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# LightSquared Threat to GPS, Space Shuttle Retrospective

Issue #27

August 29, 2011

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Reviewer

#### Pilot's Rules of Thumb

### Just Posted...

Thank you for taking the time to read this safety message.

The video of the month is a seaplane that takes off *without* water. A bonus video is included at the bottom. What do you do with an old turbine engine off a Navy drone and a love of Batman?

I've gotten social. You'll see links to facebook, twitter, youtube, and linkedin to the left. Feel free to connect and take advantage of the other information resources I provide.

**Unsubscribe:** If you'd like to stop receiving this newsletter, the quickest way is to hit reply and say STOP and I will personally remove you if you feel that you're getting too much mail. While I hate to lose someone from the list, I'd rather have satisfied subscribers who are interested in the newsletter. If you want to change the way I use your email address, click "Join Our List" and uncheck any of the boxes. **You can also subscribe to FREE updates to publications you already own.**

Thanks for your continued support,  
Darren

## Airlines With the Most Complaints

#10 Skywest Airlines - .77 complaints per 100,000 passengers

The largest independently owned regional airline boasts a low complaint rate even though it flew almost 12 million passengers over the first six months of 2011.

#9 Atlantic Southeast Airlines - .96 complaints per 100,000 passengers

Atlantic Southeast will merge with ExpressJet later this year.

#8 ExpressJet Airlines - 1.01 complaints per 100,000 passengers

Last year, it had the lowest complaint rate of the top 10, this year its much higher.

#7 JetBlue Airways - 1.07 complaints per 100,000 passengers

#6 Delta Airlines - 1.27 complaints per 100,000 passengers

A year ago, it was ranked the worst airline for complaints in virtually every category.



See a 30 year retrospective tribute to the Space Shuttle Program, from STS-1 to STS-135.

Previous Photo Collections

[Nellis ABF Air Show](#)  
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You must be logged into Facebook to look at these photo galleries.

#### Quote of the month

*"If you were born on an airliner in the US in this decade and never got off you would encounter your first fatal accident when you were 2300 years of age and you would still have a 29% chance of being one of the survivors."*

- Les Lautman, Safety Manager Boeing Commercial Airplane Company, 1989

Hit reply and send me your favorite quote.

#### PRODUCTS

### #1 Instrument Rating Checkride Guide

#5 American Airlines - 1.50 complaints per 100,000 passengers

#4 American Eagle Airlines - 1.67 complaints per 100,000 passengers

The country's largest regional carrier reported the highest rates of flight cancellations and mishandled baggage.

#3 Continental Airlines - 1.70 complaints per 100,000 passengers

#2 US Airways - 1.73 complaints per 100,000 passengers

#1 United Airlines - 2.01 complaints per 100,000 passengers

## August \$5 Special -- Nip holding problems in the bud

### Visi-Hold™ - Know Instantly

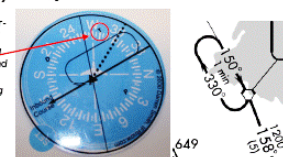
Never wonder about holding entries again! Works with standard holds and non-standard holds (left turns). The Visi-Hold™ package comes complete with Visi-Hold™ template, directions, and two articles on holds: All About Holding and Holding Simplified. You'll pay no less than \$14.95 for a complicated sliderule holding pattern calculator made by ASA. That's not even including shipping! Those of you who know what real IFR is like know that you can't fool around with a sliderule while the airplane is bouncing around. Instead, get the original Visi-Hold™, helping pilots know the holding pattern entry since 2000. Regular Price: \$9.95 but this month its \$5 + postage. [Buy online](#) or click this buy now button:

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#### Examples:

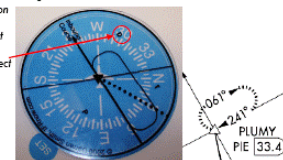
**Teardrop Entry**—Heading is 270° direct to the

VOR to enter the hold. Point the arrow at 150° and Visi-Hold shows a teardrop entry and a recommended outbound heading of 300° after station passage.



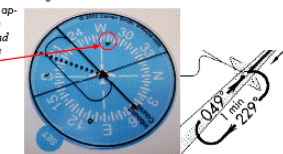
**Direct Entry**—Heading is 270° direct to the

PLUMY intersection to enter the hold. Point the arrow at 241° and Visi-Hold shows a Direct entry.



**Parallel Entry**—Heading is 270° direct to the

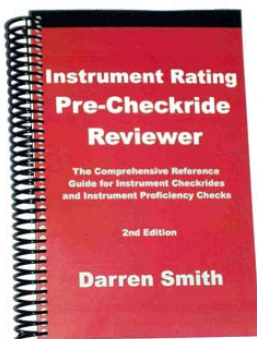
VOR to enter the approach. Point the arrow at 049° and Visi-Hold shows a Parallel entry.



## Interesting Aircraft - Falcon HTV2



An experimental, arrowhead-shaped aircraft that could reach blistering speeds of 13,000 mph above the Pacific Ocean is blasted



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### Ultimate Checklist

off Aug 10th from Vandenberg Air Force Base, northwest of Santa Barbara. The flight is slated to test new technology that would provide the Pentagon a lightning-fast vehicle, capable of delivering a military strike anywhere in the world in less than an hour.

