



**Federal Aviation
Administration**

***55054001
EN ROUTE
RADAR ASSOCIATE
CONTROLLER TRAINING PART A:
BASIC CONCEPTS***

Facility Instruction Guide (FIG)

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1. Introducing the Course

Course 55054001 (*Radar Associate Controller Training Part A: Basic Concepts*) is part of the Air Traffic Control Specialist (ATCS) training requirements outlined in FAA Order JO 3120.4, Air Traffic Technical Training. This FAA Order provides guidance for all aspects of ATCS training from initial qualification through proficiency training.

Course 55054001, in conjunction with facility-developed academic materials and simulation training, will prepare the developmental/CPC-IT for future training in the operational environment. This training is administered as instructor-led training (ILT).

1.1 Instructor-led Training (ILT) and e-Learning

The national curriculum may be supplemented by facility-developed instructional materials. There are also supplemental e-learning courses accessible at the student's local facility. These e-learning courses can be assigned to the student for additional information, but are not required. ILT lessons are listed by lesson number and any associated e-learning modules are listed by individual course numbers.

The national curriculum for course 55054001 is as follows:

- Lesson 1 - *Recording Clearances and Control Information*
 - 57826: Recording Clearances and Control Information
- Lesson 2 - *Radio and Interphone Communication*
 - 57827: Radio and Interphone Communication
- Lesson 3 - *Vertical Separation*
- Lesson 4 - *General Control and Board Management*
 - 57833 - General Control and Board Management
- Lesson 5 - *IFR Clearances and Route Assignment*
 - 57834 - IFR Clearances and Route Assignments
- Lesson 6 - *IFR Flight Direction, Altitude Assignment and Altimeter Setting*
 - 57835 - IFR Flight Direction, Altitude Assignment, and Altimeter Setting
- Lesson 7 - *Approaches*
 - 57838 - Approaches
- Lesson 8 - *Holding Aircraft*
 - 57840 - Holding Aircraft
- Lesson 9 - *Forwarding Control Information*
 - 57842 - Forwarding Control Information
- Lesson 10 - *Lost Communication Procedures*
 - 57845 - Lost Communication Procedures
- Lesson 11 - *Initiating Emergency Procedures*
- Lesson 12 - *VFR and VFR-on-Top Procedures*

- 57847 - VFR and VFR/OTP Procedures
- Lesson 13 - *Special VFR Operations*
 - 60004948 - Special VFR
- Lesson 14 - *Special Use Airspace, ATC Assigned Airspace, and Stationary Altitude Reservations*
- Lesson 15 - *Military and Special Operations*

2. Instructional Activities and Assessments

2.1 Practice Exercises

This course includes practice exercises designed to provide the students opportunities to perform the duties related to the radar associate controller position. The practice exercises are not scored, but the instructor will verify proficiency.

Each facility may develop, in accordance with the local training directives and as determined by the Training Administrator (TA), additional practice exercises for student enhancement. Practice exercises are located in:

- Lesson 1 - *Recording Clearances and Control Information*
 - Practice Exercise 1: Flight Strip Data Locations
 - Purpose: To review computer generated flight strip data locations
 - Practice Exercise 2: Strip Marking Symbols
 - Purpose: To review strip marking symbols
 - Practice Exercise 3: Recording Clearances and Control Information
 - Purpose: To review and practice strip marking on flight progress strips using proper characters and symbols in the correct locations
 - Practice Exercise 4: Flight Progress Strip Marking
 - Purpose: To review and practice strip marking on flight progress strips using proper characters and symbols in the correct locations

- Lesson 2 - *Radio and Interphone Communication*
 - Practice Exercise 1: ATC Times
 - Purpose: To review pronunciation of times in ATC communications
 - Practice Exercise 2: Numbers Phraseology, Part 1
 - Purpose: To review pronunciation of numbers in ATC communications
 - Practice Exercise 3: Numbers Phraseology, Part 2
 - Purpose: To review pronunciation of numbers in ATC communications
 - Practice Exercise 4: Communication Skills
 - Purpose: To identify and understand common barriers to communication
 - Practice Exercise 5: Listening for Readback Errors
 - Purpose: To identify readback errors in ATC communications
- Lesson 3 - *Vertical Separation*
 - Practice Exercise 1: Vertical Separation
 - Purpose: To practice applying the appropriate vertical separation minima
- Lesson 4 - *General Control and Board Management*
 - Practice Exercise 1: Board Management
 - Purpose: To practice applying procedures for board management
- Lesson 5 - *IFR Clearances and Route Assignment*
 - Practice Exercise 1: Departure Clearances
 - Purpose: To practice issuing departure clearances using appropriate phraseology

2.2 Knowledge Checks

Knowledge checks are questions within lessons that are used to ensure that critical information is retained. They occur throughout the course and are not scored.

