

Night Flying Tips – Cockpit2Cowl 10-14-26

Preflight

- All daytime preflight – plus all things involving light should work:
 - Interior panel/pedestal lights – check
 - 2 working flashlights:
 - One hands-free (demo)
 - All exterior lights (which ones required)
 - Beacon (req)
 - Strobe lights (depends on when it was built (91.205 (c))
 - Nav lights (req)
 - Landing lights (req if commercial ops)
- **Beacon and strobes are one system.** The FAA says the rotating beacon and strobes are both approved anti-collision lights under § 23.1401(a)(1), so they are parts of one system, not two backups for each other. In Letts, the FAA said every part of that system has to work to meet § 91.205.faa+1
- **A working beacon doesn't cover the gap.** Together, the two lights provide the system's certified field of coverage, so with one wing strobe out, the system no longer meets its certification standard.
- Night regs – definitions. See www.SchiffNotes.com
- FAR 1.1 = *Night* means the time between the end of evening civil twilight and the beginning of morning civil twilight, as published in the Air Almanac, converted to local time.
- Use a VERY bright white light for preflight. (old-timers say don't use white, not so true today, but true if flying in very dark environment)
- Harder to see if you're tied down or chocked...ALWAYS roll a/c fwd a few feet. You don't want to do turns about a tiedown.
- Before start – Beacon and NAV lights – ON to warn others nearby
 - (strobe at takeoff)

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Before Taxi:

- Reduce cockpit ambient light
- Turn on taxi/landing light

During Taxi:

- Roll out of parking spot slowly – no faster than you want to be when you hit anything.
- TAXI SLOWLY!!! Pilots tend to taxi too fast at night because of the lack of visual cues.
- Stay on centerline – unlit objects near taxiway edges
- Mind your taxi/landing light when pointed at someone
- Use caution for airplanes with pilots who didn't watch C2C and forgot to turn on their lights!

Takeoff:

- All lights on
 - Know what to expect when you rotate – will you have a horizon?
 - Set heading indicator for runway heading – just in case.
 - Look at lights far away. Close lights can be mesmerizing
 - Use instruments during/after rotation.
 - Fly straight for several hundred feet (longer than normal) before turning
- Don't forget to enjoy how beautiful it is at night.
 - WATCH OUT FOR DARK AREAS –
 - Flat
 - Mountains
 - Cloud

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- Watch for lights at the edge changing. If you see **more and more lights on the far side, you're overflying a mountain.** If you see **fewer and fewer lights as you approach the dark area, you're below the mountain.**
- Consider that the dark area could be an unlit mountain.
- IF POSSIBLE, FLY ONLY WITH AT LEAST 50% MOON VISIBLE
- Too many lights can make it difficult to find your airport.
 - Find the rotating beacon first. Don't look for runways (they look like roads). Look to the side of where you think it is because of your nighttime blind spot. (see exercise in Appendix A)
 - Then find the runways.

LANDING

- You don't have visual cues as you do at night. Rely more on your instruments.
- Common mistake – tend to fly too fast. Add a few knots for darkness, a few knots cuz they're lonely – USE THE SAME AIRSPEEDS and approach cues.
- Choose a runway with PAPI or VASI
 - Otherwise, fly a 3-degree path
 - $VSI = 5 \times \text{airspeed}$
 - Watch what the runway does: Up – nose up and get it. Down – nose down and get it (watch airspeed)
- Common mistake – tend to fly too fast. Add a few knots for darkness, a few knots cuz they're lonely – USE THE SAME AIRSPEEDS and approach cues.
- When to flare? When you see runway details.

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INOP light in Anti-collision system: (AI)

If an airplane has a beacon and strobe lights, and one strobe light on one wing fails, can you continue night flight beyond a place where they can be repaired? In other words, how is such a system treated?

- No. Under the FAA's reading, one failed wingtip strobe means the whole anti-collision light system has a failed light. You can fly only to a place where it can be repaired, not past one.

