Objectives	▪ The student should develop the knowledge of the elements related to loss of communications on an IFR flight plan in IMC and VMC conditions
Key Elements	▪ **Squawk 7600** ▪ **Route: AVE F** ▪ **Altitude: MEA**
Elements	▪ General ▪ Recognizing Lost Communications ▪ When to continue as filed and when to deviate ▪ The CFRs – 14CFR 91.185 ▪ Leaving the Clearance Limit ▪ Additional Steps
Schedule	▪ Review lesson objectives ▪ Review lesson material ▪ Conclusion & Review
Equipment	▪ White Board / Markers ▪ References
CFI Actions	▪ Present lesson ▪ Use teaching aids ▪ Ask/ answer questions
Student Actions	▪ Participate in discussion ▪ Take notes ▪ Ask / answer questions
Completion Standards	▪ The student can safely and properly react to a given lost communication scenario on a IFR flight plan

Additional Notes: _____
_____
_____
_____

CE = Common Error

Introduction

Attention

What happens when we can't see outside or hear anybody

Overview

Review objectives / Elements

What

Lost communication is the inability to communicate with ATC on an IFR flight plan. It may be a total, 2-way, loss of communication or just the inability to receive or transmit communications.

Why

Radio communication is essential to the safety and organization of aircraft when flying on an IFR flight plan. Without radio communication there must be rules to follow so that ATC knows the route and altitude the pilot will fly in order to keep the pilot as well as the surrounding traffic separated and safe.

How

General

- **At any point in the flight, the pilot must know what route and altitude to fly as well as when to continue beyond a clearance limit in the case of lost communications**
- **14 CFR 91.185 – IFR operations: Two-way radio communications failure**
  - 91.185 gives us steps to follow in the case of lost comms
    - **MEA** lives on 185 **AVE F**
- **Squawk 7600 to alert ATC to a radio communication failure**

Recognizing Lost Communications

Recognizing a Possible Problem

- **If it's been abnormally quiet on the radio**
  - If you feel like its too quiet, query ATC and see if it's a communication issue or if its just a quiet day
  - Could be a total loss of communication or just a one-way communication problem (receiving)

Troubleshoot

- **Do not immediately assume a loss of communication**
- **Ensure proper avionics configuration**
  - Check volume, power, ensure headset is plugged in, try headset jack in the other seat
- **Verify frequency**
  - See if you can hear other aircraft
    - If you can hear other aircraft, see if they can transmit your message to ATC
      - You may be out of range of ATC
  - Try previous frequency
  - Broadcast on guard to attempt
- **Try another COM, if available**

Identify the Problem

- **May be able to transmit but not hear**
  - This may be difficult to identify
  - Transmit "in the blind" just in case somebody can hear
- **May be able to hear ATC but not transmit**
  - In this case, you can still receive ATC instruction
  - Acknowledgement of instructions can be done with the IDENT button
- **Total Failure**
  - Transmit "in the blind"

When to Continue as Filed and When to Deviate

- **The primary objective of these procedures is to prevent extended IFR operation without radio communication.**
- **If the radio fails while operating on a IFR flight plan in VMC, if possible, land as soon as practicable**
  - Ensure that you can remain in VMC
- **If the aircraft is operating in IMC, the procedures found in 14CFR 91.185 must be followed**
  - Ensures aircraft separation

The CFRs – 14CFR 91.185

Route (AVE F) – In order

- Fly the **Assigned** route from the clearance
- If being radar **Vectored**, fly the direct route from the point of radio failure to the fix, route, airway specified in the vector clearance
- Fly the route that ATC has advised may be **Expected** in a further clearance
- Fly the route **Filed** in the flight plan

Altitude (MEA) – Fly the highest of these

- **Minimum** altitude for IFR operations
- **Expected** altitude from ATC
- **Assigned** altitude from clearance

Leaving the Clearance Limit

Clearance Limit is a fix from what an approach begins

- **Commence descent as close as possible to the EFC time if one has been received**
- **If no EFC time was given, as close as possible to ETA filed**

Clearance Limit is not a fix for an approach

- **Leave clearance limit at EFC time, if received**
- **If one has not been received, leave upon arrival over the clearance limit, and proceed to a fix from which an approach begins. Commence descent as close to the ETA as possible**

Additional Steps

- **Squawk 7600**
  - Since there are no radios, this informs ATC of the problem
- **Use all possible means to re-establish radio communications**
  - Monitor navaids, attempt to contact other aircraft, FSS, run applicable checklists
  - Return to previously assigned frequency
  - Contact FSS
    - Give position, altitude, last assigned frequency
  - Transmit on guard
- **Continue to transmit "in the blind" in case you can still transmit**

Conclusion & Review

Conclusion

- **Brief review of the main points and key elements**

Review

- **Recognition of loss of communications.**
- **When to continue with flight plan as filed or when to deviate.**
- **How to determine the time to begin an approach at destination.**

ACS Skills Standards

- **Recognize a simulated loss of communication.**
- **Simulate actions to re-establish communication.**
- **Determine whether to continue to flight plan destination or deviate.**
- **Determine appropriate time to begin an approach.**