

# SESSION 34: ATC CLEARANCES — LOST COMMUNICATION: SQUAWK 7600 AND AVE-F

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1. Upon experiencing a two-way radio communication failure, the pilot's first transponder action is to:
  - A. Squawk 7700
  - B. Squawk 7500
  - C. Squawk 1200
  - D. Squawk 7600
  
2. After squawking 7600, the next appropriate actions include:
  - A. Attempting to re-establish communication by all available means
  - B. Immediately beginning a descent
  - C. Cancelling the IFR flight plan
  - D. Landing at the nearest airport without further consideration
  
3. Under §91.185(b), if the radio fails in VFR conditions (or VFR is encountered afterward), the pilot must:
  - A. Continue under IFR to the filed destination
  - B. Continue under VFR and land as soon as practicable
  - C. Climb to the MEA and hold
  - D. Squawk 7500
  
4. The rule to continue VFR and land as soon as practicable when in VFR conditions exists because:

- A. IFR procedures are illegal after a radio failure
- B. The pilot must always land at the departure airport
- C. If the pilot can see and avoid visually, landing is safer than continuing complex IFR lost-comm procedures
- D. ATC requires it for all failures

5. Under §91.185(c), the route to fly in IMC lost-comm follows the AVE-F priority. The "A" stands for:

- A. Alternate route
- B. Assigned route (last route ATC assigned)
- C. Approach route
- D. Airway route

6. The "V" in the AVE-F route priority stands for:

- A. Vectored (the route ATC last vectored the aircraft to intercept)
- B. VOR route
- C. Visual route
- D. Variable route

7. The "E" in AVE-F stands for:

- A. Emergency route
- B. Expected (route ATC advised to expect in a further clearance)
- C. Enroute structure
- D. Established route

8. The "F" in AVE-F stands for:

- A. Final approach route
- B. Filed (the route filed in the flight plan)
- C. Frequency route
- D. Fixed route

9. A pilot loses comms in IMC. ATC's last instruction was "fly heading 090 to intercept V12." The pilot should fly:

- A. The vectored route — proceed to intercept V12 as instructed
- B. The filed route immediately
- C. Direct to the destination
- D. The expected route

10. Under §91.185(c), the altitude to fly is the HIGHEST of three values for each segment. These are the MEA, the expected altitude, and the:

- A. MOCA
- B. MCA
- C. OROCA
- D. Assigned altitude

11. A pilot in IMC lost-comm is on a segment with an MEA of 6,000, was assigned 8,000, and was told to expect 10,000 in ten minutes (the ten minutes have passed). The altitude to fly is:

- A. 6,000
- B. 8,000
- C. The average, 8,000
- D. 10,000

12. If, on a later segment, the MEA rises to 11,000 while the assigned altitude was 8,000 and expected was 10,000, the pilot should fly:

- A. 11,000, the MEA, as the highest of the three
- B. 8,000, the assigned
- C. 10,000, the expected
- D. 9,000, an average

13. The "expected" altitude becomes relevant in lost-comm because:

- A. It is one of the three values compared in the highest-altitude rule
- B. It replaces the MEA entirely
- C. It cancels the assigned altitude
- D. It is the only altitude that matters

14. When should a lost-comm pilot leave a clearance limit (such as a holding fix where an approach begins) if an EFC time was issued?

- A. Immediately upon arrival
- B. After holding 10 minutes
- C. At the filed ETA regardless of EFC
- D. At the Expect Further Clearance (EFC) time

15. If a pilot is holding with an EFC time when comms are lost, they should begin the approach or proceed:

- A. Immediately
- B. At the filed departure time
- C. As close as possible to the EFC time

D. After two turns in the hold

16. If a lost-comm pilot arrives at the destination with no EFC time and no holding instruction, they should begin the approach:

- A. Immediately upon arrival regardless of ETA
- B. After holding for one hour
- C. As close as possible to the flight-planned ETA
- D. Only after ATC re-establishes contact

17. When the lost-comm pilot reaches the clearance limit (e.g., the destination fix/IAF), they should:

- A. Hold indefinitely until contact is restored
- B. Begin the descent for the approach at the appropriate time and complete the approach
- C. Climb to the MEA and orbit
- D. Divert to the alternate immediately

18. Before applying the full §91.185(c) IMC procedures, the lost-comm pilot must first determine:

- A. The required fuel
- B. The transponder code to set
- C. Whether conditions are VFR or IMC
- D. The destination weather only

19. A pilot loses comms in IMC, with ATC's last assigned route being direct to a fix, no "expected" or "vectored" routing given. The pilot should fly:

- A. The assigned route (direct to that fix), continuing per the flight plan beyond it
- B. The filed route immediately, ignoring the assignment

