



VATSIM Network

United States Division

New York ARTCC

ZNY Training SOP

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New York ARTCC

Initiated by: Pan Lalas

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ZNY Training Program SOP

Foreword

This order provides direction and guidance for the ZNY Training Program currently in place at and under the administrative jurisdiction of the New York Air Route Traffic Control Center (NYARTCC). All personnel shall familiarize themselves with the provisions and procedures contained herein.

Pan Lalas
Training Administrator, New York ARTCC
Date: 8/1/2009

Chapter 1. Introduction

Section 1. General

1-1-1. ZNY TRAINING PROGRAM OVERVIEW

This order prescribes a system of training that ensures a comprehensive and quality education for each ZNY controller. There are four main principals that provide the foundation of the training program:

1. Each major facility (EWR, JFK, LGA and PHL) shall have at least one instructor and mentor. They shall act as the primary point of contact for students at their respective facility.
2. A student may receive training or training status adjustments from any ZNY mentor or instructor.
3. A student may receive additional certifications at other major facilities up to and including their current level. This training may be provided by an instructor or mentor (up to one level below the level of the mentor who issued the certification) from the appropriate major facility. Original certifications after level 1 may come from an instructor or a mentor.

Example: A Level 4 student at JFK wants to learn Level 4 at PHL. He may receive that certification from a Level 5 mentor at PHL, or any ZNY instructor.

Example: A Level 2 student passes the Level 2 test. He must also be certified by an instructor or Level 4 mentor to work Level 3. This is due to the fact the student had no previous Level 3 experience.

4. In order to receive formal training from an instructor or mentor, a student must schedule that session online through the "Training Request Forum." The exact procedure of how this system is to be used is indicated in the forum and the instructions must be followed exactly.
5. When a circumstance is not covered by this SOP, use good judgment and do not teach beyond your skill level. Instructors or mentors will never be penalized for making a good faith effort to teach, certify, or test someone.

1-1-2. ZNY CERTIFICATION LEVELS

The ZNY Training Program operates under five levels of training. ZNY Level Certifications are issued by New York ARTCC in conjunction with the VATSIM Global Rating Policy (GRP) as depicted below:

ZNY Certification Level	ZNY Position	VATSIM Rating
0	New York ARTCC ATC in Training	Pilot/OBS
1	<i>Reserved for future use</i>	-
2	Clearance Delivery and Ground Controller	DEL/GND (S1)
3	Tower Controller	TWR (S2)
4	Departure Controller	TMA (S3)
5	Approach Controller	TMA (S3)
6	Center Controller	En Route (C1)

1-1-3. FACILITY CERTIFICATION

Facility and position certifications for each controller are indicated via a color coded bar located on the ZNY Graphical Roster webpage. The certification bars indicate the highest ZNY Certification Level at which a controller may work for the given facility. Status icons displayed to the right of the controller's name may indicate that a controller is under Observation (OBS), Ready for Testing (RFT), or Facing the Axe (AXE) due to inactivity. General controlling requirements and associated definitions are located in the ZNY Policies Manual.

Section 2. VATUSA Training Program

1-2-1. VATUSA TRAINING PROGRAM OVERVIEW

In order to establish division wide rating standards in compliance with the VATSIM Executive Committee Global Rating Standards Policy rev. August 1st, 2009; the VATSIM S2 (TWR) rating was introduced. In addition, VATUSA changed its MAJOR and NON-MAJOR facility distinction for each ARTCC. The following definitions apply to these policies:

- a) **Certification:** An ARTCC assigned endorsement of a controller's proficiency.
- b) **MAJOR Facility:** A designation for an airport or facility that have significantly high traffic levels or airspace complexity that requires additional training and certification to be effectively managed.
- c) **NON-MAJOR Facility:** Any controlled airport within the lateral boundaries of the New York ARTCC that is not designated as a MAJOR facility.

1-2-2. ZNY NON-MAJOR / MAJOR AIRPORT DESIGNATIONS

Airport/Facility designations are located in the ZNY Policies Manual.

