

Piarco FIR
S2 Tower Controller Training Syllabus
(rev. 1)

Course Objective:

The objective of this syllabus is for the trainee to gain the necessary skills, knowledge, and experience to meet the requirements of the *VATSIM S2 Tower Controller Rating*.

Prerequisites:

1. The trainee must be able to fluently read, speak, and understand the English language.
2. Controllers are required to take and pass, VATCAR's online Student Advancement Course before beginning any practical training.
3. All new controllers are required to pass an Online or Sweatbox checkout session before proceeding to the next level.

Experience Requirements:

1. S2 trainees should have a basic understanding of ICAO flight rules and flight operations procedures.
2. S2 Trainees should have confidence in their knowledge of Clearance Delivery and Ground Control procedures prior to attempting this course.
3. S2 Trainees must log a **minimum** of 10– 20 GND hours before considering proceeding to the next level. (Hours can vary based on the Student's knowledge, learning abilities and Mentor/Trainer).
4. S2 Trainees must have possess the ability to read and understand arrival and departure plates / charts.

S2 Controller Training Course:

The S2 Rating is one of the most important rating achievements in a VATSIM Controller's career. Trainees will learn the fundamentals of controlling aircraft in flight, basic and advanced tower operations, and coordination with more than one other controller. The syllabus is broken down into four stages containing numerous modules. Each stage must be completed within 30 days. Should a trainee fail to advance their current training stage within the 30-day period, he/she shall be academically-rolled back to the beginning of the previous stage.

Each module contains both an academic and a practical lesson. This presents an integrated training process and will promote easier learning and a more efficient training program. Ideally, the academic lesson will be completed prior to the practical phase. Each lesson will also include a briefing and debriefing period.

Testing Procedures:

A stage exam is included with each stage, testing the student on both the academic and practical training material covered throughout the stage. This exam must be passed with a minimum score of 80%, and reconciled to 100% based on the *Piarco FIR OTS Evaluation Guide*, in order to proceed to the next stage.

It is essential that the objective of each module be accomplished before moving on to the next module.

Required Materials for the S2 Controller Course:

1. Piarco FIR Training and Promotions Policy
2. Vatsim ATC Competency Standards
3. Euroscope User's Manual
4. Euroscope Piarco Sector File (*current*)
5. Assigned TMA Standard Operating Procedures
6. Assigned TMA Instrument Procedures Charts (*current*)
7. Sectional and Enroute Charts for Assigned TMA (*current*)
8. Reusable Writing Surface (*Clear plastic sleeves or Dry-erase Whiteboard*)
9. Dry-Erase Pens

Course Outline/Checklist:

Stage/Module	Hours of Instruction	Date of Completion
Stage 1		
Module 1	2.0	
Module 2	2.0	
Module 3	2.0	
Stage Check 1	2.0	
Total	8.0	
Stage 2		
Module 1	2.0	
Module 2	2.0	
Module 3	2.0	
Module 4	2.0	
Stage Check 2	2.0	
Total	10.0	
Stage 3		
Module 1	2.0	
Module 2	2.0	
Module 3	2.0	
Stage Check 3	2.0	
Total	8.0	
Stage 4		
Module 1	2.0	
Module 2	2.0	
Total	4.0	
Course Completion	30.0	

STAGE 1

Module 1

INTRODUCTION TO TOWER CONTROL

TIME:

1 hour Academic Instruction; 1 hour Practical Instruction

OBJECTIVE:

To introduce the trainee to the position of Tower Controller

HOME STUDY:

TMA SOPs; TMA Instrument Approach Procedures ; Euroscope Manual

NEW LESSON ITEMS:

1. Euroscope setup for Tower
2. Tower Controller duties and responsibilities
3. Airspace boundaries
4. Rules and Regulations governing the movement of aircraft
5. ATIS Setup
6. Creating and adhering to a plan of action
7. Tower phraseology

