



FLYING LESSONS for June 15, 2017

FLYING LESSONS uses recent mishap reports to consider what *might* have contributed to accidents, so you can make better decisions if you face similar circumstances. In almost all cases design characteristics of a specific airplane have little direct bearing on the possible causes of aircraft accidents—but knowing how your airplane's systems respond can make the difference as a scenario unfolds. So apply these *FLYING LESSONS* to the specific airplane you fly. Verify all technical information before applying it to your aircraft or operation, with manufacturers' data and recommendations taking precedence. **You are pilot in command, and are ultimately responsible for the decisions you make.**

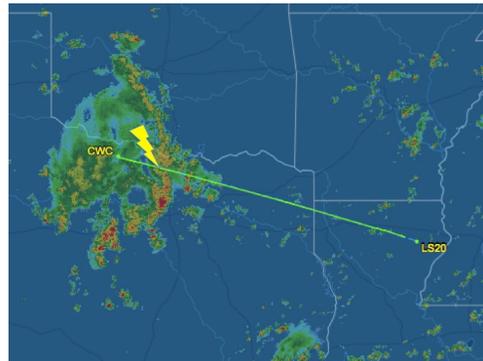
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This week's LESSONS:

Where Do You Go?

The pilot of a pressurized single-engine airplane departed northern Texas for eastern Louisiana. According to an FAA preliminary report, the pilot states that while at altitude over Denton, Texas, the airplane was struck by lightning. As a result the airplane experienced radio failure. The pilot continued 280 nautical miles and "landed without further incident" at Monroe, Louisiana.



The rules for lost communications are straightforward. But they are also frequently misunderstood or forgotten...like many things that almost never happen, total radio failure in flight can fall from our consciousness.

Under U.S. rules—and likely in other jurisdictions as well—here's what to do if you are on an instrument flight and you lose communication:

§91.185 IFR operations: Two-way radio communications failure.

- (a) *General.* Unless otherwise authorized by ATC, each pilot who has two-way radio communications failure when operating under IFR shall comply with the rules of this section.
- (b) *VFR conditions.* If the failure occurs in VFR conditions, or if VFR conditions are encountered after the failure, each pilot shall continue the flight under VFR and land as soon as practicable.
- (c) *IFR conditions.* If the failure occurs in IFR conditions, or if paragraph (b) of this section cannot be complied with, each pilot shall continue the flight according to the following:
- (1) *Route.* (i) By the route assigned in the last ATC clearance received;
 - (ii) If being radar vectored, by the direct route from the point of radio failure to the fix, route, or airway specified in the vector clearance;
 - (iii) In the absence of an assigned route, by the route that ATC has advised may be expected in a further clearance; or
 - (iv) In the absence of an assigned route or a route that ATC has advised may be expected in a further clearance, by the route filed in the flight plan.
 - (2) *Altitude.* At the highest of the following altitudes or flight levels for the route segment being flown:
 - (i) The altitude or flight level assigned in the last ATC clearance received;
 - (ii) The minimum altitude (converted, if appropriate, to minimum flight level as prescribed in §91.121(c)) for IFR operations; or
 - (iii) The altitude or flight level ATC has advised may be expected in a further clearance.
 - (3) *Leave clearance limit.* (i) When the clearance limit is a fix from which an approach begins, commence descent or descent and approach as close as possible to the expect-further-clearance time if one has been received, or if one has not been received, as close as possible to the estimated time of arrival as calculated from the filed or amended (with ATC) estimated time en route.
 - (ii) If the clearance limit is not a fix from which an approach begins, leave the clearance limit at the expect-further-clearance time if one has been received, or if none has been received, upon arrival over the clearance limit, and proceed to a fix from which an approach begins and commence descent or descent and approach as close as possible to the estimated time of arrival as calculated from the filed or amended (with ATC) estimated time en route.

