

TRAINING & READINESS SUPPLEMENT

RADAR FLIGHT DATA



Air Traffic Control Facility
26 Sep 2019

Name

This supplement includes Lesson Topic Guides (LTGs) and Local Qualification Standards (LQSs) for Marine Corps Air Station Cherry Point as required by ATC NATOPS and NAVMC 3500.94B, Chapter 8, Training & Readiness Manual.

The LTGs detail the reference materials and discussion items that support the Knowledge, Skills and Abilities (KSAs) that must be satisfactorily completed in order to assign the applicable qualification or designation. The LQSs are divided into KSAs. The time allowed to complete this T&R Supplement is defined by the ATC Facility Manual and shall not exceed the requirements of the T&R Directive. The actual completion data for each position qualification, to include total number of days and total number of hours, shall be collected and analyzed by the facility's training branch. These data support Continuous Process Improvement within the facility and aid in projects and planning at the regional level.

Knowledge is checked with a written test. All Knowledge tests shall be completed with a minimum passing score of 80% prior to the trainee reaching 25% of the established OJT time limit. Skills and Abilities may be accomplished through OJT or simulation and shall be marked appropriately. LTGs and LQSs written in black are those required by the T&R Directive, those written in red are supplemental information specifically for MCAS Cherry Point.

The following events are included in this supplement and taught in the associated Lesson Plan:

Event	Description
ACAD-0520	Describe radio and interphone communications knowledge.
ACAD-0521	Describe aircraft movement data knowledge.
ACAD-0522	Describe flight progress strip knowledge.
ACAD-0523	Describe ATC clearance knowledge and phraseology.
ACAD-0532	Identify radar equipment usage.
ACAD-0534	Describe basic radar knowledge.
ACAD-0538	Describe radar coordination procedures.
EQPT-2018	Operate Radar Equipment
EQPT-2019	Operate Radar Flight Data equipment.
COMM-2206	Operate radar communications equipment.

OJT shall not commence until the required progression benchmarks are met.

RADAR FLIGHT DATA

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Section III	Progression Benchmarks
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TRAINING PLAN			
Trainee:		Date:	
Position:		Initial Training <input type="checkbox"/>	
SATCS:		Subsequent Training <input type="checkbox"/>	
OJT Start Date		25% Date	
Pre OJT Required		50% Date	
Simulation Required		75% Date	
		100% Date	
Objectives:			
Trainee		Signature/Date	
Primary OJTI		Signature/Date	
Secondary OJTI		Signature/Date	

Ensure a copy of this training plan is on file in the ATC Training Office.

LTG 1 - RADIO AND INTERPHONE COMMUNICATIONS (ACAD-0520)

Lesson Topic Guide

GOAL. Describe radio and interphone communications knowledge.

REQUIREMENT.

1. Describe radios and interphone communications per the reference.

INSTRUCTOR. BI.

REFERENCE

1. FAA JO 7110.65

2-4-1	Radio Communications
2-4-2	Monitoring
2-4-14	Words and Phrases
2-4-15	Emphasis for Clarity
2-4-16	ICAO Phonetics
2-4-17	Numbers Usage
2-4-18	Number Clarification
2-4-19	Facility Identification
2-4-20	Aircraft Identification
2-4-21	Description of Aircraft Types
2-4-22	Airspace Classes

Local Qualification Standards

KNOWLEDGE. Pass a written examination encompassing the requirement with a minimum score of 80%.

SKILLS AND ABILITIES

Skill/Ability	Date	OJTI
Demonstrate the ability to monitor interphones and assigned radio frequencies continuously.		
Demonstrate the skill of using the word "heavy" as part of the identification of heavy aircraft.		
Demonstrate the ability to use ICAO pronunciation of numbers and letters.		
Demonstrate the skill to state numbers properly for altitudes, flight levels, time, altimeter, speed, wind, headings, beacon codes, runways and frequencies.		
Demonstrate the skill to use proper aircraft identification.		

Individual has satisfactorily completed all LQS requirements for LTG 1:

Date: _____

Trainee: _____ Signature: _____

FWO/Crew Chief Signature _____

Lesson Topic Guide

GOAL. Describe aircraft movement data knowledge.

