

Gleim Commercial Pilot Flight Maneuvers

Sixth Edition, Second Printing

Updates

February 2022

NOTE: Sections with changes are indicated by a vertical bar in the left margin. Text that should be deleted is displayed with a line through it. New text is shown with blue underlined font.

If you are tested on any content not represented in our materials or this update, please share this information with Gleim so we can continue to provide the most complete test preparation experience possible. You can submit feedback at www.GleimAviation.com/questions. Thank you in advance for your help!

Part II – Flight Maneuvers and FAA Airman Certification Standards: Discussed and Explained

Page 15: This edit updates the language to match the current FAA ACS.

1. ~~Perform~~ Demonstrate the tasks specified in the areas of operation for the certificate or rating sought within the approved standards

Part II/Study Unit 3 – Pilot Qualifications

Page 20, Subunit 3.1, Item 1.a.7)c)ii): This update reflects changes in 14 CFR 61.129.

- ii) 10 hr. of training in a technically advanced aircraft (TAA), or an airplane that has a retractable landing gear, flaps, and controllable-pitch propeller, or is turbine-powered

Part II/Study Unit 5 – Weather Information

Page 49, Subunit 5.1, Item 2.r.: This update removes references to HIWAS, which is no longer in use.

- r. If you are already in flight and you need weather information and assistance, ~~the following~~ services are provided by flight service stations (FSSs). They can be accessed over the proper radio frequencies listed on aeronautical charts and the Chart Supplement.
 - ~~1) Hazardous Inflight Weather Advisory Service (HIWAS) is a continuous broadcast service over selected VORs of in-flight aviation weather advisories, i.e., AIRMETs, SIGMETs, convective SIGMETs, severe weather forecast alerts (AWW), center weather advisories (CWA), and urgent pilot reports (PIREPs).~~
 - 2) 1) In-flight weather briefings.** An FSS may be contacted in flight using the universal frequency of 122.2 MHz or the frequencies listed on aeronautical charts and the Chart Supplement for the purposes listed below. To use this service, call the local FSS by its locality name and “radio.” For example, “(Gainesville) Radio, this is . . .”

Page 73, Subunit 5.3, Item 3.o.: This update removes references to HIWAS and adds coverage of FIS-B.

- o. ~~HIWAS, SIGMETs, and Center Weather Advisories (CWAs) combined with automated cockpit weather can help you make in-flight diversion decisions.~~ [Flight Information Services-Broadcast \(FIS-B\) automatically transmits a wide range of weather products with national and regional focus to UAT IN-equipped aircraft over 978 MHz \(UAT\) flying within ADS-B coverage.](#)

Part II/Study Unit 6 – Cross-Country Flight Planning

Page 76, Subunit 6.1, Item 1.c.3): This edit updates chart publication information.

- 3) ~~Because the sectional chart is published once every 6 months, you must also check the Aeronautical Chart Bulletin in the Chart Supplement for major changes to the sectional chart (e.g., new obstructions).~~ [All publications previously identified in Aeronautical Chart Bulletins are now updated every 56 days to coincide with other en route, terminal, and supplemental chart products on established 56-day Aeronautical Information Regulation and Control \(AIRAC\) dates.](#)

Page 78, Subunit 6.1, Item 4.: This update is for information about the use of ICAO flight plans.

4. The applicant demonstrates understanding of the elements of a VFR flight plan.

~~NOTE: Currently, pilots file flight plans in the U.S. under either a domestic or International Civil Aviation Organization (ICAO) format. The FAA is proposing to implement flight plan filing for civil aircraft exclusively under the ICAO format. This section includes information for both domestic and ICAO formats.~~ [the FAA prefers users to file ICAO-format flight plans for all flights. An ICAO-format flight plan **must** be used in international airspace; in RVSM airspace; when the flight expects services based on ADS-B; or when the flight expects routing or separation based on performance-based navigation \(PBN\), e.g., RNAV 1. Flights that remain wholly within domestic United States airspace and do not meet these criteria may use an FAA domestic-format flight plan.](#)

Part II/Study Unit 7 – National Airspace System

Page 93, Subunit 7.1, Item 1.c.1)b): This update adds information about ADS-B requirements.

- b) Two-way radio communication, appropriate navigational capability, [ADS-B Out \(1090 ES required\)](#), and a Mode C transponder are required.

Page 93, Subunit 7.1, New item 1.d.2)c): This update adds information about ADS-B requirements.

- c) [Applicable ADS-B Out equipment from the surface to 10,000 ft. MSL, including the airspace from portions of Class B that extend beyond the Mode C veil up to 10,000 ft. MSL, is required.](#)
- e)d) Mode C transponder is required within and above the lateral limits of Class B airspace and within 30 NM of the primary airport regardless of altitude.
- d)e) The PIC must be at least a private pilot, or a student or recreational pilot who is under the supervision of a CFI.