2.3 End-of-Lesson Tests

The instructor should administer and grade the end-of-lesson test upon completion of each lesson. There is one test and one alternate test for each lesson. The passing score is 70%. If a student does not achieve a score of 70%, allow the student time to review the material, then administer one retake using the alternate end-of-lesson test. If the student does not score a 70% or higher on the retake, refer the student to their Training Manager.

2.4 Locally Prepared Materials

The instructor may use locally developed materials as needed to augment the national training. Assessment and remediation strategies for these materials, if applicable, will be determined by the local facility and administered in accordance with national and local directives.

Review lessons and prepare any local procedures and adaptation information, as necessary. Instructor notes in the lessons give suggestions as to when local information may be applicable.

3. Organizing the Course

The TA, or their designee(s), will organize and conduct the course. This includes:

- Reviewing the course requirements
- Developing and/or reviewing the schedule
- Preparing to conduct the course

Before the course starts, the instructor(s) should review each lesson and associated PowerPoints, and test the animation on the PowerPoint. Some lessons contain embedded videos, therefore, classroom speakers should be tested as well. Report any issues with training materials to the TA.

3.1. Course Schedule

The agenda should include six to seven training hours for each day. Hours needed for each topic may vary greatly from one topic to the next. The hours provided at the beginning of each lesson are for planning purposes only. Factors that can impact the length of a topic include: group size, group energy level, instructor's style, etc. Break times and ELT retake times are not included in these estimates.

Lesson	ILT	Practice Exercise(s)	End-of-Lesson Test	Total Lesson Length
1. Recording Clearances and Control Information	1 hour	2 hours	30 mins	3 hours, 30 mins
2. Radio and Interphone Communication	1 hour	1 hour	30 mins	2 hours, 30 mins
3. Vertical Separation	30 mins	15 mins	30 mins	1 hour, 15 mins
4. General Control and Board Management	30 mins	15 mins	30 mins	1 hour, 15 mins
5. IFR Clearances and Route Assignment	2 hours, 30 mins	30 mins	30 mins	3 hours, 30 mins
6. IFR Flight Direction, Altitude Assignment, and Altimeter Setting	45 mins	N/A	30 mins	1 hour, 15 mins

Lesson	ILT	Practice Exercise(s)	End-of-Lesson Test	Total Lesson Length
7. Approaches	2 hours	N/A	30 mins	2 hours, 30 mins
8. Holding Aircraft	45 mins	N/A	30 mins	1 hour, 15 mins
9. Forwarding Control Information	30 mins	N/A	30 mins	1 hour
10. Lost Communication Procedures	45 mins	N/A	30 mins	1 hour, 15 mins
11. Initiating Emergency Procedures	1 hour, 45 mins	N/A	30 mins	2 hours, 15 mins
12. VFR and VFR-on-Top Procedures	30 mins	N/A	30 mins	1 hour
13. Special VFR Operations	30 mins	N/A	30 mins	1 hour
14. Special Use Airspace, ATC Assigned Airspace, and Stationary Altitude Reservations	1 hour	N/A	30 mins	1 hour, 30 mins
15. Military and Special Operations	2 hours, 15 mins	N/A	30 mins	2 hours, 45 mins
TOTAL TIME	16 hours, 15 mins	4 hours	7 hours, 30 mins	27 hours, 45 mins

3.2. Training Materials

The following materials are required to conduct this training:

- Instructor Lesson Plans
 - Add examples as necessary to reflect local information
- PowerPoint (PPT) presentations for each lesson
 - Add examples as necessary to reflect local information
- Student Lesson Plans (one copy per participant per lesson)
- Computer/laptop loaded with the PowerPoint program and presentations
 - Ensure the computer is capable of playing videos with sound
- Sign-in sheet, if applicable
- Handouts and other instructional materials
 - Lesson 1 - *Recording Clearances and Control Information*

- Practice Exercises Handout HO01_L01
- End-of-Lesson Test Handouts ELT01_L01 and ELT02_L01

