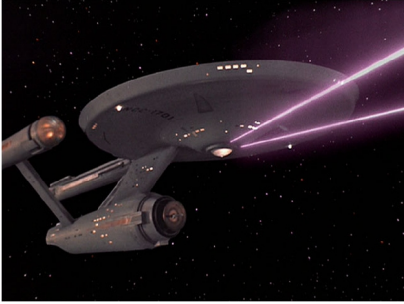


LASER WEAPONS FOR AIRCRAFT AND SHIPS

Most have seen the Star Wars and Star Trek movies as well as the many Star Trek TV series re-runs. In those movies/series the weapons the spacecraft crew often used were phasers, phaser cannons, phaser beams, blasters, ray guns, and other beam weapons to destroy the enemy. Most believe that these movies and series are fun to watch but science fiction for some time in the future. Not so fast! The weapons they used are real, now!



This was science fiction.

You might not know it, but most likely the body of the car you drive was cut and [welded by a laser](#). This has been done for over 30 years. The same goes for the [clothes you wear](#). You don't think scissors were used to cut out your clothes? The Navy's Laser Weapon System (LaWS) recently targeted and shot down an aerial drone in testing; meanwhile another



This is real!

aircraft-mounted laser system (this one for self-defense) may commence testing in 2014. The Navy's test involved a destroyer-mounted laser that successfully tracked and engaged a flying drone. The aerial vehicle caught fire in flight and crashed into the sea. The Navy released a video showing its new laser weapons system during an exercise at sea. The laser is capable of destroying planes, drones and boats. Chief of Naval Operations Admiral Jonathan Greenert praised the LaWS ability to take out targets at a tiny fraction of the cost of other conventional weapons. He claimed that the LaWS can shoot down a small drone for about \$1 worth of electricity and, once the laser is operational, it should be able to replace a Gatling gun, whose rounds can cost several thousand dollars each.



Watch the Navy's new ship-mounted laser kill a drone [KILL DRONE](#).

Next year, the USS Ponce is expected to carry the system to the Persian Gulf. Meanwhile, [DARPA](#) (Defense Advanced Research Projects Agency) may soon test a High Energy Liquid Laser Area Defense System (HELLADS) mounted on an aircraft and designed for defense against inbound threats. The laser is liquid-cooled and solid state. It was completed in 2012 and is expected to be integrated into different platforms in 2013 with the possibility of real-world tests in 2014. For aircraft, the system would serve in a self-defense capacity, targeting inbound anti-aircraft missiles and other threats fired at aircraft. A B1 Bomber is expected to carry the first test article.

(Information adapted from multiple sources including the April reports and news releases by ABC, CBS, [NBC](#), [Industrial-Lasers.com](#), AvWeb, [Wired.com](#))

AVIATION QUESTION OF THE MONTH

Answer to last month's question: *A pilot wants to fly his certificated plane, but on preflight he realized the airplane has a bulb burned out in the anti-collision light system and there's no A&P mechanic to fix the bulb at his airport. He is flying an airplane that was certificated after March 11, 1996. Can the airplane be flown, or does a mechanic have to come fix the light first?*

According to AOPA and the FAA: The airplane can be flown, but only to a place where you will get the bulb repaired or replaced before you depart again. Part [91.205 \(b\)\(11\)](#) states that an aircraft must have all lights working in the anti-collision light system: "For small civil airplanes certificated after March 11, 1996, in accordance with Part 23 of this chapter, an approved aviation red or aviation white anti-collision light system. In the event of failure of any light of the anti-collision light system, operation of the aircraft may continue to a location where repairs or replacement can be made." Note that if you have a experimental amateur-built aircraft just replace the bulb yourself. You might want to enter what you did in your logbook/maintenance records.

This Month's Question: How long should you wait to go flying at night after looking at a bright light?

MEDICAL CERTIFICATES EASIER TO GET FOR THOSE WITH CONDITIONS

The FAA physicians in Oklahoma City and Washington, D.C., amended the certification policy (different and easier than having to change a “regulation”) for a group of low-risk medical conditions to eliminate the special issuance requirement. Now, there are worksheets included in the [Guide for Aviation Medical Examiners](#), the online reference guide for AMEs, for the conditions that require specific medical evaluations and testing that you will obtain from your treating physician and provide to your AME at the time of your flight physical. If all the requirements specified in the worksheet are met, the AME may issue you a medical certificate without calling the FAA for verbal or written permission. The new procedures are called CACI – for “Conditions AMEs Can Issue.” The CACI conditions are arthritis, asthma, glaucoma, chronic hepatitis C, hypothyroidism, migraine and chronic headache, pre-diabetes conditions, and renal (liver) cancer.

(Information adapted from multiple sources including [Flying e-Magazine](#), 04/16/13, [AvwebBiz](#) 04/17/13, [AOPA ePilot](#) 04/26/13, and the FAA)



PILOT'S GUIDE TO AVIONICS NOW AVAILABLE – *FREE!*

The 2012-13 edition of the Aircraft Electronics Association's Pilot's Guide to Avionics is now available. To request a complimentary copy, visit [AEPilotsGuide.net](#). This special 10th anniversary edition is a consumer's directory containing buyer's guides, educational articles and timely information about the avionics industry, its products and its people. The publication helps pilots make better buying decisions and locate more than 1,300 AEA member companies, including government-certified repair stations around the world. (Information from [AvWEBbiz](#) 03/06/13)

COMMENTS ABOUT SUN'N FUN: NOT AS GREAT AS IT USED TO BE

Op-Ed

Although the promoters and operators of Sun 'n Fun 2013 had many positive things to say and write about, it seems that those that went there had different opinions:

One visitor wrote “I attended SNF this year as I have done for the past 8 years. Frankly, it was depressing! The crowds were not there, favorite vendors have given up do to absurd SNF costs and the usual fly-in fields that used to be covered with aircraft were non-existent.” Another commented “The new revitalized Paradise City area worked but there was just



not the crowds there to keep us busy all day.” For those who don't know, Paradise City is the portion of Sun 'n Fun where there were often small aircraft including ultralights. People liked it because it wasn't “staid and stuck-up” like the Cessna and other certified aircraft areas were. Another wrote “I agree that the tone at SNF this year was very subdued. It seemed like I was watching zombies roaming the vendor pavilions. There was a lot to see but at least for me very little that I could relate to or afford. My priority was finding ways to keep my aging Bonanza in the air and not necessarily updating to the newest gadget.” Others complained about the prices “Starting to charge \$5 to park a few years ago was bad enough but when I found admittance for a qualified organization member at \$32 ... this

might be one of the last times I attend!” Others blamed the current “quality” or “mindset” of youngsters nowadays. In the old days most teens would be able to work on their old cars and could handle tools. Nowadays most kids, boys or girls, wouldn't know a box-end from an open-end wrench. A Sun 'n Fun visitor wrote “The culture has changed, and not for the better. Kids aren't interested in flying or for that matter anything mechanical. Just silly stupid things that are presented on smartphones, tablets and computers.”

(Information adapted from [AVweb Insider Blog](#) 04/17/13, [AVwebFLASH](#) 04/15/13, [Pilots of America Forum](#) 03/29/13)

If you have an opinion about what Sun'n Fun has become, send it to [Sun 'n Fun Opinion](#). We can leave off your name if you wish and note that your comments might be used in a future *Pea Patch Post*.