COMPLETION STANDARDS:

The lesson is complete when the trainee demonstrates:

1. An ability to properly setup Euroscope for Tower Ops; including ATIS
2. An understanding of the airspace and the limitations of the Tower position
3. The ability devise a plan of action for aircraft movements in the air and on the ground
4. Proper usage of phraseology

Module 2

COORDINATING AND SEQUENCING DEPARTURES (TWR / GND)

TIME:

1 hour Academic Instruction; 1 hour Practical Instruction

OBJECTIVE:

For the trainee to learn how to properly coordinate departing traffic with a Ground Controller

HOME STUDY:

TMA SOPs; TMA Instrument Approach Procedures; Euroscope Manual

NEW LESSON ITEMS:

1. Tower / Ground Coordination
2. Departure Sequencing
3. Flight Plan Check and Verify
4. Traffic Separation
5. IFR Departures
6. VFR Departures
7. Phraseology

COMPLETION STANDARDS:

The lesson is complete when the trainee demonstrates:

1. Sufficient knowledge of coordinating procedures
2. Proficiency in recognizing flight plan errors
3. Proficiency in maintaining good traffic flow
4. Vigilant adherence to traffic separation minimums
5. An understanding of VFR and IFR departures and their differences
6. Proper usage of phraseology

Module 3

COORDINATING AND SEQUENCING DEPARTURES (TWR / APP)

TIME:

1 hour Academic Instruction; 1 hour Practical Instruction

OBJECTIVE:

For the trainee to learn how to properly coordinate departing traffic with an Approach or Center Controller

HOME STUDY:

TMA SOPs; TMA Ground Control Procedures; Euroscope Manual

NEW LESSON ITEMS:

1. Coordinating Departures with Approach / Center
2. Phraseology

COMPLETION STANDARDS:

The lesson is complete when the trainee demonstrates:

1. Sufficient knowledge of coordinating procedures
2. Proficiency in recognizing flight plan errors
3. Proficiency in maintaining good traffic flow
4. Vigilant adherence to traffic separation minimums
5. Proper usage of phraseology

Module 4

STAGE CHECK

TIME:

0.5 hour Academic Exam; 1.5 hour Practical Exam

OBJECTIVE:

To verify the trainee has mastered the required skills taught during Stage 1

HOME STUDY:

TMA SOPs; TMA Instrument Approach Procedures; Euroscope Manual

NEW LESSON ITEMS:

COMPLETION STANDARDS:

The lesson is complete when the trainee demonstrates:

1. Proper management of departing traffic
2. Proper coordination with both Ground and Approach controllers
3. Good understanding of and adherence to traffic separation minimums
4. Proper usage of phraseology
5. Sufficient knowledge of the required duties in general

STAGE 2

Module 1

COORDINATING AND SEQUENCING ARRIVALS (TWR / GND)

TIME:

1 hour Academic Instruction; 1 hour Practical Instruction

OBJECTIVE:

For the trainee to learn how to properly sequence and coordinate arriving traffic with a Ground Controller

HOME STUDY:

TMA SOPs; TMA Instrument Approach Procedures; Euroscope Manual

NEW LESSON ITEMS:

1. Arriving Aircraft Initial Contact
2. Coordination with Ground Prior to Arrival
3. Creation and Execution of a Plan of Action for Arriving Traffic
4. IFR Arrivals
5. VFR Arrivals
6. In-Flight Traffic Separation Procedures
7. Phraseology

COMPLETION STANDARDS:

The lesson is complete when the trainee demonstrates:

1. An ability to properly bring an aircraft in flight under his/her control
2. Good prior planning and coordination with Ground Control
3. Good sequencing and separation of arrivals
4. An ability to identify potential separation conflicts early and take corrective action
5. Proper usage of phraseology

Module 2

COORDINATING AND SEQUENCING ARRIVALS (TWR / APP)

TIME:

