BY ORDER OF THE SECRETARY OF THE AIR FORCE

AIR FORCE MANUAL 11-210
21 DECEMBER 2021

Flying Operations

INSTRUMENT REFRESHER PROGRAM (IRP)



COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

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This manual implements Air Force Policy Directive (AFPD) 11-2, Aircrew Operations, by prescribing guidance for conducting the Instrument Refresher Program (IRP). This manual applies to all pilots, navigators, and combat systems officers on active flying status who are uniformed members or civilian employees of the Regular Air Force, the Air Force Reserve, the Air National Guard, and those who are contractually obligated to comply with Department of the Air Force publications. This publication does not apply to the United States Space Force (USSF). Compliance with the attachment in this publication is not mandatory. Ensure all records generated as a result of processes prescribed in this publication adhere to Air Force Instruction 33-322, Records Management and Information Governance Program, and are disposed in accordance with the Air Force Records Disposition Schedule, which is located in the Air Force Records Information Management System. Address questions concerning this manual to Headquarters Air Force Flight Standards Agency (AFFSA). Refer recommended changes and questions about this publication to the office of primary responsibility (OPR) using the AF Form 847, Recommendation for Change of Publication; route AF Forms 847 from the field through the appropriate functional chain of command. This publication may not be supplemented or further implemented/extended. The authorities to waive wing/unit level requirements in this publication are identified with a tier ("T-0, T-1, T-2, or T-3") number following the compliance statement. See Department of the Air Force Instruction (DAFI) 33-360, Publications and Forms Management, for a description of the authorities associated with the tier numbers. Submit requests for waivers through the chain of command to the appropriate tier waiver approval authority, or alternately, to the requestor's commander for non-tiered compliance items. The use of the name or mark of any specific

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SUMMARY OF CHANGES

Incorporates Air Force Manual (AFMAN) 11-210_AFGM2021-01 changes following the release of AFMAN 11-202 Volume 3, *Flight Operations*. Additionally, **paragraph 4.2.1.3.1** states non-current CBTs are not authorized for completion of the IRC and **paragraph 4.3.2** clarifies who develops HUD training content.

PROGRAM OVERVIEW

- **1.1. General.** The United States Air Force (USAF) Instrument Refresher Program (IRP) is a two-part program designed to provide USAF aircrew with the knowledge, procedures, and techniques required to achieve safe and effective worldwide mission accomplishment when operating under instrument flight rules. **Part 1** is the USAF Instrument Refresher Course (IRC). This recurring requirement is primarily an interactive classroom-based training event conducted in accordance with this manual and major command (MAJCOM) guidance. **Part 2** is the open-book instrument examination. This examination includes USAF, MAJCOM, and mission design series (MDS)-specific instrument regulations and publications. It is a requisite of the Instrument Flight Evaluation and is accomplished in accordance with this manual and AFMAN 11-202, Volume 2, *Aircrew Standardization and Evaluation Program*, and MAJCOM guidance. **Note:** Parts 1 and 2 are separate events. **Part 2** is not a requirement to receive credit for **Part 1**.
- **1.2. Special Experience Identifier (SEI).** All instrument school graduates will automatically receive the SEI code of "OEV" on their personnel records. They will also receive a certificate of course completion and an SEI code letter from Advanced Instrument School (AIS). **Note:** AF graduates of the United States Army Instrument Flight Examiner Preparatory Course (EIFE-PC) will need to request these documents from AIS upon completion of the EIFE-PC and present them to their local unit training manager in order to get this SEI code loaded into their records.
- **1.3. Waivers.** Directive guidance (will, shall, must, etc.) throughout this publication are tiered in accordance with DAFI 33-360. Units will send waiver requests to the responsible MAJCOM OPR for review/coordination. MAJCOM will forward waiver request to Headquarters Air Force Flight Standards Agency Advanced Instrument School (HQ AFFSA/XOT) prior to obtaining MAJCOM/CC approval. Waiver approval may not be delegated lower than MAJCOM/A3.
- **1.4. HQ AFFSA Contact Information. HQ** AFFSA email is **hqaffsa.a3ot@us.af.mil** and phone number is DSN 312-884-7073. Mailing Address in **Figure 1.1**.

Figure 1.1. Mailing Address.