REQUIREMENT.

1. Describe the terms of acknowledgement of clearances and instructions.
2. Describe interphone transmission priorities.
3. Describe the terms for priority interruption.
4. Describe the interphone format.

INSTRUCTOR. BI.

REFERENCE

1. FAA JO 7110.65

2-4-3	Pilot Acknowledgement/Read Back
2-4-4	Authorized Interruptions
2-4-5	Authorized Transmissions
2-4-6	False or Deceptive Communications
2-4-7	Authorized Relays
2-4-8	Radio Message Format
2-4-9	Abbreviated Transmissions
2-4-10	Interphone Transmission Priorities
2-4-11	Priority Interruption
2-4-12	Interphone Message Format
2-4-13	Interphone Message Termination

Local Qualification Standards

KNOWLEDGE. Pass a written examination encompassing the requirement with a minimum score of 80%.

SKILLS AND ABILITIES

Skill/Ability	Date	OJTI
Demonstrate the ability to communicate using proper radio message format.		
Demonstrate the skill of abbreviating transmissions after communications have been established.		
Demonstrate the ability to terminate interphone messages with your operating initials.		
Demonstrate the ability to use the proper format for interphone messages.		
Demonstrate the skill to properly prioritize interphone messages.		
Demonstrate the ability to interrupt lower priority messages.		

Individual has satisfactorily completed all LQS requirements for LTG 2:

Date: _____

Trainee: _____ Signature: _____

FWO/Crew Chief Signature _____

Lesson Topic Guide

GOAL. Describe flight progress strip knowledge.

REQUIREMENT

1. Describe the methods for updating information on flight progress strips.
2. Label flight progress strips, to include:
 - a. Arrivals.
 - b. Departures.
 - c. Overflights.
 - d. Enroute aircraft.
3. List aircraft prefixes.
4. List aircraft suffixes.
5. List flight progress strip control information symbols.

INSTRUCTOR. BI.

REFERENCE

1. FAA JO 7110.65
 - 2-3-1 General
 - 2-3-4 Terminal Data Entries
 - 2-3-5 Aircraft Identity
 - 2-3-6 Aircraft Type
 - 2-3-7 USAF/USN Undergraduate Pilots
 - 2-3-8 Aircraft Equipment Suffix
 - 2-3-10 Control Symbolology

Local Qualification Standards

KNOWLEDGE. Pass a written examination encompassing the requirement with a minimum score of 80%.

SKILLS AND ABILITIES

Skill/Ability	Date	OJTI
Demonstrate the ability to identify civil and military aircraft using call sign prefixes.		
Demonstrate the skill to properly complete flight progress strips.		
Demonstrate the ability to properly forward aircraft equipment suffixes.		
Demonstrate the ability to use the proper code for test flight plans.		
Demonstrate the skill to post flight progress strips and data to the appropriate position.		
Demonstrate the ability to write a manual copy with return strip and enter them correctly into the STARS display.		
Demonstrate the ability to identify what information goes in each block of a flight progress strip for both arrivals and departures.		
Demonstrate the ability to record a pointout from an adjacent facility.		

Individual has satisfactorily completed all LQS requirements for LTG 3:

Date: _____

Trainee: _____ Signature: _____

FWO/Crew Chief Signature _____

Lesson Topic Guide

GOAL. Describe ATC clearance knowledge and phraseology.

REQUIREMENT

1. Identify the clearance items.
2. Describe how to relay clearances.
3. Describe the phraseology to issue route and altitudes amendments.
4. Describe the phraseology to issue a through clearance.
5. Describe the phraseology to issue an altitude reservation (ALTRV) clearance.

INSTRUCTOR. BI.

REFERENCE

1. FAA JO 7110.65
 - 4-2-1 Clearance Items
 - 4-2-4 Clearance Relay
 - 4-2-5 Route and Altitude Amendments
 - 4-2-6 Through Clearances
 - 4-2-7 ALTRV Clearance
 - 4-2-8 IFR-VFR and VFR-IFR Flights
 - 4-5-2 Flight Direction
 - 4-5-4 Lowest Usable Flight Level

Local Qualification Standards

KNOWLEDGE. Pass a written examination encompassing the requirement with a minimum score of 80%.