1 hour Academic Instruction; 1 hour Practical Instruction

OBJECTIVE:

For the trainee to learn how to properly sequence and coordinate arriving traffic with an Approach or Center Controller

HOME STUDY:

TMA SOPs; TMA Instrument Approach Procedures; Euroscope Manual

NEW LESSON ITEMS:

1. Coordination Procedures for Arrivals with Approach or Center
2. Planning ahead based on Approach Time Estimates
3. Missed Approach Procedures
4. Separation Conflict Resolution
5. Phraseology

COMPLETION STANDARDS:

The lesson is complete when the trainee demonstrates:

1. Proper coordination techniques
2. An ability to maintain good traffic flow
3. Proficiency in good decision-making
4. Proficiency in working missed-approach traffic
5. Proficiency at maintaining proper aircraft separation
6. Proper usage of phraseology

Module 3

TRAFFIC CIRCUIT (AIRPORT TRAFFIC PATTERN)

TIME:

1 hour Academic Instruction; 1 hour Practical Instruction

OBJECTIVE:

For the trainee to learn how to properly handle both VFR and IFR traffic in the airport traffic circuit

HOME STUDY:

TMA SOPs; Euroscope Manual

NEW LESSON ITEMS:

1. Traffic Circuit
2. Departing VFR traffic into the circuit
3. Directing VFR arrivals into the circuit
4. Directing IFR traffic into the circuit (*when?, why?, and how?*)
5. Traffic separation techniques within the circuit
6. Phraseology

COMPLETION STANDARDS:

The lesson is complete when the trainee demonstrates:

1. An ability to properly work VFR and IFR traffic within the traffic circuit
2. Proficiency at maintaining proper aircraft separation
3. Proper usage of phraseology

Module 4

FULL TOWER CONTROL (NO COORDINATION / LOW-VOLUME)

TIME:

0.5 hour Academic Instruction; 1.5 hour Practical Instruction

OBJECTIVE:

For the trainee to demonstrate his/her ability to work the Tower Control facility solo with a low-volume of traffic

HOME STUDY:

TMA SOPs; TMA Instrument Approach Procedures; Euroscope Manual

NEW LESSON ITEMS:

1. Management of Arriving and Departing Traffic Without Coordination

COMPLETION STANDARDS:

The lesson is complete when the trainee demonstrates:

1. Ability to maintain attention to detail and situational awareness
2. Positive control at all times
3. Proficiency at maintaining traffic separation
4. Proper phraseology

Module 5

STAGE CHECK

TIME:

0.5 hour Academic Exam; 1.5 hour Practical Exam

OBJECTIVE:

For the trainee to demonstrate the lessons learned in Stage 2

HOME STUDY:

TMA SOPs; TMA Instrument Approach Procedures; Euroscope Manual

NEW LESSON ITEMS:

COMPLETION STANDARDS:

The lesson is complete when the trainee demonstrates:

1. The ability to control the Tower facility with and without coordination
2. Good traffic separation techniques
3. The ability to work traffic within the circuit
4. Proper usage of phraseology

STAGE 3

Module 1

FULL TOWER CONTROL (High-Volume)

TIME:

1 hour Academic Instruction; 1 hour Practical Instruction

OBJECTIVE:

For the trainee to demonstrate his/her ability to work a high-volume of departing and arriving traffic without coordination

HOME STUDY:

TMA SOPs; TMA Instrument Approach Procedures; Euroscope Manual

NEW LESSON ITEMS:

1. Methods to maintain Situational Awareness and Attention to Detail during high traffic loads
2. Maintaining good organizational skills

COMPLETION STANDARDS:

The lesson is complete when the trainee demonstrates:

1. Sufficient organizational and forward thinking abilities
2. Ability to depart and land aircraft in a proficient yet timely manner
3. Adherence to separation minimums
4. Proficiency at conflict avoidance

Module 2

FULL TOWER CONTROL (TWR / GND High-Volume)