How the system is treated

- **Beacon and strobes are one system.** The FAA says the rotating beacon and strobes are both approved anti-collision lights under § 23.1401(a)(1), so they are parts of one system, not two backups for each other. In Letts, the FAA said every part of that system has to work to meet § 91.205.[\[faa\]](#)[\[faa\]](#)
- **A working beacon doesn't cover the gap.** The two lights together give the system its certified field of coverage, so with one wing strobe out, the system no longer meets its certification standard.

What the rule allows

- **Night VFR:** § 91.205(c)(3) requires an approved red or white anti-collision light system. It says that if any light in the system fails, you may continue "to a stop where repairs or replacement can be made".[\[govinfo\]](#)
- **"Any light":** The rule's own words cover a single strobe, so you don't need to lose the whole system for it to apply.
- **Not beyond a repair stop:** The permission ends at a stop where repairs can be made. Flying past a field that could fix it to keep your schedule goes beyond what the rule allows. I didn't find an FAA letter that defines exactly which stop that is, but the plain wording points to the first practical one.

Why the usual workarounds fail

- **Placarding it INOP (§ 91.213(d)):** This doesn't work, because § 91.213(d) won't let you defer equipment that § 91.205 requires for the flight. At night, § 91.205 requires the anti-collision system. Letts rejected the same idea for a broken beacon.
- **The pilot's safety exception (§ 91.209(b)):** The pilot in command may turn the lights off when that's safer, but the exception is not a way to fly with broken equipment. The lights that still work must stay on unless conditions call for turning them off.[\[pilot-protection-services.aopa\]](#)

What does work:

- an approved MEL that covers that light, for operators who have one;
- a waiver under § 91.903 (§ 91.905 lists § 91.209 as waivable);

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- a ferry permit;
- repairing the light.

Caveat

- This assumes the strobes were installed and approved as part of the anti-collision system, which is normal for a factory or STC installation. If the paperwork shows a strobe as purely supplemental lighting, that changes the analysis. Check the type certificate data sheet, the equipment list and the STC.
- Short version for pilots: one failed light means the system has failed. Get it to a repair shop, don't finish the trip with it.

FAR 91.205 (c) *Visual flight rules (night)*. For VFR flight at night, the following instruments and equipment are required:

(1) Instruments and equipment specified in [paragraph \(b\)](#) of this section.

(2) Approved position lights.

(3) An approved aviation red or aviation white anticollision light system on all U.S.-registered civil aircraft. Anticollision light systems initially installed after August 11, 1971, on aircraft for which a type certificate was issued or applied for before August 11, 1971, must at least meet the anticollision light standards of [part 23](#), [25](#), [27](#), or [29 of this chapter](#), as applicable, that were in effect on August 10, 1971, except that the color may be either aviation red or aviation white. In the event of failure of any light of the anticollision light system, operations with the aircraft may be continued to a stop where repairs or replacement can be made.

(beacon and strobes are one system – even though on different switches – see letter of interpretation.)

(4) If the aircraft is operated for hire, one electric landing light.

(5) An adequate source of electrical energy for all installed electrical and radio equipment.

(6) One spare set of fuses, or three spare fuses of each kind required, that are accessible to the pilot in flight.

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61.57(b) Night takeoff and landing experience.

(1) Except as provided in [paragraph \(e\)](#) of this section, no person may act as pilot in command of an aircraft carrying persons during the period beginning 1 hour after sunset and ending 1 hour before sunrise, unless within the preceding 90 days that person has made at least three takeoffs and three landings to a full stop during the period beginning 1 hour after sunset and ending 1 hour before sunrise, and—

(i) That person acted as sole manipulator of the flight controls; and

(ii) The required takeoffs and landings were performed in an aircraft of the same category, class, and type (if a class or type rating is required).

(2) The takeoffs and landings required by [paragraph \(b\)\(1\)](#) of this section may be accomplished in a full flight simulator that is—

(i) Approved by the Administrator for takeoffs and landings, if the visual system is adjusted to represent the period described in [paragraph \(b\)\(1\)](#) of this section; and

(ii) Used in accordance with an approved course conducted by a training center certificated under [part 142 of this chapter](#).