Chapter 2. Basic Training

Section 1. Non-Major Certifications

2-1-1.1. ZNY S1 CONTENT STANDARDS

All ZNY S1 (DEL/GND) controllers shall become proficient in:

I. General Control Procedures

- a. Pre-Control Setup and Configuration
- b. Network Procedures
- c. Position Relief Briefing
- d. Coordination / Handoff Procedures

II. Flight Plan Procedures

- a. Accessing Flight Strip Data
- b. Flight Plan Amendments
- c. Preferred and Non-Standard Routing Procedures

III. Clearance Delivery Procedures

- a. VFR and IFR Clearance Procedures
- b. Squawk Code Assignments
- c. Clearance Issuance
- d. Departure Information

IV. Ground Control Procedures

- a. Movement and Non-Movement Areas
- b. Taxi and Ground Movement Operations
- c. Helicopter Taxi Operations

V. Human Factors

- a. Professionalism
- b. Appropriate Behavior
- c. Courteous Attitude

2-1-1.2. ZNY S1 CERTIFICATION AND VATSIM S1 RATING

Upon joining New York ARTCC, controllers who at the time of matriculation hold a VATSIM Pilot/OBS rating, will be assigned the written ZNY S1 Examination. After successful completion of this examination the student will be issued the VATSIM S1 (DEL/GND) rating. No further testing will be required for this rating.

2-1-2.1. ZNY S2 CONTENT STANDARDS

All ZNY S2 (TWR) controllers shall become proficient in:

I. General Control Procedures

- a. Pre-Control Setup and Configuration
- b. Network Procedures
- c. Position Relief Briefing
- d. Coordination / Handoff Procedures

II. Local Control Procedures

- a. Runway Selection
- b. ATIS Issuance
- c. Departure Procedures
- d. Arrival Procedures
- e. Spacing and Sequencing
- f. Taxi Into Position and Hold (TIPH) and Land and Hold Short (LAHSO)
- g. VFR Traffic Pattern
- h. Wake Turbulence Separation
- i. Converging or Parallel Runway Operations
- j. Missed Approach Procedures

III. Emergency Procedures

- a. Declaration of Emergencies
- b. Providing Emergency Assistance

IV. Human Factors

- a. Professionalism
- b. Appropriate Behavior
- c. Courteous Attitude

2-1-2.2. ZNY S2 CERTIFICATION AND VATSIM S2 RATING

Upon completing 20 hours as a non-Major Delivery and/or Ground Controller the student will be assigned the written ZNY S2 exam. After successful completion of this exam, the student will be required to pass a checkout (Sweatbox) session, in which he/she will demonstrate their ability to work air traffic as they would on the network. After successful completion of the checkout, the written VATSIM S2 exam will be assigned. Passing this exam will result in a promotion to VATSIM S2 (TWR) rating.

2-1-3.1. ZNY S3 CONTENT STANDARDS

All ZNY S3 (TMA) controllers shall become proficient in:

- I. General Control Procedures**
 - a. Pre-Control Setup and Configuration
 - b. Network Procedures
 - c. Position Relief Briefing
 - d. Coordination / Handoff Procedures
 - e. Provide VFR Traffic Advisories
 - f. Provide Additional Services
 - g. Provide Clearance to In-flight Aircraft
 - h. Uncontrolled Airport Operations

- II. General Radar Procedures**
 - a. Ensure Separation Requirements
 - b. Aircraft Vectoring
 - c. Issuing Speed Control Instructions
 - d. Issuing Holding Instructions
 - e. VFR On Top

- III. Radar Control Procedures**
 - a. Radar Tracking an Aircraft
 - b. Radar Identifying an Aircraft
 - c. Aircraft Vectoring Procedures
 - d. Pointout Procedures
 - e. Satellite Airport Operations

- IV. Instrument Approach Procedures**
 - a. Precision Approach Procedures
 - b. Non-Precision Approach Procedures
 - c. Clearance from Initial Approach Fix
 - d. Missed Approach Procedures
 - e. Clearance to Alternate