- Lesson 2 - *Radio and Interphone Communication*
 - Practice Exercise Handout HO01_L02
 - End-of-Lesson Test Handouts ELT01_L02 and ELT02_L02
 - Audio Files
 - “Barriers to Communication” (7:29 minutes)
 - “Listening for Readback Errors” (6:33 minutes)
- Lesson 3 - Vertical Separation
 - Practice Exercise Handout HO01_L03
 - End-of-Lesson Test Handouts ELT01_L03 and ELT02_L03
- Lesson 4 - *General Control and Board Management*
 - End-of-Lesson Test Handouts ELT01_L04 and ELT02_L04
- Lesson 5 - *IFR Clearances and Route Assignment*
 - Practice Exercise Handout HO01_L05
 - End-of-Lesson Test Handouts ELT01_L05 and ELT02_L05)
- Lesson 6 - *IFR Flight Direction, Altitude Assignment, and Altimeter Setting*
 - End-of-Lesson Test Handouts ELT01_L06 and ELT02_L06
- Lesson 7 - *Approaches*
 - U.S. Terminal Procedures Publication (electronic or hard copy)
 - End-of-Lesson Test Handouts ELT01_L07 and ELT02_L07)
- Lesson 8 - *Holding Aircraft*
 - Practice Exercise Handout HO01_L08
 - End-of-Lesson Test Handouts ELT01_L08 and ELT02_L08
- Lesson 9 - *Forwarding Control Information*
 - End-of-Lesson Test Handouts ELT01_L09 and ELT02_L09
- Lesson 10 - *Lost Communication Procedures*
 - Practice Exercise Handout HO01_L10
 - End-of-Lesson Test Handouts ELT01_L10 and ELT02_L10
- Lesson 11 - *Initiating Emergency Procedures*
 - End-of-Lesson Test Handouts ELT01_L11 and ELT02_L11
- Lesson 12 - *VFR and VFR-on-Top Procedures*
 - End-of-Lesson Test Handouts ELT01_L12 and ELT02_L12
- Lesson 13 - *Special VFR Operations*
 - End-of-Lesson Test Handouts ELT01_L13 and ELT02_L13










- Lesson 14 - *Special Use Airspace, ATC Assigned Airspace, and Stationary Altitude Reservations*
 - End-of-Lesson Test Handouts ELT01_L14 and ELT02_L14
- Lesson 15 - *Military and Special Operations*
 - End-of-Lesson Test Handouts ELT01_L14 and ELT02_L14
- At a minimum, provide students access to the following references:
 - FAA Orders
 - JO 8260.3 (TERPS), Aeronautical Information Manual
 - JO 7110.65, Air Traffic Control
 - JO 7610.4, Special Operations
 - JO 7400.10, Special Use Airspace
 - JO 7210.3 Facility Operation and Administration
 - Code of Federal Regulations (CFR) Part 91, General Operating and Flight Rules
 - FAA-H-8083-25, Pilot's Handbook of Aeronautical Knowledge
 - Facility Standard Operating Procedures
 - Sector Binders

3.2 Hidden Text in Lessons and End-of-Lesson Tests

Instructor notes and answers to knowledge checks and test questions are shown in Hidden Text in the Instructor lessons and tests. The tests also contain references and lesson plan page numbers for each question in hidden text. This information is not visible in student versions of the material.

3.3 *Icon Legend*

The icons in the table below are used throughout the lessons to indicate common features and activities.

	Description
	The Activity icon indicates an exercise, lab, or hands-on activity.
	The Discussion Question icon signals a discussion question to be asked to the students.
	The Handout icon indicates a handout is to be distributed to the students.
	The Instructor Note icon is in hidden text and indicates text that is for the instructor only.
	The Multimedia icon indicates a video or audio clip is in the presentation.
	The Phraseology icon indicates that phraseology is in the content.
	The WBT icon indicates a component of web-based training.
	The Click icon indicates a PPT slide with click-based functionality to present additional information.
	The Definition icon indicates a published definition.

4. Course Checklist

This checklist includes activities to be completed before, during, and after the course. Although you may not be responsible for completing all of the items, you should ensure these items have been completed prior to conducting the course. You may also want to add or remove items, as applicable.