HO AFFSA/XOT

Building 8400, Room 232

5316 South Douglas Blvd

Oklahoma City, OK 73150

ROLES AND RESPONSIBILITIES

- 2.1. Headquarters Air Force Flight Standards Agency (AFFSA). AFFSA will:
 - 2.1.1. Ensure AFMAN 11-210, *Instrument Refresher Program* is kept current, maintained and is published in accordance with DAFI 33-360. **(T-1)**
 - 2.1.2. Administer the USAF Advanced Instrument School. (**T-1**) Provide a classroom facility that will support 24 students per class. (**T-1**) Classes will provide a curriculum that enhances instrument flying safety.
 - 2.1.3. Maintain the HQ AFFSA/XOT SharePoint® website that serves as the central reference point for all IRP-related information. (T-1) The HQ AFFSA/XOT SharePoint® is found at https://usaf.dps.mil/sites/affsa/SitePages/XOT.aspx. The HQ AFFSA/XOT SharePoint® contains IRC instructor briefing aids, the instrument examination question bank, and a discussion forum that provides users the ability to post questions to AIS instructors regarding instrument related material. Notify MAJCOMS when there are changes to the instrument examination question bank. (T-1)
 - 2.1.4. Assist MAJCOMs/units by reviewing, on request, any proposed computer based training (CBT) products and provide comments for improvement (if applicable). (T-1)
 - 2.1.5. Maintain the HQ AFFSA Instrument Examination Test Bank in electronic format. (**T-1**)
- **2.2. MAJCOMs.** For the purpose of this manual, Air Force District of Washington is considered a MAJCOM. MAJCOM/A3 or their designated representative will:
 - 2.2.1. Coordinate with HQ AFFSA/XOT for annual allocations to the USAF AIS. Allocate training slots amongst their units. (T-1)
 - 2.2.2. Use of IRC CBT products is optional. If MAJCOMs choose to use CBTs as IRC supplemental forms of instruction, MAJCOMs will develop and approve IRC CBT products for units to use in accordance with **paragraph 4.2.1** Development of specific CBTs may be delegated to the unit level, but MAJCOM/A3s or their designated representatives must approve the final product before use. (**T-1**)
 - 2.2.3. Inspect IRPs within assigned units in accordance with AFI 90-201, *The Air Force Inspection System*, Attachment 3, to verify compliance with this publication and other applicable directives. **(T-1)**
 - 2.2.4. May develop IRC specific tests. If employing electronic testing (e.g., PEX, GTIMS), maintains electronic secure question bank (SQB) based on the HQ AFFSA Instrument Examination Test Bank. (T-1)
- **2.3. Units.** For the purpose of this manual, the term unit refers to operations group level activity. MAJCOMs may adjust unit-level responsibilities as needed but no lower than the squadron level. Units will:
 - 2.3.1. Designate one unit-level IRP administrator as the point of contact for the unit's IRC programs. **(T-1)**

- 2.3.2. Appoint AIS graduates as unit IRC instructors. (T-1)
- 2.3.3. Obtain AIS training allocations through their MAJCOM training requester quota identifier (TRQI) manager. (T-1)
- 2.3.4. Provide IRC instructors with the appropriate facilities and resources necessary to produce and conduct the IRC. (T-1)
- 2.3.5. Forward unit-developed IRC CBT products to their MAJCOM for review and approval prior to use. **(T-1)**
- 2.3.6. Ensure designated nominees for USAF AIS are or have been previously qualified as either an instructor pilot, instructor navigator, or instructor combat systems officers in a Department of Defense (DoD) aircraft. Route waivers for this requirement through the MAJCOM TRQI, which will be approved on a case by case basis by the AIS Commandant.
- 2.3.7. Develop and manage the instrument examination in accordance with **paragraph 4.4** and AFMAN 11-202V2.

2.4. IRP Administrator. IRP administrator will:

- 2.4.1. Maintain and administer the unit's IRP. (T-1)
- 2.4.2. Be a qualified instructor in the unit's MDS. (T-1)
- 2.4.3. Act as the lead IRC instructor, schedule and conduct IRCs, set the tone for instrument refresher training, and stress the importance of a high level of instrument flying knowledge and proficiency. (T-1)
- 2.4.4. Tailor IRCs to meet the unit's mission-specific needs. (T-1)
- 2.4.5. Maintain a list of unit AIS graduates and IRC instructors. (T-1)
- 2.4.6. Lead unit IRC instructors in delivering the best possible refresher courses. (T-1)
- 2.4.7. Create/update the instrument examination and local instrument-related questions in coordination with the unit Standardization/Evaluation (Stan/Eval) function. (**T-1**)
- 2.4.8. Ensure a review of the unit's instrument examination test bank is accomplished in accordance with AFMAN 11-202 Volume 2. (**T-1**) The latest version of the HQ AFFSA Instrument Examination Test Bank (as indicated on the HQ AFFSA/XOT SharePoint®) is used to generate any requisite instrument examinations. The HQ AFFSA Instrument Examination Test Bank is dated to indicate when the latest changes were made.
- 2.4.9. Notify HQ AFFSA/XOT of any necessary changes to the questions or answers contained in the HQ AFFSA Instrument Examination Test Bank. (T-1)
- 2.4.10. Coordinate on unit-generated AF Form 847 affecting Headquarters Air Force or MAJCOM-level instrument related flying regulations and manuals. (**T-1**)
- 2.4.11. Establish a reference library of instrument related publications (may be co-located with Stan/Eval). (**T-1**) The reference library may be in a digital format.