- V. Emergency Procedures**
 - a. Declaration of Emergencies
 - b. Providing Emergency Assistance
 - c. Understanding Emergency Effects on Traffic

- VI. Human Factors**
 - a. Professionalism
 - b. Appropriate Behavior
 - c. Courteous Attitude
 - d. Understanding Pilots

2-1-3.2. ZNY S3 CERTIFICATION AND VATSIM S3 RATING

When the student feels prepared to move up to ZNY S3, they may request observation from an instructor or mentor. If proficiency is deemed to be satisfactory the student will be assigned the written ZNY S3 exam. Upon successful completion of the exam the student will then need to pass a checkout (Sweatbox) session, in which he/she will demonstrate their ability to work air traffic as they would on the network. After successful completion of the checkout the written VATUSA S3 exam will be assigned. Passing this exam will result in a promotion to VATSIM S3 (TMA) rating.

2-1.4. PRIMARY TRAINING MATERIALS

All of the required training material for each level (ZNY S1-C1) shall be provided by New York ARTCC. These materials include, but are not limited to, Training Classes, SOPs, weekly online training seminars, and network-based Over the Shoulder (OTS) and Sweatbox practical verifications and/or training.

Section 2. Initial Phase of Major Certification

2-2-1. PRIMARY FACILITY ASSIGNMENT

Primary facility assignments are based upon the ARTCCs operational needs and the training demands at each facility. Requests to transfer to a different facility shall be executed as per the procedures outlined in the ZNY Policies Manual.

2-2-2. SUBMISSION OF PRACTICE CLEARANCES

Controllers must complete and receive an 80% or better on the practice clearances, or instructor/mentor approval before beginning their major training. The follow prerequisites must be complete:

- a. ZNY S1 as outlined in section 2-1-1.1 and 2-1-1.2
- b. Read and study the facility SOP
- c. Take the online computer based facility SOP class

2-2-3. CERTIFICATION OF PRACTICE CLEARANCES

Upon satisfactory completion of the submitted practice clearances, a facility based mentor or instructor will certify the practice clearances and permit the controller to work alone at their Major facility providing Clearance Delivery services. In the event the student fails to successfully complete the practice clearances he/she will be required to complete an oral performance verification with an instructor or mentor.

Section 3. ZNY Certification Level Promotions

2-3-1. TRAINING STATUS ADJUSTMENTS

Observation: When placed under Observation, the controller must have demonstrated a basic understanding of the material for his/her appropriate level and be prepared to take the next step towards mastery. In determining readiness instructors and mentors shall consider the following questions:

- a. Can they handle enough of the position on their own in order to be accurate and functional?
- b. Do they accept criticism and are they able to receive guidance from other facility Mentors and/or Instructors?
- c. Do they show a willingness to learn and an interest in making themselves a better controller?
- d. Do they understand the general concepts as presented in the current training level, and are they able to explain how their position coexists with the entire air traffic network?
- e. Are there any fundamental errors that are being consistently executed?
- f. Are the errors that are being committed a result of an advanced concept that has not yet been reinforced or introduced?
- g. Are they familiar with the SOP for their facility as it relates to their current ZNY Level?
- h. Do they interact appropriately and professionally with fellow controllers and staff members; and do they utilize effective coordination?

Ready for Testing: When marked Ready for Testing, the controller must have demonstrated an advanced understanding of the material for his/her appropriate level and will be prepared to demonstrate their ability to work the position alone. In determining readiness, instructors and mentors shall consider the following questions:

- a. Can they fully handle the position on their own with absolutely no repetition of fundamental mistakes and only minor execution errors?
- b. Are they able to coordinate with other controllers?
- c. Are they completely familiar with the SOP for their facility as it relates to their current ZNY level?
- d. Would they be able to handle an unexpected situation that may arise without sacrificing the safety and enjoyment of other pilots?
- e. Would they be able to explain in detail the skills and techniques involved in operating their current level correctly?
- f. Are they a decent and acceptable role model for other controllers aspiring to reach their current level?
- g. Do they interact appropriately and professionally with fellow controllers and staff members, and do they utilize effective coordination?