Page 93, Subunit 7.1, New item 1.e.2)c): This update adds information about ADS-B requirements.

- c) Applicable ADS-B Out equipment from the surface up to 4,000 ft. MSL, including the airspace above the horizontal boundary up to 10,000 ft. MSL, is required.

Page 94, Subunit 7.1, Item 1.g.2): This update adds information about ADS-B requirements.

- 2) There are no specific pilot certification or equipment requirements to operate under VFR in Class E airspace, with the exception of the requirement for the applicable ADS-B Out equipment above 10,000 ft. MSL over the 48 contiguous states and Washington, D.C., excluding airspace at and below 2,500 ft. AGL, and over the Gulf of Mexico at and above 3,000 ft. MSL within 12 NM of the coastline of the U.S.

Page 96, Subunit 7.1, Item 3.a.1): This update increases the types of special use airspace by one.

- 1) There are ~~six~~seven types of SUA in the U.S. National Airspace System. You should be familiar with the types of SUA and any operation rules that apply (e.g., entry, transit, etc.).

Page 98, Subunit 7.1, New item 3.a.8): This update adds information about national security areas.

- 8) National Security Areas (NSAs) -- airspace of defined vertical and lateral dimensions established at locations where there is a requirement for increased security and safety of ground facilities.
- a) Pilots are requested to voluntarily avoid flying through a depicted NSA. Flight in NSAs also may be temporarily prohibited by regulation under the provisions of 14 CFR 99.7 to provide a greater level of security and safety.
- i) Regulatory prohibitions will be issued by System Operations Security and disseminated via NOTAM.

Pages 98-101, Subunit 7.1, Items 3.b.-d.: These edits update and reorganize the information about special use airspace and other airspace areas.

d.b. Other Airspace Areas

- 1) **Airport advisory areas** encompass the areas within 10 SM of airports that have no operating control towers but where FSSs are located. At such locations, the FSS provides advisory service to arriving and departing aircraft. Participation in the Local Airport Advisory (LAA) program is recommended but not required.
- 2) **Military training routes (MTRs)** are developed for use by the military for the purpose of conducting low-altitude (below 10,000 ft. MSL), high-speed training (more than 250 kt.).

- 3) ~~**National security areas (NSAs)**~~—airspace of defined vertical and lateral dimensions established at locations where there is a requirement for increased security and safety of ground facilities. Pilots are requested to voluntarily avoid flying through the depicted NSA.
- a) ~~A NOTAM will be issued to prohibit flight in NSAs when it is necessary to provide a greater level of security and safety.~~
- 4) ~~Flight limitations in the proximity of space flight operations (14 CFR 91.143) are designated in a NOTAM.~~
- b.3) **Special Flight Rules Areas (SFRAs) and Special Air Traffic Rules (SATR)**
- 4)a) When necessary for safety or security, ~~SFRAs~~these will be established by the FAA to modify the rules for operating within a given airspace area.

[...]

e.4) **Temporary Flight Restrictions (TFRs)**

[...]

11) **Weather reconnaissance areas (WRAs) are established to support weather reconnaissance/research flights.**

- a) They are airspace with defined dimensions and published by a NOTAM.

Part II/Study Unit 17 – Traffic Patterns

Page 216, Subunit 17.1, Item 4.b.2): This update removes references to AWSS.

- 2) **~~Automated Surface Observing System (ASOS)/Automated Weather Sensor System (AWSS)~~**
- a) Primary surface weather observing system of the U.S.
- i) ~~AWSS is a follow-on program that provides identical data as ASOS.~~
- ii) ASOS/AWSS is more sensitive and provides more information than AWOS.
- b) Designed to support aviation operations and weather forecast activities.
- i) ~~ASOS/AWSS will provide~~s continuous minute-by-minute observations and performs the basic observing functions necessary to generate a METAR and other aviation weather information.

Part II/Study Unit 31 – Pilotage and Dead Reckoning

Page 417, Subunit 31.1, Item 3.a.1)c): This edit updates chart publication information.