2.5. IRC Instructors. IRC instructors will:

2.5.1. Perform the duties of an IRP administrator if an IRP administrator is not assigned. (**T-1**)

- 2.5.2. Maintain familiarity with the latest instrument instructions/manuals, HQ AFFSA/XOT "Hot Topics," and local instrument flying trends. HQ AFFSA/XOT "Hot Topics" will be downloaded from the HQ AFFSA/XOT SharePoint®. (**T-1**) Other instrument briefings are available for use on the HQ AFFSA/XOT SharePoint®.
- 2.5.3. During the IRC, provide relevant high-quality training in accordance with **Chapter 3** of AFMAN 11-210. **(T-1)**
- 2.5.4. Provide documentation of IRC completion to the appropriate Squadron Aviation Resource Management (SARM) or training offices or training offices via AF Form 1522, *ARMS Additional Training Accomplishment Report.* (**T-1**)
- 2.5.5. Maintain a high level of knowledge on unit's aircraft instrument certifications, approvals, and capabilities in accordance with MAJCOM and local guidance. (**T-1**)
- 2.5.6. Notify IRP administrator and Stan/Eval of any necessary changes to the HQ AFFSA Instrument Examination Test Bank. (T-1)

IRC CURRENCY AND QUALIFICATIONS

- **3.1. IRC Currency.** IRC is a mandatory continuation training item. **(T-1)** Refer to AFMAN 11-202, Volume 1, *Aircrew Training*, guidance for failure to complete continuation training requirements. **Note:** The instrument examination is not required to receive credit for the IRC.
 - 3.1.1. Pilots on active flying status will complete the IRC every 17 months. (**T-1**) IRC currency will expire on the last day of the 17th month following the month in which the IRC was successfully completed (e.g., a class that was completed on 9 Oct 18 expires on 31 Mar 20). **Note:** This requirement applies to all crewmembers mandated by AFMAN 11-202V1, MAJCOM guidance, or unit policy to attend the IRC.
 - 3.1.2. Successful completion of the AIS curriculum at the USAF Advanced Instrument School satisfies IRC completion for that particular 17-month cycle.
 - 3.1.3. IRC instructors who teach all blocks of instruction for the course may take credit for the IRC event.

3.2. IRC Instructor Qualifications.

- 3.2.1. IRC instructors (including contractors) must be graduates of the USAF AIS, the AF AIS/Instrument Pilot Instructor School (AIS/IPIS), the SAC Instrument Flight Course (SIFC)/Advanced Instrument Flight Course, or the United States Army Instrument Flight Examiner Preparatory Course (EIFE-PC) taught at Annville, PA. (T-1) Note: The EIFE-PC is for helicopter pilots only.
- 3.2.2. IRC instructors must be an instructor pilot, instructor navigator, instructor combat systems officer, contracted or certified civilian, a previously qualified instructor in a DoD aircraft or have an equivalent level of experience. (**T-1**) The intent is to have rated flyers teach rated flyers about instrument flying.
- 3.2.3. Guest speakers from other agencies such as weather, air traffic control, aerospace physiology, flight medicine, etc., are highly encouraged. For example, an aerospace physiologist or flight surgeon should present spatial disorientation and situational awareness topics and how they factor into USAF mishaps.

IRC DEVELOPMENT AND CONTENT

- **4.1. IRC Development.** The most appropriate level for IRC content development is at the unit level. The following guidance will help instructors decide on what to cover in an IRC.
 - 4.1.1. Refresh aircrew members on information on instrument knowledge, especially those topics not seen on a daily basis.
 - 4.1.2. Instruct procedures and information that have changed since the last IRC.
 - 4.1.3. Reinforce topics the wing staff, stan/eval, training offices, air traffic control, base operations personnel, weather personnel, flight surgeons, etc. have identified as weak areas.
 - 4.1.4. Emphasize instrument procedures deemed necessary to ensure successful accomplishment of the unit mission.