2-3-2. TESTING PROCEDURES

When marked Ready for Testing, the controller should make a training request in order to schedule a testing session. The instructor or mentor administering the test will assess the overall readiness and proficiency of the controller. The test will consist of two assessment areas:

- a) Practical Verification: While working traffic on the network with the instructor or mentor observing over the shoulder, the controller shall demonstrate proficiency and mastery in the operational procedures and phraseology required of the position under assessment.
- b) Oral Exam: At any time before, during, or after the Practical Verification, the instructor will quiz the controller about the operational procedures and phraseology required for the position under assessment.

The controller shall receive a numerical grade out of 100 for the Oral Exam for each area of assessment. A grade of 80 or greater and instructor or mentor endorsement for the practical verification will constitute a passing grade. Once a controller passes the performance verification they will be promoted to the next ZNY Certification Level as a *Developmental*. Before being allowed to control solo at the next level the controller must receive a brief training session covering the basics of the new level. After successful completion of the training session the controller will be able to work the position solo and the Developmental designation will be removed. This can often be accomplished immediately after the test.

If a controller fails to successfully complete the testing process, their Ready for Testing status will be removed and they will be returned to the status of Observation. After receiving instruction from a mentor or instructor for the areas that require more study the controller will be marked Ready for Testing, and is once again eligible to complete a performance verification.

Section 4. ZNY Certification Levels 4 and 5 (DEP/APR)

2-4-1. RADAR CONTROL OVERVIEW

Radar control encompasses positions that provide departure and approach separation services to aircraft within the terminal environment. Due to the complexity of the ZNY radar environment, in particular New York TRACON (N90), ZNY Certification Levels 4 and 5 require a great deal of study and practice. Controllers will not be marked Ready for Testing unless an instructor or mentor is completely satisfied that they have met all of the operational and procedural standards with proficiency.

2-4-2. LEVEL 4 AND 5 EXAMINATION

See section 2-1-3.1-2.

All ZNY Level 5 controllers must also be proficient in:

- 1) Facility sectorization
- 2) ZNY Letter of Agreements (LOAs)
- 3) Local geography
- 4) Traffic flows

2-4-3. LIBERTY AREA - NEW YORK TRACON (N90)

In order to be eligible to control the Liberty Area of New York TRACON (N90) a student must hold ZNY Certification Level 4 at all three primary N90 airports (JFK, LGA, and EWR) and successfully complete a performance verification with an instructor. After the student is deemed proficient he/she will receive Liberty Area certification.

Section 5. Certification at Other Major Facilities

2-5-1. CERTIFICATION RESTRICTIONS

The following conditions must be met in order to receive certifications at other Major facilities:

- a. Controllers lower than ZNY Certification Level 4 may not seek secondary certification at other major facilities until they receive ZNY Level 4 at their primary facility.
- b. Controllers must complete their training at a secondary facility up to and including their current ZNY Level at their primary before moving on to another secondary major facility.

EXAMPLE: A LGA Level 4 controller studying JFK as a secondary may not work at PHL or EWR until reaching Level 4 at JFK.

Chapter 3. Advanced Training

Section 1. En-Route Controller Certification (ZNY Level 6)

3-1-1. EN-ROUTE CONTROL OVERVIEW

En-Route control encompasses the highest training level (ZNY Certification Level 6). In order to be considered for ZNY Level 6, controllers must show proficiency and have certification for all of the Major facilities up to and including ZNY Level 5, and must demonstrate the ability to safely and efficiently separate aircraft while working the entire ARTCC.