If Possible, Two Months Prior to Training

- ☐ Identify and coordinate with other instructors assisting with the course.
- ☐ Identify potential participants.
- ☐ Create a roster for the course.
- ☐ Select dates and times for the course. The course must meet the minimum days required in the course description.
- ☐ Arrange for and check the location where the course will be facilitated.
- ☐ Coordinate a planned schedule for the lab.
- ☐ Develop a schedule for the classroom portion of the course.
- ☐ Notify the facility scheduler of course dates as soon as possible.
- ☐ Review the course materials.
 - Plan breaks for longer lessons after 50-60 minutes of instruction.
- ☐ If applicable, gather information for each lesson to include local procedures, adaptation information, examples, etc.

If Possible, One Month Prior to Training

- ☐ Prepare materials.
 - Determine if electronic or printed copies of student lesson plans will be used.
 - Download the PDF version of the Student and Instructor lessons and handouts from the INET site to the classroom computer.
 - Request a link to download the end-of-lesson tests (ELTs) from the INET site.
 - Download the PowerPoints for the lessons to the classroom computer. This is important, as videos and animations may not perform properly if run from materials online.
 - Regardless of which format is used for the student lesson plans, you must make print copies of handouts and ELTs.
 - All printed materials should be printed in color.
 - The PDF instructor lessons contain hidden text which are not visible in the student lessons. Answers to practice exercises and knowledge checks, as well as instructor notes are in hidden text.
 - The PDF instructor ELTs contain answers and references which are not visible in the PDF student ELTs.
- ☐ Make sure that you have adequate copies of all printed materials.
- ☐ Request equipment (easels, chart paper, markers, computer and projector, as needed).
- ☐ Develop the required facility exercises and scenarios.
- ☐ Send a completed Participant Letter to participants in the course.

If Possible, One Week Prior to Training

- ☐ Obtain copies of all reference materials.
- ☐ Ensure electronic and/or printed versions of reference materials and lessons are available to students.
- ☐ Obtain facility specific training materials such as the unlabeled chart of the local center area.
- ☐ Ensure sufficient quantities of student lessons, handouts, and ELTs are available. Ensure ELTs are secured before and after they are administered.
- ☐ Determine class start time for first day.

Day Before the Training

- ☐ Confirm which instructor will teach each lesson.
- ☐ Verify room and lab availability.

Day of the Training

- ☐ Inspect the room for correct setup, temperature, and lighting.
- ☐ Verify equipment and supplies are available.
- ☐ Resolve any problems with the room or equipment.
- ☐ Verify participants present with the class roster.

After the Training

- ☐ Return equipment, supplies, and resource materials.
- ☐ Review the end-of-course evaluations.
- ☐ Note any changes to topics that will enhance your next course.
- ☐ Record the student test scores in the appropriate location(s)
- ☐ Forward the completed roster to the participants' facility Training Manager to ensure course credit is recorded.

5. Sample Participant Letter

The DOT Congressional Mandate (PL105-277) requires that the goals of the training are included in this letter. Send a letter in advance to all participants listing the goals of the training as mandated by PL105-277.

(Date)

Dear (Participant's Name):

You will be attending *En Route Radar Associate Controller Training* from (beginning date) to (ending date). The training will begin at (time) and end at (time) each day. The training will be held at (location). Bring any FAA-issued tablet to class.

The purpose of this letter is to provide information regarding the course.

The goal of the course is to prepare the developmental/CPC-IT to perform independently all the duties of the radar associate controller on all sectors.

The training methods used in the course involve high levels of involvement by course participants.

If you have any questions about the course, please let me know. The best time to reach me is (days, time, phone number, facility address). I am looking forward to seeing you at the course.

Sincerely,

(Instructor's name)

6. Course Evaluation Form

This evaluation should be administered immediately after completion of the course. Collect evaluation forms and deliver to the facility Training Administrator.

Course _____

Facility and Date _____

Your feedback is anonymous and valuable for the success of this training. Please rate your experience in this class using the following Likert Scales:

1. Strongly Disagree
2. Disagree
3. Neutral
4. Agree
5. Strongly Agree

Questions	1	2	3	4	5	Comments
1. The Instructor taught in such a way that I was able to understand the content.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2. The Instructor was available to assist me during the course.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3. I understood the objectives for each lesson.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4. I was able to understand the course materials.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5. I felt the course kept me actively engaged.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6. The knowledge and/or skills checks assessed my proficiency level.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
7. The training environment was conducive to my learning.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	