4.2. IRC Development Tools.

- 4.2.1. Sources of IRC academic material include:
 - 4.2.1.1. The HQ AFFSA/XOT SharePoint® is the central reference point for all IRP information. The site contains the most current HQ AFFSA Instrument Examination Test Bank, sample outlines for individual IRC topics, and briefings used by the HQ AFFSA AIS instructor cadre. All material can be downloaded and used by the unit IRP administrators to develop their own unit IRP. The SharePoint® also provides links to other sites offering instrument-related information.
 - 4.2.1.2. The instructors at AIS provide a great deal of information helpful to IRC instructors. Contact AIS at DSN 884-7073 or visit the HQ AFFSA/XOT SharePoint®.
 - 4.2.1.3. MAJCOMs may also develop IRC course materials (i.e. CBT or MDS specific simulator profiles) for use by unit-level IRC instructors.
 - 4.2.1.3.1. CBTs are not a required component of the IRC. If utilized, CBTs will be developed in accordance with Air Force Handbook (AFH) 36-2235, Volume 5, Information for Designers of Instructional Systems, Advanced Distributed Learning: Instructional Technology and Distance Learning and AFH 36-2235, Volume 8, Information for Designers of Instructional Systems, Application to Aircrew Training. Additionally, CBTs will be updated as new or revised instructions and manuals are released. Non-current CBTs are not authorized for completion of the IRC. CBTs will be approved by the respective MAJCOM/A3 division prior to use. (T-1)
 - 4.2.1.3.2. Simulator Profile Development. Simulator capabilities vary based on MDS and can be valuable training tools. Regardless of the level of fidelity, a simulator profile specifically designed for IRC training provides one of the best methods to reinforce safe instrument procedures and concepts. Including emergency procedures in the IRC simulator is a valuable and encouraged technique (e.g., engine failure and transition to a special departure procedure). Other IRC simulator profile examples would be: a pending deployment route and terminal procedures, divert base approach information, missed approach procedures and techniques, local divert base familiarity,

- standard instrument departures, obstacle departure procedures, etc. This list is not all-inclusive, but does offer some ideas for structuring an IRC specific simulator profile.
- **4.3. IRC Content Requirements.** As a minimum, the IRC will contain instruction in each of the following required categories: new or revised regulations/instructions, instrument procedures, flight planning, weather and local related hazards, spatial disorientation, "Hot Topics," and head-up displays (HUD) (if applicable). **(T-1)**
 - 4.3.1. The IRC instructor will teach items found in the "Hot Topics" section of the HQ AFFSA/XOT SharePoint®. (T-1)
 - 4.3.2. IRC instructors in units possessing aircraft equipped with a HUD that is approved for instrument meteorological conditions will teach HUD specific content (**T-1**) The MAJCOM, IRP administrator, or IRC instructor will develop this content.
 - 4.3.3. The IRC will be taught in a classroom format by a qualified IRC instructor in accordance with this manual and applicable MAJCOM supplements. (**T-1**) Simulator profiles and/or CBT programs specifically designed for IRC training may be used for IRC classroom credit. However, supplemental forms of instruction (simulators, CBT, video, guest speaker, etc.) are not authorized as a sole means of IRC completion. A portion of the IRC must utilize instructor based training. (**T-1**) **Note:** The instructor-based classroom portion of the IRC may be conducted remotely (via Microsoft Teams®, Zoom®, etc.) as long as the material is available for all trainees to view and the instruction is done in real time (not a played back recording).
 - 4.3.4. The IRC will be at least six hours in length. (**T-1**) Time spent taking the Instrument Examination does not count towards the six-hour IRC course requirement.
 - 4.3.5. Completion of a MAJCOM approved CBT may fulfill up to a maximum of four hours of the IRC classroom credit. Aircrew completing a CBT program will provide a completion certificate to the IRC instructor. **(T-1)**
 - 4.3.6. If the unit IRC program includes simulator training profiles specifically designed for IRC training, a maximum of two hours of the IRC may be spent in a simulator as classroom credit. **(T-1)**
 - 4.3.7. Other methods of instruction that relate to IRC topics may be utilized, such as videos, expert guest speakers, tours, etc. These other methods can fulfill a maximum of one hour of classroom credit for each event. **(T-1) Example:** a one hour tour of ATC/RAPCON and a one hour presentation from a base meteorologist would count for two hours of credit.
 - 4.3.8. If a combination of CBTs, simulator profiles, and/or other instructional methods is utilized, a minimum of one hour of classroom taught by a qualified IRC instructor is still required to complete the IRC. (**T-1**) **Note:** The classroom portion will include: new and revised regulations/instructions, unit-designated and HQ AFFSA/XOT SharePoint® "Hot Topics," and local instrument trends and procedures. (**T-1**)
- **4.4. Requisite Instrument Examination.** The requisite instrument examination provides an extensive open-book review of instrument procedures and other instrument-related subjects. The test is synchronized with the instrument and/or qualification evaluation in accordance with AFMAN 11-202 Volume 2 and AFMAN 11-2MDS Volume 2.
 - 4.4.1. HQ AFFSA/XOT maintains the HQ AFFSA Instrument Examination Test Bank in electronic format. The test bank is available for download via the HQ AFFSA/XOT