SKILLS AND ABILITIES.

Skill/Ability	Date	OJTI

Individual has satisfactorily completed all LQS requirements for LTG 4:

Date: _____

Trainee: _____ Signature: _____

FWO/Crew Chief Signature _____

Lesson Topic Guide

GOAL. Identify radar equipment usage.

REQUIREMENT. Identify radar equipment principles, to include the following:

1. Presentation and equipment performance.
2. Alignment accuracy check.
3. Radar use.
4. Beacon range accuracy.
5. Electronic cursor.
6. Altitude filters.
7. Standby/low sensitivity operation.
8. Inoperative interrogator.
9. In-flight deviations from transponder.
10. Automated Radar Terminal Systems (ARTS)-Terminal.
11. TPX-42-Terminal.
12. Facility equipment general.
13. Radar use.
14. Video maps.
15. Airport facilities.
16. Radar operations equipment.
17. Precision approach landing system approach criteria.
18. Facility equipment.

INSTRUCTOR. BI.

REFERENCE

1. FAA JO 7110.65
 - 5-1-1 Presentation and Equipment Performance
 - 5-1-2 Alignment Accuracy Check
 - 5-1-3 ATC Surveillance Source Use
 - 5-1-4 Beacon Range Accuracy
 - 5-1-7 Electronic Cursor
 - 5-2-13 Standby or Low Sensitivity Operation
 - 5-2-16 Inoperative or Malfunctioning Interrogator
 - 5-2-21 Automatic Altitude Reporting
 - 5-2-22 Inflight Deviations From Transponder Requirements
 - 5-2-23 Beacon Termination
 - 5-2-24 Altitude Filters

- 5-15-1 Application
- 5-15-2 Responsibility
- 5-15-3 Functional Use
- 5-15-4 System Requirements
- 5-15-5 Information Displayed
- 5-15-6 CA/MCI
- 5-15-7 Inhibiting Minimum Safe Altitude Warning (MSAW)
- 5-15-8 Track Suspend Function

2. FAA JO 7210.3

- Ch3 Sec1 (Facility Equipment) General
- Ch3 Sec7 Radar Use
- Ch3 Sec8 Video Maps

3. NAVAIR 00-80T-114

- 3.5 Airport Facilities
- 10.2.1 Equipment Requirements

Local Qualification Standards

KNOWLEDGE. Pass a written examination encompassing the requirement with a minimum score of 80%.

SKILLS AND ABILITIES. Will be evaluated during LTG 23 and LTG 24.

Individual has satisfactorily completed all LQS requirements for LTG 13:

Date: _____

Trainee: _____ Signature: _____

FWO/Crew Chief Signature _____

Lesson Topic Guide

GOAL. Describe basic radar knowledge.

REQUIREMENT. Describe the following IAW the reference:

1. Formation flights.
2. Wake turbulence.
3. Wake turbulence cautionary advisories.
4. Observed abnormalities.
5. Landing area condition.
6. Timely information.
7. Traffic advisories.
8. Bird activity information.
9. Traffic information.
10. Altitude restricted approach.
11. Vertical separation minima.
12. Single frequency approaches (SFA).
13. Clearance relay.
14. Transfer of radar identification.
15. Circling approach.
16. Radar identification.
17. Radar separation.
18. Radar arrivals.