It's a long and involved regulation, but it can be easily broken down into to concepts: *where do you go?* and *what altitude do you fly?*

Where to go:

- If you're in visual conditions, stay in visual conditions and land as soon as practicable.
- If at any time you enter visual conditions, stay in visual conditions and land as soon as practicable.
- If you are IMC and do not encounter visual conditions:
 - Follow your cleared route of flight.
 - If you are on vectors, proceed direct to the fix you were being vectored to, then as cleared.
 - If not cleared to destination, proceed along the route you were told to expect.
 - If you have no other guidance, proceed along the route you had filed.

In summary, go VFR, or as cleared, expected or filed.

What altitude:

- Fly the *highest* that applies:
 - Your cleared altitude.
 - The altitude you were told to expect.
 - If either of those altitudes is lower than the minimum altitude for your segment of flight, at that minimum altitude.

In summary, fly as cleared, as expected, or at the *charted minimum altitude*, whichever is higher.

The pilot of the no-radio single continued more than an hour at Flight Level 190, then made a normal, uninterrupted en route descent to landing. Presumably he was in compliance with 91.185.

Regardless, this event is a reminder to regularly review the minutia of the regulations that apply to the type of flying you do. You never know when, in a flash, you'll need to know where you'll go and what you'll do.

Comments? Questions? Let us learn from you, at mastery.flight.training@cox.net



Lost Comm in IMC Watch This Video...



See www.pilotworkshop.com/blog/lost-comm?ad-tracking=lost-comm-turn

Debrief:

Readers write about recent *FLYING LESSONS*:

Reader Bill Page writes about a common *FLYING LESSONS* topic, precision during final approach and landing to avoid some of the most common accident scenarios:

Tom, I stumbled onto [this website and article](#) [about stabilized approaches] and thought it was quite good!

Thanks, Bill. I know several SIMCOM instructors. They do good work, and the article you cite is worth a read.

See <http://flightlevelsonline.com/2017/spring-2017/control-column-stabilized-preferred-approach-condition/>

Several [recent LESSONS](#) resulted from the post-maintenance control rigging crash of a Piper PA12 who rebuilders/pilot was attempting the first test flight after major restoration. Reader Mark Sletten passed along this description of [another post-maintenance, improperly connected controls crash](#), this one involving a qualified test pilot...who should have known better. As we discussed in the case of the PA12 pilot, we *all* need to be aware of the hazards of complacency. A simple **Controls: Free and Correct** check should catch these post-maintenance rigging errors. I said it before: the more a check seems to be a formality or even a waste of time, the more you must focus on doing it fully and correctly to combat complacency. Thank you, Mark.

See:

<http://www.mastery-flight-training.com/20170511-flying-lessons.pdf>

<http://aviationweek.com/business-aviation/two-chances-lost-pilot-and-mechanic-both-miss-aileron-hook-error>

Frequent Debriefing and flight instructor Alan Davis writes about [the most recent LESSON](#), "boring holes in the sky." Alan writes:

Back in the day when I was flying both GA and Airline, people would ask me if I got bored on those long coast to coast Boeing 707 flights. While I was "boring" - holes in the sky that is - I never found it boring, primarily for one reason. I committed when I first started flying that **on every flight I made I would try to learn at least one "new" thing**. Notice that the word new was in quotes, because I consider bringing something back to the forefront is just like something new, since it was not right up there before that. In some cases it would be something small, such as a finesse item, and in other cases something really insightful and/or impactful. To this day, I approach every flight with that in mind - perhaps part of your "focusing" point and definitely "satisfying"! If one becomes inattentive, the disaster will be close behind. **If one constantly searches out the "new", there is no inattention.**

Great approach, Alan. Thank you.

See <http://www.mastery-flight-training.com/20170525-flying-lessons.pdf>

Comments? Questions? Let us learn from you, at mastery.flight.training@cox.net.

I have been reading for maybe a year. I don't give to many newsletters but yours is heartfelt, informational, and directly usable. Thank you. – Mark Sanz

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FAA FlySafe Focus: Startle Response

Fatal general aviation accidents often result from inappropriate responses to unexpected events. Don't get caught by surprise on your next flight — check out this month's #FlySafe fact sheet on [how to manage the "startle response"](#).

See <http://1.usa.gov/2rNpCGP>

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