The unmanned aircraft, dubbed Falcon Hypersonic Technology Vehicle 2, is scheduled to be launched at 7 a.m. PDT into the upper reaches of the Earth's atmosphere aboard an eight-story Minotaur IV rocket, made by Orbital Sciences Corp. The aircraft will then separate, screech back toward Earth, level out and glide above the Pacific at 20 times the speed of sound, or Mach 20. To give you an idea of how fast that is: an aircraft at that speed would zip from Los Angeles to New York in less than 12 minutes.

## Industry News Feed

My Facebook page has a daily news feed which beats most other sources in the industry. To get this on your facebook wall, click the logo and "Like" what you see. You'll find news shorts, pictures, and videos. It's a quick and easy way to stay current.



## Fun Facts About Commercial Aircraft - the 787

### The Dreamliner...



Boeing delivered the first 787 this month to ANA. The 787 will provide airlines with unmatched fuel efficiency, resulting in exceptional environmental performance. The airplane will use 20 percent less fuel for comparable missions than today's similarly sized airplane. A few fun facts:

- 50 percent composites (by weight)
- 20 percent aluminum (by weight)
- Seating: 787-8, 210 to 250 seats, 787-9, 250 to 290 seats
- Fewer than 10,000 holes drilled into fuselage during assembly
- 20 percent more fuel efficient than similarly sized airplanes
- Typical speed: Mach 0.85 (about the same as a 777 and 747)

### Materials Breakout

- Composites - 50%
- Aluminum - 20%
- Titanium - 15%
- Steel - 10%
- Other - 5%



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### Safer Approaches

## Safer Approaches

Use CANPA to perform safer, stabilized approaches

**Feet/Minute Descent Rate Table**  
Approach Speed 90 Knots

Use the safest, airline-proven flying technique for non-precision approaches that minimizes aerodynamic surprises and virtually eliminates the possibility of Controlled Flight Into Terrain.

Darren Smith, ATP, CFII/MEI

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### Learning IFR Charts

## Learning IFR Enroute Charts

The quickest way to teach or learn IFR Enroute Chart Symbolology

Darren Smith, ATP, CFII/MEI

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### Best VFR X/C Plotter

## LightSquared Plans Stirs FAA Worry

(WSJ) The LightSquared Inc. proposal for a high-speed wireless network would "severely impact" the nation's evolving aviation-navigation system, despite proposed changes to quell concerns about interference, according to a new Federal Aviation Administration assessment.

LightSquared wants to build a national wireless network with more than 40,000 antennas that would offer wholesale broadband access to other wireless carriers. But commercial GPS users and manufacturers have cited concerns that LightSquared frequencies could possibly overpower weaker GPS signals.

The FAA estimated LightSquared's interference would cost the aviation community an estimated \$70 billion over the next 10 years, in part because of the loss of existing GPS safety and efficiency benefits, and the need to retrofit aircraft.

"Billions of dollars in existing FAA and GPS user investments would be lost," the agency said in the report. The agency report was examining questions about the LightSquared proposal presented by the national coordination office director for the Space-Based Positioning, Navigation and Timing Executive Committee, which is part of the Executive Office of The President.

LightSquared's Executive Vice President of Regulatory Affairs Jeff Carlisle disagrees with the FAA assessment, saying it doesn't accurately reflect its proposed changes and seems to be evaluating a plan that is no longer on the table.

"Simply put, the vast majority of the interference issues raised by this report are no longer an issue. We look forward to discussing this with the FAA," Mr. Carlisle said.

The seven-page FAA assessment said LightSquared's plan could also hurt U.S. leadership in international aviation by eroding confidence in the U.S.-owned global positioning system. That would be despite "presidential commitments" to the International Civil Aviation Organization about the continued safety and availability of GPS technology, the FAA said.

On June 20, LightSquared offered a new plan that it said wouldn't interfere with the vast majority of GPS systems. It would use just the portion of its frequencies that are farthest away from GPS signals and would transmit weaker signals. Even with those changes, LightSquared's network could still affect some precision GPS systems, which are generally used by farmers, the aviation industry and others.

At a June 23 congressional hearing about LightSquared's broadband-spectrum proposal, several lawmakers cited concern about the company's plans. The company now says the hearing was addressing its original plan, not its proposed changes. One key House lawmaker said at the hearing that the Federal Communications Commission shouldn't approve a service that disrupts or burdens GPS devices in the aviation industry.

In the FAA's recent assessment, it said LightSquared's most recent proposal would "severely impact" NextGen, an FAA initiative to build a new national air-traffic control system that calls for satellite technology to replace ground-based facilities. NextGen, officially called the Next Generation Air Transportation System, relies heavily on GPS-based technologies. LightSquared's interference would not only erode existing GPS safety and

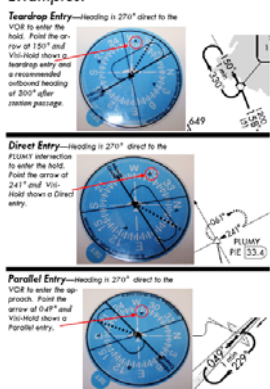


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### Nip Holding Problems in the Bud

Examples:



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Just for Fun...



World's only actual turbine powered Bat car

efficiency benefits, but would also force the FAA to replan NextGen investments, the FAA said, resulting in additional development costs and delays.

The FAA would have to return to dependency on ground-based aviation aids and billions of dollars in existing agency and GPS-user investments would be lost, the agency said.

### Video of the Month - Floatplane Takes Off From Trailer



Stinson floatplane takeoff without water

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Darren Smith, CFII/MEI | Box 17307 | Mpls | MN | 55417