3-1-2.1 ZNY C1 CONTENT STANDARDS

All ZNY C1 (En-Route) controllers shall become proficient in:

- I. General Control Procedures**
 - a. Pre-Control Setup and Configuration
 - b. Network Procedures
 - c. Position Relief Briefing
 - d. Coordination / Handoff Procedures
 - e. Separation Standards
 - f. Special Flight Operations
 - g. Weather Procedures
- II. En-Route Radar Operations**
 - a. Request for Altitude Change
 - b. Successive Arrivals and Departures
 - c. Approach Control Saturation
 - d. Loss of Radar Contact
 - e. Route Change in Flight
 - f. Pilot Deviations
- III. Coordination With Other Controllers**
 - a. Request Control from Adjacent Sector
 - b. Release Control to Adjacent Sector
- IV. Application of Separation Rules**
 - a. Crossing, Converging, and Opposite Direction Traffic
 - b. Overtaking Aircraft
- V. Emergency Procedures**
 - a. Loss of Communication
 - b. In-flight Emergencies
 - c. Equipment Malfunctions
 - d. Unexpected Aircraft Performance
- VI. Human Factors**

- a. Professionalism
- b. Appropriate Behavior
- c. Courteous Attitude
- d. Understanding Pilots
- e. Providing New Pilot Help

3-1-2.2 ZNY CERTIFICATION LEVEL 6 AND VATSIM C1 RATING

Prior to becoming a ZNY Certification Level 6 controller, a controller must be promoted to VATSIM En-Route (C1) rating by successfully completing the written VATUSA En-Route (C1) examination. The VATUSA En-Route (C1) examination shall be assigned at the discretion of the ZNY Training Administrator (TA).

All ZNY Level 6 controllers must be proficient in:

- 1) Letters of Agreement (LOAs) with ZOB, ZDC, and ZBW
- 2) Oceanic procedures

ZNY Certification Level 6 developmentals will receive several mentoring sessions by various instructors while working on the network and through training (Sweatbox) sessions. Developmentals must demonstrate comfort and ease while working the entire ARTCC. A controller will be promoted to ZNY Certification Level 6 at the consent the majority of the instructional staff.

3-1-3. ZNY OCEANIC CERTIFICATION (KZWY)

Prior to becoming a certified oceanic controller, a controller must hold a VATSIM En-Route (C1) rating and must be ZNY Certification Level 6. An oceanic controller shall be proficient in:

- 1) Time and Mach Number Separation Techniques
- 2) RVSM and MNPS regulations and Separation Requirements
- 3) WATRS and Ocean 21 Transition Areas
- 4) Oceanic Clearances
- 5) Adjacent Oceanic and Domestic Facility Letters of Agreement (LOAs)
- 6) CPDLC Procedures

The certification shall be granted to the controller after completing an online training session with an oceanic certified instructor.

Section 2. ZNY Instructional Staff

3-2-1. ZNY INSTRUCTIONAL STAFF OVERVIEW

Among other considerations, controllers who meet the following criteria are eligible to become members of the instructional/training staff:

- 1) At least ZNY Level 4 certified
- 2) In good standing with the instructional staff
- 3) Demonstrate considerable skill and ability at working their certified positions
- 4) Express eagerness and willingness to learn new material
- 5) Accepting of criticism and desire to improve upon preexisting abilities
- 6) Excellent oral and written communication skills
- 7) Show great patience during adverse and difficult situations
- 8) Well respected amongst peers
- 9) Express leadership qualities
- 10) Follow directions and respect the rules that govern teaching positions

3-2-2. ZNY MENTOR AND INSTRUCTOR CURRENCY REQUIREMENTS

In order for the current mentors (MTR) and instructors (INS) to maintain their position status they must meet the following requirements:

- 1) Meet the monthly hourly controlling requirements as described in the ZNY Policies Manual.
- 2) Complete at least one online training seminar for one of the four major facilities every month.
- 3) Reply to and complete a logical amount of training requests per month, including the review and correction of Practice Clearances.
- 4) Participate in the INS/MTR forum and provide constructive criticism and comments regarding the progress of students, as well as provide evaluation notes during the Over the Shoulder (OTS) or Sweatbox (SB) sessions.
- 5) Show professionalism and be courteous at all times while controlling or interacting with other ZNY staff members or students.

All mentors and instructors will be reevaluated in order to maintain training staff proficiency. Recurrency training shall serve to ensure staff competency in the areas of controlling procedures and technique as well as an in-depth understanding of ZNY operations.