INSTRUCTOR. BI

REFERENCE

1. FAA JO 7110.65
 - 2-1-13 Formation Flights
 - 2-1-15 Control Transfer
 - 2-1-19 Wake Turbulence
 - 2-1-20 Wake Turbulence Cautionary Advisories
 - 2-1-21 Traffic Advisories
 - 2-1-22 Unmanned Aircraft System (UAS) Activity Information
 - 2-1-23 Bird Activity Information
 - 2-2-5 IFR to VFR Flight Plan Change
 - 3-1-6 Traffic Information
 - 3-1-10 Observed Abnormalities
 - 3-3-1 Landing Area Conditions

- 3-3-3 Timely Information
- 3-10-10 Altitude Restricted Approach
- 4-5-1 Vertical Separation Minima
- 4-7-3 Single Frequency Approaches (SFA)
- 4-8-6 Circling Approach
- 4-8-8 Communications Release
- 5-3-1 Application
- 5-3-2 Primary Radar Identification Methods
- 5-3-3 Beacon Identification Methods
- 5-3-5 Questionable Identification
- 5-4-1 Application
- 5-4-3 Methods (Transfer of Radar ID)
- 5-4-4 Traffic (Radar Separation)
- 5-4-5 Transferring Controller Handoff
- 5-5-1 Application (Radar Separation)
- 5-5-2 Target Separation
- 5-5-4 Minima (Radar Separation)
- 5-5-8 Additional Separation For Formation Flights
- 5-9-1 Vectors to Final Approach Course
- 5-9-2 Final Approach Course Interception
- 5-9-3 Vectors Across Final Approach Course
- 5-9-4 Arrival Instructions
- 5-9-5 Approach Separation Responsibility
- 10-2-8 Radar Assistance to VFR Aircraft in Weather Difficulty

Local Qualification Standards

KNOWLEDGE. Pass a written examination encompassing the requirement with a minimum score of 80%.

SKILLS AND ABILITIES. Will be evaluated on Radar Final Control.

Individual has satisfactorily completed all LQS requirements for LTG 15:

Date: _____

Trainee: _____

Signature: _____

FWO/Crew Chief Signature _____

Lesson Topic Guide

GOAL. Describe radar coordination procedures.

REQUIREMENT. Describe the following IAW the reference:

1. Radio and interphone communication monitoring.
2. Authorized interruptions.
3. Authorized relays.
4. Clearance prefix.
5. Departure clearances.
6. Abbreviated departure clearance.
7. Delay sequencing.
8. Delays.
9. Forward departure delay info.
10. Coordination with receiving facility.
11. Forwarding departure times.

INSTRUCTOR. BI.

REFERENCE

1. FAA JO 7110.65

2-1-14	Coordinate Use of Airspace
4-2-2	Clearance Prefix
4-3-2	Departure Clearances
4-3-3	Abbreviated Departure Clearance
4-3-6	Delay Sequencing
4-3-7	Forward Departure Delay Information
4-3-8	Coordination With Receiving Facility
4-3-10	Forwarding Departure Times
4-6-3	Delays

Local Qualification Standards

KNOWLEDGE. Pass a written examination encompassing the requirement with a minimum score of 80%.

SKILLS AND ABILITIES

Skill/Ability	Date	OJTI
Demonstrate the ability to coordinate Special Use Airspace Activity information with adjacent facilities.		
Demonstrate the skill to maintain current information on all status boards.		

Individual has satisfactorily completed all LQS requirements for LTG 19:

Date: _____

Trainee: _____ Signature: _____

FWO/Crew Chief Signature _____

LTG 23 - RADAR EQUIPMENT (EQPT-2018)

Lesson Topic Guide

GOAL. Operate Radar Equipment.

REQUIREMENT. Given the required equipment, conduct the following:

1. Configure the ASR scope for daily operations.
2. Configure PAR for daily operations.
3. Ensure transmitter/receiver control panels are functional.
4. Use intercom units to conduct a communications check.
5. Read altimeter, wind instruments, and clock information.
6. Ensure NAVAID monitors are operating properly, read indicators, and identify equipment status.
7. Navigate through different screens in the VIDS.
8. Operate the weather reporting monitor to extract information.
9. Operate the VISCOM
10. Perform alignment checks.
11. Operate the Emergency Communications System (ECS).

INSTRUCTOR. BI

PREREQUISITE. ACAD-0532

Local Qualification Standards

KNOWLEDGE. Pass a written examination encompassing the requirement with a minimum score of 80%.

SKILLS AND ABILITIES. Demonstrate the proper operation of the following with no assistance from the instructor.