- SharePoint®. **Note:** The test bank will not be referenced during the instrument examination. **(T-1)**
- 4.4.2. Unit changes to individual questions in the HQ AFFSA Instrument Examination Test Bank are not authorized. Omit questions from testing if changes in source material render the question invalid. Approved changes will be posted on the HQ AFFSA/XOT SharePoint®.
- 4.4.3. The IRP administrator, with the assistance of IRC instructors, will act as the unit conduit for deficiencies and updates to questions in the HQ AFFSA Instrument Examination Test Bank. (T-1)
- 4.4.4. The requisite instrument examination will contain a minimum of 40 questions taken from the HQ AFFSA Instrument Examination Test Bank and a minimum of 10 locally developed questions specific to the unit mission and/or aircraft type. (T-1) The test will be constructed as follows:
 - 4.4.4.1. 25 questions (minimum) AFMAN 11-202, Volume 3, Flight Operations (T-1)
 - 4.4.4.2. 10 questions (minimum) Flight Information Publications (FLIP) (T-1)
 - 4.4.4.3. 5 questions (minimum) AFH 11-203, Volume 1, Weather for Aircrews, and/or AFH 11-203 Volume 2, Weather for Aircrews-Products and Services. (**T-1**)
 - 4.4.4.4. 10 questions (minimum) Locally developed. Questions must cover instrument-related areas and may be taken from MAJCOM flight directives, supplements, aircraft tech orders, and/or local flying directives. (T-1)
 - 4.4.4.5. Additional questions (in excess of the 50 minimum) may be written by the unit IRP administrator, written by the MAJCOM, taken from the HQ AFFSA Instrument Examination Test Bank, or a combination of all three methods.
- 4.4.5. The requisite instrument examination, as detailed above, should be completed as one event and not broken up into multiple tests over time.

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Attachment 1

GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION

References

AFPD 11-2, Aircrew Operations, 31 January 2019

AFI 33-322, Records Management and Information Governance Program, 27 July 2021

AFI 90-201, The Air Force Inspection System, 20 November 2018

AFH 36-2235, Volume 5, Information for Designers of Instructional Systems Advanced Distributed Learning: Instructional Technology and Distance Learning, 1 November 2002

AFH 36-2235, Volume 8, Information for Designers of Instructional Systems Application to Aircrew Training, 1 November 2002

AFMAN 11-202, Volume 1, Aircrew Training, 27 September 2019

AFMAN 11-202, Volume 2, Aircrew Standardization and Evaluation Program, 30 August 2021

AFMAN 11-202, Volume 3, Flight Operations, 10 June 2020

AFH 11-203, Volume 1, Weather for Aircrews, 12 January 2012

AFH 11-203, Volume 2, Weather for Aircrews-Products and Services, 13 August 2015

DAFI 33-360, Publications and Forms Management, 1 December 2015

Adopted Forms

AF Form 847, Recommendation for Change of Publication

AF Form 1522, ARMS Additional Training Accomplishment Report

Abbreviations and Acronyms

AFI—Air Force Instruction

AFMAN—Air Force Manual

AFPD—Air Force Policy Directive

AIS—Advanced Instrument School

ARMS—Aviation Resource Management System

CBT—Computer Based Training

DAFI—Department of the Air Force Instruction

DoD—Department of Defense

EIFE-PC—Instrument Flight Examiner Preparatory Course

FLIP—Flight Information Publication

GTIMS—Graduate Training Integration Management System

HUD—Head-Up Display

HQ AFFSA—Headquarters Air Force Flight Standards Agency

HQ AFFSA/XOT—Headquarters Air Force Flight Standards Agency Advanced Instrument School

IPIS—Instrument Pilot Instructor School

IRC—Instrument Refresher Course

IRP—Instrument Refresher Program

MAJCOM—Major Command

MDS—Mission Design Series

OPR—Office of Primary Responsibility

PEX—Patriot Excalibur Software Application

SARM—Squadron Aviation Resource Management

SEI—Special Experience Identifier

SIFC—SAC Instrument Flight Course

SIFC—Secure Question Bank

Stan/Eval—Standardizations and Evaluations

TRQI—Training Requester Quota Identifier

USAF—United States Air Force

USSF—United States Space Force