show programmer and choreographer, FPV racing pilot, live event drone camera operator.

- Typical pay: FPV pilot roles are posted from roughly \$45-\$50/hour up to \$100,000-\$400,000/year for top competitive and testing roles; drone show crew and event coverage roles vary widely by company and market.
 - Discuss the software and hardware skills needed: choreography software for shows, high-speed manual flying for FPV, and camera or gimbal skills for event coverage.
- **Activity: Plan a Drone Show Mission** (20–25 min)
- Using the Show Mission Planning Worksheet, small groups plan a mock drone light show, accounting for the number of drones, formation sequence or timeline, exclusion zone size, and backup plan.
- **Wrap-Up Discussion** (10 min)
- Groups present their show mission plans.
 - Discuss the concrete steps (certification, practice, portfolio) needed to pursue a career in this field.

REFLECTION SECTION

Advisor Note: Some sample questions are below. They are designed to help the participants apply what they have learned to their own interests. You are welcome to use these questions or develop your own.

Focusing Questions

- What surprised you about the waivers and safety planning required for a live drone show?
- Which entertainment drone career (choreography, FPV racing, event coverage) sounds most interesting to you?

Analysis Questions

- Why does flying drones over an audience require more than just a standard Part 107 certificate?
- How is the skill set for FPV racing different from the skill set for programming a drone light show?

Generalization Questions

- How is rehearsing and planning for a live drone show like preparing for any live performance?
- What other careers combine creativity with strict technical safety requirements, like this one does?

Challenge: This week, research one company that produces drone light shows or FPV racing events and identify what roles they hire for.

OPTIONAL EXTENSIONS

Guest Speaker: Invite someone who works in drone show production, FPV racing, or live event drone coverage to share their career path and take questions, in person or by video call.

Advisor-Led Option: If no guest speaker is available, Advisors can run the full session using this outline, the Career Pathway handout, and the resource links below — no outside expert is required.

Resource Links: FAA Part 107 overview ([faa.gov/uas/commercial_operators](https://www.faa.gov/uas/commercial_operators)); FAA information on waivers for operations over people; drone show and FPV racing company career pages.

Extension Project: Explorers who are 16 or older can begin studying for the actual Part 107 knowledge test using the FAA's free study guide.

Handout: Career Pathway — Drone Entertainment Professional

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Drone entertainment careers branch into a few different pathways:

Show Programming and Choreography Pathway

Uses choreography software to plan formations and light patterns; may require attending a dedicated drone show pilot training program.

FPV Racing and Cinematography Pathway

Hand-flying skill with video goggles; competitive roles and testing/field roles have been posted from \$45-\$50/hour up to \$100,000-\$400,000/year.

Live Event Coverage Pathway

Combines Part 107 flying with camera and gimbal and video editing skills, like drone cinematography.

Getting Started

FAA Part 107 certification (age 16+), practice flying and editing, and building a demo reel are common first steps across all three pathways.

Handout: Show Mission Planning Worksheet

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Use this worksheet to plan your mock drone light show mission.

Planning Item	Your Plan	Notes and Risks
Number of drones and formations		
Choreography timeline		
Exclusion zone size		
Backup or fail-safe plan		
Weather go or no-go decision		