Skill/Ability	Date	OJTI
Demonstrate the ability to read altimeter, wind instruments and clock information.		
Demonstrate the ability to configure the ASR scope for an approach.		
Demonstrate the ability to configure the PAR scope to the correct runway.		
Demonstrate the skill to perform an alignment check on the PAR scope.		
Demonstrate the ability to relay weather information.		
Demonstrate the skill of navigating through different menus and screens on the VIDS.		
Demonstrate the ability to operate the VISCOM correctly.		

Individual has satisfactorily completed all LQS requirements for LTG 23:

Date: _____

Trainee: _____ Signature: _____

FWO/Crew Chief Signature _____

Lesson Topic Guide

GOAL. Operate Radar Flight Data (RD) equipment.

REQUIREMENT. Given the required RD equipment, conduct the following:

1. Use telephones.
2. Operate FDIO to include:
 - Input flight plans
 - Amend flight plans
 - Weather report
 - General information message
 - Hold message
 - Departure message
 - Progress report
 - ARTS force flight progress data
 - Restore database
 - Stereo flight plan
 - Input station altimeter
 - Remove flight plan
3. Radar Displays.
4. Personal computer.
5. Wind Indicators.
6. Altimeter Readout.
7. Clocks.

INSTRUCTOR. BI

PREREQUISITE. None.

Local Qualification Standards

KNOWLEDGE. This event is completed through practical application.

SKILLS AND ABILITIES

Skill/Ability	Date	OJTI
Demonstrate the use of telephones.		
Demonstrate the ability to input the following using the FDIO equipment.		
Flight Plan - FP		
Amendment Message - AM		
Departure Message - DM		
Flight Plan Readout - FR		
General Information - GI		
Hold Message - HM		
Progress Report - PR		
Restore Database - RB		
ARTS Force - RF		
Remove Strip - RS		
Stereo Flight Plan - SP		
Strip Request - SR		
Test Device - TD		
Weather Request- WR		
Demonstrate the skill to load blank strips into the FDIO printer.		

Individual has satisfactorily completed all IQS requirements for LTG 24:

Date: _____

Trainee: _____ Signature: _____

FWO/Crew Chief Signature _____

LTG 25 - RADAR COMMUNICATIONS EQUIPMENT (COMM-2206)

Lesson Topic Guide

GOAL. Operate ATC communications equipment.

REQUIREMENT. While in a RATCF, operate the following communications equipment:

1. Transmitter/receiver control panel(s).
2. Backup/emergency transmitter/receiver location and controls.
3. Emergency communications system (ECS).
4. Crash Phone
5. Intercom units.
6. Telephones.
7. VIDS.

INSTRUCTOR. BI.

PREREQUISITE. None.

Local Qualification Standards

KNOWLEDGE. Pass a written examination encompassing the requirement with a minimum score of 80%.

SKILLS AND ABILITIES

Skill/Ability	Date	OJTI
Demonstrate the ability to call agencies on the landlines.		
Demonstrate the ability to add, modify and delete status information on the VIDS.		
Demonstrate the use of intercom units to conduct a communications check.		
Demonstrate the skill to navigate through different screens on the VIDS.		

Individual has satisfactorily completed all LQS requirements for LTG 25:

Date: _____

Trainee: _____ Signature: _____

FWO/Crew Chief Signature _____

LTG 26 - LOCAL PROCEDURES

Lesson Topic Guide

GOAL. Describe information contained in local directives.

REQUIREMENT. Given the reference material, identify the key information contained.

INSTRUCTOR. BI.

REFERENCE

1. Letters of Agreement.

Wilmington Tower and MCAS Cherry Point and MCAS New River
Washington Center and Cherry Point RATCF
FACSFAC VACAPES and MCAS Cherry Point

2. Glossary

Acknowledge
Roger
Say Again
Stand By
Unable

3. Facility Manual

2-603 Location Identifiers
2-605 Interfacility Landlines
2-606 Intrafacility Landlines
2-607 Cherry Point Landline Numbers
2-608 Local Frequencies
2-609 Adjacent Facility Frequencies

