

V.B. Cockpit Management

Objectives	The student should develop knowledge of the elements related to single pilot resource management. The student should maintain an organized cockpit and properly position all controls for correct use. The student should understand all equipment in order to use all possible resources.
Key Elements	<ul style="list-style-type: none">✦ Passenger briefings✦ Internal and external resources
Elements	<ul style="list-style-type: none">✦ Arranging and securing materials and equipment✦ Use and adjustment of cockpit items✦ Occupant briefing✦ Resource utilization
Schedule	<ol style="list-style-type: none">1. Discuss objectives2. Review material3. Development4. Conclusion
Equipment	<ul style="list-style-type: none">✦ White board✦ Markers✦ References
Instructor's Actions	<ol style="list-style-type: none">1. Discuss lesson objectives2. Present lecture3. Questions4. Homework
Student's Actions	Participate in discussion Take notes
Completion Standards	The student can efficiently and safely make use of all resources to complete a flight.
References	FAA-H-8083-3B, <i>Airplane Flying Handbook</i> (Chapter 2) FAA-H-8083-25B, <i>Pilot's Handbook of Aeronautical Knowledge</i> (Chapter 2) POH/AFM

Instructor Notes

Introduction

Overview—review objectives and key ideas.
Why—understanding what goes into single pilot resource management helps make the flight safer and more efficient.

Arranging and securing materials and equipment

All necessary equipment, documents, checklists, and appropriate navigation charts should be on board—neatly arranged and organized so that they are readily available.
Wires for equipment should not interfere with the motion and operation of any of the controls.

Check the flight deck for articles that could be tossed around in turbulence and secure loose items. Don't use the top of the instrument panel for storage.

CE—failure to place and secure essential materials and equipment for easy access during flight.

Use and adjustment of flight deck items

The pilot needs to have an unobstructed view of inside and outside references. Use a cushion if necessary to sit at an appropriate height.

Adjust seat belt and shoulder harnesses should to a comfortably snug fit.

- ✦ Wear shoulder harnesses at least for taxi, takeoff, and landing.
- ✦ Wear the seat belt at all times while at the controls.

If able, adjust the rudder pedals forward or backward so that the knees are slightly bent, and full movement is available with heels on the floor and balls of the feet on the pedals. The brakes should be able to be actuated using the toes.

CE—failure to properly adjust cockpit items, such as safety belts, harnesses, rudder pedals, and seats.

CE—failure to provide proper adjustment of equipment and controls.

Occupant briefing

SAFETY

- ✦ **Seat belts**—brief each passenger on how to fasten/unfasten the safety belt and shoulder harnesses; you cannot taxi without ensuring each person has fastened their safety belts. *[14 CFR 91.107]*
- ✦ **Air vents**—show the passengers how to adjust the airflow to assist in providing a comfortable flight.
- ✦ **Fire extinguisher**—show the passengers where the fire extinguisher is located and how to unlatch and use it.
- ✦ **Exit, emergencies, and equipment**—inform the passengers what should be done before, during, and after an off-airport landing, and

Resource utilization

ensure that everyone knows how to open all exit doors and unfasten safety belts. Designate a gathering point and point out survival equipment. Have a departure plan: which runways are available, how much runway is required, emergency procedures during takeoff.

- ✈ **Traffic and talking**—passengers can help scan for traffic and on expectations for communications. Sterile cockpit during takeoff and landing.
- ✈ **Your questions**—allow passengers to ask questions about any part of the flight.

CE—failure to provide occupant briefing on emergency procedures and use of safety belts.

Be aware of all resources available to you to make informed decisions. Use all of them during preflight planning and during flight.

Internal resources

- ✈ The POH can help the pilot plan the flight accurately and to resolve equipment malfunctions.
- ✈ Checklists can be used to verify that instruments and systems are checked, set, and operating properly, and to ensure that the proper procedures are performed in the case of an emergency.
- ✈ Thorough understanding of equipment is necessary to fully make use of all resources—program ahead of time (radio frequencies, fixes, ...) but do not rely on it so much that you become complacent.
- ✈ Passengers can help look for traffic and provide information (checklist help, ...)
- ✈ Charts, other pilots, and your ingenuity, knowledge, and skill are also internal resources.

External resources

- ✈ ATC, maintenance technicians, flight service personnel.
- ✈ ATC and Flight Service can decrease work with traffic advisories, vectors, and emergency assistance, and may be able to access maintenance personnel or other assistance in an emergency.
- ✈ FSS can provide weather and airport conditions.
- ✈ Other airplanes can provide PIREPs.
- ✈ ASOS/AWOS to get weather conditions in flight.

CE—failure to utilize all resources required to operate a flight safely.

Common errors

- ✈ Failure to place and secure essential materials and equipment for easy access during flight.
- ✈ Failure to properly adjust cockpit items, such as safety belts, shoulder harnesses, rudder pedals, and seats.
- ✈ Failure to provide proper adjustment of equipment and controls.

- ✈ Failure to provide occupant briefing on emergency procedures and use of safety belts.
- ✈ Failure to utilize all resources required to operate a flight safely.

Conclusion

Brief review of main points.
Use all resources available to reduce workload and mental stress and fatigue.

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Objective: To determine that the applicant:

1. Exhibits instructional knowledge of the elements of cockpit management by describing:
 - a. Proper arranging and securing of essential materials and equipment in the cockpit.
 - b. Proper use and/or adjustment of cockpit items such as safety belts, shoulder harnesses, rudder pedals, and seats.
 - c. Occupant briefing on emergency procedures and use of safety belts.
 - d. Proper utilization of all resources required to operate a flight safely: dispatchers, weather briefers, maintenance personnel, and air traffic control.

2. Exhibits instructional knowledge of common errors related to cockpit management by describing:
 - a. Failure to place and secure essential materials and equipment for easy access during flight.
 - b. Failure to properly adjust cockpit items, such as safety belts, shoulder harnesses, rudder pedals, and seats.
 - c. Failure to provide proper adjustment of equipment and controls.
 - d. Failure to provide occupant briefing on emergency procedures and use of safety belts.
 - e. Failure to utilize all resources required to operate a flight safely.

3. Demonstrates and simultaneously explains cockpit management from an instructional standpoint.

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Task	B. Flight Deck Management
References	FAA-H-8083-2, FAA-H-8083-3; AC 120-71; POH/AFM
Objective	To determine that the applicant exhibits satisfactory knowledge, risk management, and skills associated with safe flight deck management practices.
Knowledge	The applicant demonstrates understanding of:
PA.II.B.K1	Passenger briefing requirements, to include operation and required use of safety restraint systems.
PA.II.B.K2	Use of appropriate checklists.
PA.II.B.K3	Requirements for current and appropriate navigation data.
Risk Management	The applicant demonstrates the ability to identify, assess and mitigate risks, encompassing:
PA.II.B.R1	Improper use of systems or equipment, to include automation and portable electronic devices.
PA.II.B.R2	Flying with unresolved discrepancies.
Skills	The applicant demonstrates the ability to:
PA.II.B.S1	Secure all items in the flight deck and cabin.
PA.II.B.S2	Conduct an appropriate pre-takeoff briefing, to include identifying the PIC, use of safety belts, shoulder harnesses, doors, sterile flight deck, and emergency procedures.
PA.II.B.S3	Properly program and manage the airplane's automation.

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