- C. Direct to the alternate
- D. A random heading toward the destination

20. The purpose of the AVE-F and highest-altitude rules is to:

- A. Make the lost-comm aircraft's path and altitude predictable so ATC can clear the airspace for it
- B. Allow the pilot maximum flexibility
- C. Require the pilot to land immediately
- D. Replace the need for a flight plan

21. A lost-comm pilot who breaks out into VFR conditions while en route in IMC should:

- A. Continue the IFR lost-comm procedure to the destination
- B. Climb back into the clouds to stay IFR
- C. Squawk 1200
- D. Continue VFR and land as soon as practicable

22. The "land as soon as practicable" standard (VFR conditions) differs from "as soon as possible" in that it:

- A. Requires an immediate off-airport landing
- B. Allows the pilot to choose a suitable airport considering safety, not necessarily the absolute nearest
- C. Means the pilot may continue to the filed destination
- D. Requires landing within 5 minutes

23. A lost-comm pilot should set the transponder to 7600 specifically so that:

- A. The aircraft becomes invisible to radar
- B. The IFR flight plan is cancelled

- C. ATC is alerted to the communication failure and can anticipate the aircraft's actions
- D. The autopilot disengages

24. Among the immediate troubleshooting steps after a comm failure, the pilot should check:

- A. Only the destination weather
- B. Only the fuel quantity
- C. The transponder code first, then nothing else
- D. The audio panel, alternate radios, guard frequency 121.5, and possible relay

25. The fundamental purpose of the §91.185 lost-communication framework is to:

- A. Provide a predictable, regulation-based route, altitude, and timing so the flight can be completed safely without two-way communication
- B. Require an immediate emergency descent
- C. Cancel the IFR clearance automatically
- D. Transfer navigation responsibility to ATC

## **ANSWER KEY & EXPLANATIONS – SESSION 34**

1. D. Squawk 7600 — The first transponder action on a comm failure is to squawk 7600.
2. A. Re-establish comms — After squawking 7600, the pilot attempts to re-establish communication by all available means.
3. B. Continue VFR/land — Under §91.185(b), in VFR conditions the pilot continues VFR and lands as soon as practicable.

4. C. Visual is safer — The VFR rule exists because if the pilot can see and avoid visually, landing is safer than continuing complex IFR lost-comm procedures.
  
5. B. Assigned — "A" is the last route ATC assigned.
  
6. A. Vectored — "V" is the route ATC last vectored the aircraft to intercept.
  
7. B. Expected — "E" is the route ATC advised to expect in a further clearance.
  
8. B. Filed — "F" is the route filed in the flight plan.
  
9. A. Vectored route — With "fly heading 090 to intercept V12," the pilot proceeds to intercept V12 as instructed (the vectored route).
  
10. D. Assigned — The three altitudes compared (highest of) are MEA, expected, and assigned.
  
11. D. 10,000 — Highest of MEA 6,000, assigned 8,000, expected 10,000 is 10,000.
  
12. A. 11,000 MEA — Highest of MEA 11,000, assigned 8,000, expected 10,000 is the MEA, 11,000.
  
13. A. One of three compared — The "expected" altitude is one of the three values compared in the highest-altitude rule.
  
14. D. EFC time — A lost-comm pilot leaves a clearance limit at the Expect Further Clearance (EFC) time if one was issued.
  
15. C. Near EFC — If holding with an EFC when comms are lost, proceed/begin the approach as close as possible to the EFC time.

16. C. Near filed ETA — With no EFC and no holding instruction, begin the approach as close as possible to the flight-planned ETA.

17. B. Begin/complete approach — At the clearance limit, the lost-comm pilot begins the descent for the approach at the appropriate time and completes the approach.

18. C. VFR or IMC — Before applying §91.185(c), the pilot must determine whether conditions are VFR or IMC.

19. A. Assigned route — With only an assigned route (direct to a fix) and no expected/vectored routing, the pilot flies the assigned route, continuing per the flight plan beyond it.

20. A. Predictable path — The AVE-F and altitude rules make the aircraft's path and altitude predictable so ATC can clear the airspace.

21. D. Continue VFR/land — Breaking into VFR while in IMC lost-comm, the pilot continues VFR and lands as soon as practicable.

22. B. Suitable airport — "Land as soon as practicable" allows choosing a suitable airport considering safety, not necessarily the absolute nearest.

23. C. Alerts ATC — Squawking 7600 alerts ATC to the failure so it can anticipate the aircraft's actions.

24. D. Audio/radios/121.5/relay — Troubleshooting includes checking the audio panel, alternate radios, guard 121.5, and possible relay.

25. A. Predictable safe completion — The §91.185 framework provides a predictable, regulation-based route, altitude, and timing so the flight can be completed safely without two-way communication.