6-100 General
6-101 Airspace
6-102 Adjacent Airspace
6-104 Fixes and Airports Within 80 Nautical Miles
6-105 Discrete Beacon Code Assignments
6-200 Terminal Radar Team Positions
6-210 Radar Flight Data
6-304 FDIO Test Flight Plans
6-310 Equipment Status Notification
6-324 Information and Status Boards
6-327 Terminal Data Entries
6-328 Control Symbology
6-330 Strip Marking for Local IFR Clearances

7-102 ETVS
7-110 Tape Recorders
App H Flight Data Input/Output (FDIO) Handbook

4. Airfield Operations Manual

2.3. Instructions for Filing and Completing Flight Plans

5. NAVAIR 00-80T-114

10.1.3.6 Flight Data

Local Qualification Standards

KNOWLEDGE. Pass a written examination encompassing the requirement with a minimum score of 80%.

SKILLS AND ABILITIES.

Skill/Ability	Date	OJTI

Individual has satisfactorily completed all LQS requirements for LTG 26:

Date: _____

Trainee: _____ Signature: _____

FWO/Crew Chief Signature _____

1. Radar Flight Data.

COMPLETION REQUIRED PRIOR TO BEGINNING OJT		
Task	Completion Date	OJTI Initials
5 Hour of On-the-Job Familiarization		

COMPLETION REQUIRED AT 25% OF OJT TIME LIMIT			
Task	T&R Event	Completion Date	OJTI Initials
LTG 1 Test	ACAD-0520		
LTG 2 Test	ACAD-0521		
LTG 3 Test	ACAD-0522		
LTG 4 Test	ACAD-0523		
LTG 13 Test	ACAD-0532		
LTG 15 Test	ACAD-0534		
LTG 19 Test	ACAD-0538		
LTG 23 Practical Application	EQPT-2018		
LTG 24 Practical Application	EQPT-2019		
LTG 25 Practical Application	COMM-2206		
LTG 26 Test	NA		

ADDITIONAL TASKS THAT MAY BE REQUIRED		
Task	Completion Date	OJTI Initials
25% Tape Talk		
50% Performance Skill Check		
75% Performance Skill Check		
100% Performance Skill Check		

Qualification Process

Recommended By Primary OJT Instructor (Signature)	Date:
Final Examination Complete (Signature)	Date:
MACCS Qualification Form Complete - Examiner (Signature)	Date:

MACCS QUALIFICATION FORM

The MACCS T&R qualification form is used to document all event training that results in a qualification. The qualification form is a tool that provides the evaluator a medium to document a trainee's qualification skill check. Both the trainee and evaluator will sign this form. The WTPP Section will ensure this form is administratively correct and logged in M-SHARP.

Trainee Rank / Name:	Billet:
Exercise / Operation:	Date:
Evaluator's Rank/Name:	Evaluator's Billet / DESG:

T&R Event Codes	U	1	2	3	4	Comments
ACAD-0520						
ACAD-0521						
ACAD-0522						
ACAD-0523						
ACAD-0532						
ACAD-0534						
ACAD-0538						
EQPT-2018						
EQPT-2019						
COMM-2206						
RFD-3700						
QUAL-6100						

Evaluator's Overall Comments

(Comments on the trainees overall performance to include trends and recommendations for improvement)

Legend

U = UNSAT	Unsafe or complete lack of ability and/or knowledge. Requires substantial input from the evaluator for mission accomplishment.
1	Limited proficiency, does not meet the standard. Requires frequent input from the evaluator.
2	Capable. Recognizes and corrects errors. Requires occasional input from the evaluator.
3	Proficient. Correct, efficient, skillful, and without hesitation. Requires minimal input from the evaluator.
4	Unusually high degree of ability. Requires no input from evaluator

Trainee Endorsement

Trainee Signature _____ **Date** _____
I have read and discussed this evaluation with the evaluator and I understand its contents.

Approval Process

Evaluator Signature _____ **Date** _____
I certify that the trainee has completed the training as described on this form.

OIC/SNCOIC Signature _____ **Date** _____

WTPP Signature _____ **Date** _____
Evaluation form is correct, administrative actions have been completed, and event code(s) have been logged in M-SHARP.