TIME:

1 hour Academic Instruction; 1 hour Practical Instruction

OBJECTIVE:

For the trainee to demonstrate his/her ability to work a high-volume of departing and arriving traffic without coordination

HOME STUDY:

TMA SOPs; TMA Instrument Approach Procedures; Euroscope Manual

NEW LESSON ITEMS:

COMPLETION STANDARDS:

The lesson is complete when the trainee demonstrates:

1. Good and efficient coordination with Ground Controller
2. Ability to depart and land aircraft in a proficient yet timely manner
3. Adherence to separation minimums
4. Proficiency at conflict avoidance

Module 3

FULL TOWER CONTROL (TWR / APP / GND; High-Volume)

TIME:

1 hour Academic Instruction; 1 hour Practical Instruction

OBJECTIVE:

For the trainee to demonstrate his/her ability to work a high-volume of departing and arriving traffic while coordinating with Approach and ground Control

HOME STUDY:

TMA SOPs; TMA Instrument Approach Procedures; Euroscope Manual

NEW LESSON ITEMS:

COMPLETION STANDARDS:

The lesson is complete when the trainee demonstrates:

1. Good and efficient coordination with Approach and Ground Controllers
2. Ability to depart and land aircraft in a proficient yet timely manner
3. Adherence to separation minimums
4. Proficiency at conflict avoidance

Module 4

STAGE CHECK

TIME:

0.5 hour Academic Exam; 1.5 hour Practical Exam

OBJECTIVE:

For the trainee to demonstrate the lessons learned in Stage 3

HOME STUDY:

TMA SOPs; TMA Instrument Approach Procedures; Euroscope Manual

NEW LESSON ITEMS:

COMPLETION STANDARDS:

The lesson is complete when the trainee demonstrates:

1. The ability to control the Tower facility with and without coordination at high-volume traffic levels
2. Good traffic separation techniques
3. The ability to work traffic within the circuit
4. Proper usage of phraseology

STAGE 4

Module 1

OTS PREP 1

TIME:

0.5 hour Academic Instruction; 1.5 hour Practical Instruction

OBJECTIVE:

Provide the trainee a low-volume traffic level workup to the OTS Exam

HOME STUDY:

TMA SOPs; TMA Instrument Approach Procedures; Euroscope Manual

NEW LESSON ITEMS:

COMPLETION STANDARDS:

The lesson is complete when the trainee demonstrates:

1. Sufficient understanding of all material covered to date
2. Proficiency at controlling the entire Tower environment
3. Good traffic planning
4. Good coordination
5. Proper usage of phraseology

Module 2

OTS PREP 2

TIME:

0.5 hour Academic Instruction; 1.5 hour Practical Instruction

OBJECTIVE:

Provide the trainee a high-volume traffic level workup to the OTS Exam

HOME STUDY:

TMA SOPs; TMA Instrument Approach Procedures; Euroscope Manual

NEW LESSON ITEMS:

COMPLETION STANDARDS:

The lesson is complete when the trainee demonstrates:

1. Sufficient understanding of all material covered to date
2. Proficiency at controlling the entire Tower environment
3. Good traffic planning
4. Good coordination
5. Proper usage of phraseology

Module 3

STAGE CHECK (OPTIONAL; IF TRAINEE REQUIRES ADDITIONAL PREP)

TIME:

0.5 hour Academic Exam; 1.5 hour Practical Exam

OBJECTIVE:

For the trainee to demonstrate complete and proper control and coordination of the airspace at a high-volume traffic level

HOME STUDY:

TMA SOPs; TMA Instrument Approach Procedures, Euroscope Manual; Regional Charts

NEW LESSON ITEMS:

COMPLETION STANDARDS:

The lesson is complete when the trainee demonstrates:

1. Sufficient understanding of all material covered to date
2. Proficiency at controlling the entire airspace
3. Good traffic separation practices
4. Good coordination