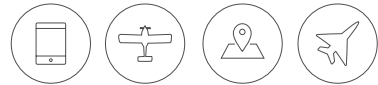




Electronic flight bags



INTRODUCTION

Electronic flight bags (EFB) have transformed flight operations by providing essential information and documents in a tablet format. While they are beneficial, it's important to understand the regulations and limitations of EFB use.

COMPONENTS

- » Hardware:
 - > Portable EFBs (like iPads) are personal devices and are not part of the aircraft configuration.
 - > Installed EFBs are integrated into the aircraft and follow standard airworthiness requirements.
- » Software:
 - > Type A applications display non-critical documents, such as certificates of airworthiness or passenger and cargo manifests.
 - > Type B applications display essential documents required to be carried by regulations, such as for flight planning, weather and aeronautical information.
 - > If a software function is used to display instrument approach charts, the software provider must be approved by CASA.

REGULATORY COMPLIANCE

- » Approval:
 - > Private operations (Part 91) do not need specific authorisation but the use of an EFB must not create a hazard and comply with portable electronic device regulations.
 - > Australian air transport AOC holders need CASA approval.
- » Navigation:
 - > Portable EFBs with GPS are for situational awareness only, not as the primary means of navigation.
 - > You must still meet the VFR flight navigation requirements.
- » Weight & balance – aircraft performance calculations:
 - > You are responsible for verifying the data on the EFB matches the approved data for your aircraft.
 - > This could be achieved through verification of examples and crosschecking of the data.

EFB MOUNTING

- » Temporary mounts (suction, velcro) and handheld EFB are regarded as unsecured devices. They must be stowed during the following stages of flight:
 - > during take-off and landing
 - > during an instrument approach
 - > when the aircraft is flying at a height less than 1,000 ft above the terrain
 - > in turbulent conditions.
- » Permanent mounts require airworthiness approval. These include control yoke attachment mechanisms or mounting devices.
- » Mounts and power cords must not obstruct vision, access to controls, pose safety risks or present a physical hazard in the event of an emergency.
- » EFBs attached to kneeboard holders do not need to be stowed.

EFB LIMITATIONS

- » Avoid fixation and distraction:
 - > exercise discipline and use EFBs correctly
 - > use EFBs on the ground for planning to improve situational awareness
 - > EFBs do not replace the pilot's responsibility to see and avoid other aircraft, when operating under the VFR.
- » Heat management:
 - > manage cockpit airflow and screen brightness, particularly during high ambient temperatures.
- » Power:
 - > ensure adequate charge prior to flight and whether charging will be available during the flight
 - > be aware during high usage an EFB can consume more battery power than charging can replace
 - > manage screen brightness and usage.

- » Accuracy:
 - > be aware of potential lag in position data
 - > a loss of signal or failure indication may not be displayed.
 - > you may not be able to verify the integrity of the information being displayed.
- » Incorrect data:
 - > Conduct a gross error check. Ask yourself if the data makes sense.
- » Redundancy:
 - > If the device fails, you must ensure this will not create a hazard to the operation of the aircraft.
 - > Have a backup option, such as physical documents or another EFB.
- » Emergencies:
 - > Ensure consideration is given to how you will manage a malfunction such as a battery fire or smoke.
 - > The most efficient method of stopping a lithium battery thermal runaway is to cool it down.
 - > Lithium safe battery bags can be used as a method of containment.

**For more information, refer to
AC 91-17 Electronic flight bags.**