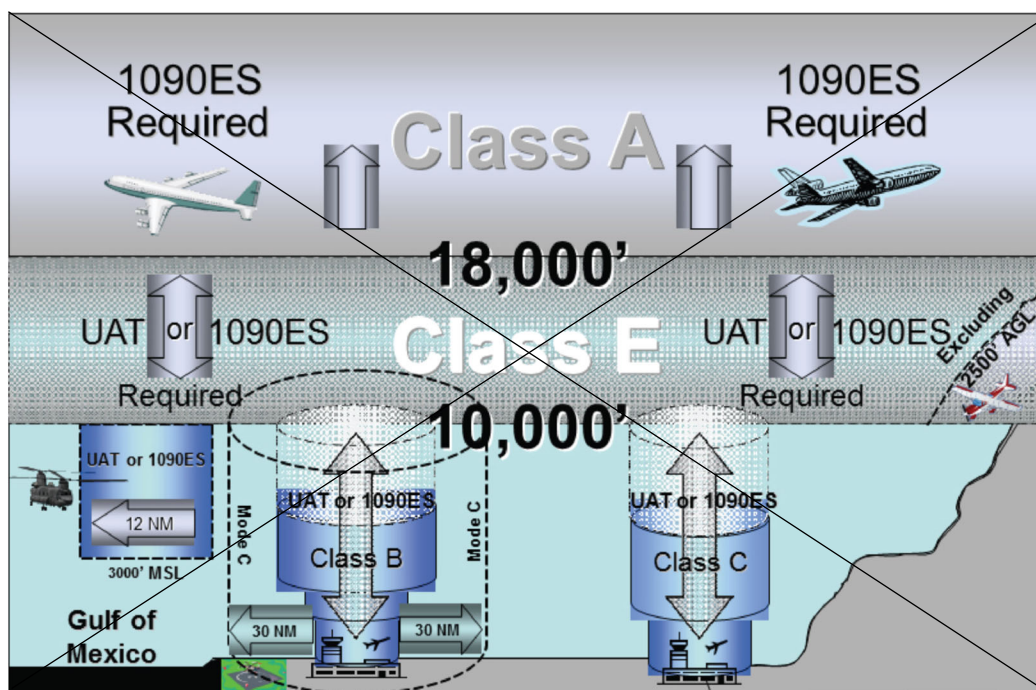
- c) ~~Since the sectional chart is published once every 6 months, you must also check the Aeronautical Chart Bulletin in the Chart Supplement for major changes to the sectional chart (e.g., new obstructions).~~All publications previously identified in Aeronautical Chart Bulletins are now updated every 56 days to coincide with other en route, terminal, and supplemental chart products on established 56-day Aeronautical Information Regulation and Control (AIRAC) dates.

Part II/Study Unit 32 – Navigation Systems and Radar Services

Page 442, Subunit 32.1, Items 4.e.3)-4): These edits update information about ADS-B.

3) ADS-B Mandate

- a) ADS-B Out uses GPS technology to determine an aircraft's location, airspeed, and other data and broadcasts that information to a network of ground stations. The ground stations then relay the data at least once per second to air traffic control displays and to nearby aircraft equipped to receive the data via ADS-B In.
- b) ~~All aircraft (with few exceptions) operating in designated ADS-B airspace must be equipped with a certified ADS-B Out avionics unit by January 1, 2020.~~
- e) ~~b)~~ ADS-B Out ~~will be~~ is required in the following airspaces:
 - i) Class A, B, and C airspace
 - ii) Class E airspace areas at or above 10,000 ft. MSL over the 48 states and D.C., excluding airspace at and below 2,500 ft. AGL
 - iii) Airspace within 30 NM of certain busy airports from the surface up to 10,000 ft. MSL; airports listed in Appendix D to Part 91
 - iv) Above the ceiling and within the lateral boundaries of a Class B or C airspace area up to 10,000 ft. MSL
 - v) Class E airspace over the Gulf of Mexico at and above 3,000 ft. MSL within 12 NM of the coastline of the United States



- d) ~~The mandate does not mean that aircraft without ADS-B will be grounded after January 1, 2020.~~
 - i) ~~Rather, they will only be prohibited from flying in the designated airspace, which is very similar to the current Mode C transponder requirements.~~
 - ii) ~~Aircraft that are not operated above 10,000 ft. MSL or near Class B or C airspace, may be able to continue operating without equipping.~~
 - iii) ~~The image on the next page indicates areas where ADS-B Out is required below 10,000 ft. MSL.~~



[...]

- 4) Operators of aircraft equipped with ADS-B In can receive weather and traffic position information directly to the flight deck via FIS-B.
 - a) On most systems, the traffic is displayed on the GPS moving map or MFD with altitude and velocity information.
 - b) ~~The cost to equip general aviation airplanes with ADS-B In starts around \$2,000.~~
 - e) ~~Portable ADS-B In devices are available starting at around \$200 to display weather and traffic information to a portable electronic device. These devices cannot be certified to meet the ADS-B Out mandate.~~

Abbreviations and Acronyms

Page 621: This update removes terms no longer in use and adds FIS-B to the list.

AWSS	automated weather sensor system
FIS-B	Flight Information Services-Broadcast
HIWAS	hazardous in-flight weather advisory service