



BOSTON ARTCC (vZBW) TRAINING SYLLABUS

LEVEL: Delivery/Ground Controller (S1)

“The primary purpose of the ATC system is to prevent a collision between aircraft operating in the system and to organize and expedite the flow of traffic...” (FAA Order 7110.65, Air Traffic Control).

RELEASE RECORD			
Version	Date	Author	Notes
1.0	02 Jan 2008	EE	Initial Release
1.1	01 Feb 2009	PB, DO	General/Maintenance update, added VFR Coded Arrivals, added exam request links
2.0	01 Aug 2009	DO	Incorporates changes made as a result of VATSIM GRP 2.0, including separation of DEL/GND and TWR, updates all links.
2.01	04 Sep 2009	DO	Minor edit to clarify Class B DEL/GND certification process.
2.1	15 Feb 2010	DO	Updated links, added references/links to new KBOS and A90 SOPs, updated document to reference new KBOS RNAV Departure Procedures.
2.2	01 Mar 2010	DO	Minor maintenance updates, added new VATSIM S1 examination requirement, added requirement for basic familiarization training at KBOS before KBOS off-peak privileges are authorized, updated VATUSA reference information.
2.3	01 Aug 2010	DO	Implements Minor/Major training tracks
2.4	18 Feb 2014	BN	General Maintenance update, fixed links
2.41	01 May 2014	DO	Fixed additional broken links and general updates
2.5	30 Jan 2015	BN	Updated training/testing process after new website release and fixed links

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Introduction

“Because there are many variables involved, it is virtually impossible to develop a standard list of duty priorities that would apply uniformly to every conceivable situation. Each set of circumstances must be evaluated on its own merit, and when more than one action is required, controllers shall exercise their best judgment based on the facts and circumstances known to them. That action which is most critical from a safety standpoint is performed first.” (FAA Order 7110.65, Air Traffic Control).

The VATSIM Boston ARTCC Training Program is self-learning centric. The training staff at ZBW is both extremely professional and experienced with Air Traffic Control on the VATSIM network. It is the primary goal of the training staff to ensure that students possess the fundamental skills needed to control at the Boston ARTCC on VATSIM. They are always available to answer questions, and provide insight and training advice on all aspects of virtual Air Traffic Control.

However, the vast majority of the “book work” is expected to be completed by the student. This will allow the training staff to focus on where the practical learning takes place, behind the scopes. The fundamental precept, on which the training program is based, can be derived directly from the quote at the top of this page. We’re here not to provide you a cookbook recipe to all aspects of controlling, but rather to teach you how to think on your feet, and know where to go to find the information you need. In short, we are here to provide you what you need, so that you can gain the experience and knowledge to utilize your best judgment in all situations.

With some exceptions (due to network peculiarities, often called “VATSIM-isms”), all of our procedures and the standards we hold ourselves to here, are directly based upon real world FAA orders, Facility Standard Operating Procedures (SOPs) and inter-facility Letters of Agreement (LOAs).

This Delivery/Ground Controller (S1) Syllabus will provide you links to reference material that you’ll be expected to read and have a fundamental grasp of, in order to obtain Clearance Delivery and Ground Control Certifications at VATSIM’s Boston ARTCC. You won’t be expected to know ALL the material, just the basics, which your instructor or mentor will go over during your training sessions.

Welcome to the Boston ARTCC Training Program! The training staff is looking forward to working with you and seeing you progress up the ATC ladder. As always, if you have any questions, please do not hesitate to ask!

1 VRC or ASRC Installation and Configuration

- 1.1 [Download VRC](#) or [Download ASRC](#)
- 1.2 [VRC Documentation](#) or [ASRC Documentation](#)
- 1.3 [Training Resource for New Controllers](#)

2 Standard Operating Procedures (SOP) and Policies

- 2.1 [General SOP](#)
- 2.2 Review of all SOPs and Policies found on the [Boston ARTCC Home Page](#)
- 2.3 Review information available in the [vZBW Controller-Only Forums](#)

3 Weather

- 3.1 [Glossary of Weather Terms](#)
- 3.2 [Decoding METARs](#)
- 3.3 [Decoding TAFs](#)
- 3.4 [METAR / TAF Frequently Asked Questions \(FAQs\)](#)
- 3.5 [Live METAR Access](#)

4 General Control Procedures

“Give first priority to separating aircraft and issuing safety alerts as required in this order. Good judgment shall be used in prioritizing all other provisions of this order based on the requirements of the situation at hand.” (FAA Order 7110.65, Air Traffic Control)

- 4.1 ATC Phraseology
 - 4.1.1 [FAA Pilot / Controller Glossary](#)
- 4.2 Frequency Selection
 - 4.2.1 [ZBW Airport Information](#)
 - 4.2.2 [KBOS Tower Cab SOP](#)
 - 4.2.3 [K90 TRACON SOP](#)
 - 4.2.4 [G90 TRACON SOP](#)
 - 4.2.5 [Y90 TRACON SOP](#)
 - 4.2.6 [KALB TRACON SOP](#)
- 4.3 ATIS Standards/Requirements

- 4.3.1 [FAAO 7110.65 2-9: Automatic Terminal Information Service Procedures](#)
- 4.3.2 [VATSIM Code of Conduct Paragraph \(c\)11: Voice Automatic Terminal Information Service](#)
- 4.3.3 [VZBW ATIS Guidelines](#)

4.4 *Aircraft Handoffs*

- 4.4.1 [FAAO 7110.65 2-1-17: Radio Communication Transfer](#)

4.5 *Flight Strip Amendments*

- 4.5.1 [VRC Documentation](#)
- 4.5.2 [ASRC Documentation](#)

5 National Airspace System (NAS)

5.1 *Charts and Airways*

- 5.1.1 [SkyVector](#) (Sectional / Terminal Area Charts)
- 5.1.2 [Aeronautical Chart User's Guide \(including chart symbols\)](#)

5.2 *Airspace Classes*

- 5.2.1 [AIM Chapter 3-2: Controlled Airspace](#)
- 5.2.2 [AIM Chapter 3-3: Class G Airspace](#)

5.3 *NAVAIDS*

- 5.3.1 [AIM Chapter 1-1: Navigation Aids](#)
- 5.3.2 [FAAO 7110.65 2-5: Route and NAVAID Description](#)

5.4 *Aircraft Equipment / Suffixes*

- 5.4.1 [FAAO 7110.65 2-3-8: Aircraft Equipment Suffix](#)
- 5.4.2 [FAAO 7110.65 Table 2-3-10: Aircraft Equipment Suffixes](#)

6 Clearance Delivery Control

6.1 Responsibility

- 6.1.1 [ZBW General SOP](#)
- 6.1.2 [ZBW Clearance Delivery SOP](#)

6.2 Aircraft Types

- 6.2.1 [FAAO 7110.65 Appendix A - Aircraft Information \(Fixed Wing\)](#)
- 6.2.2 [FAAO 7110.65 Appendix B - Aircraft Information \(Rotorcraft\)](#)
- 6.2.3 [FAAO 7110.65 Appendix C - Aircraft Information \(Experimental\)](#)

6.3 VFR and IFR Altitudes

- 6.3.1 [FAAO 7110.65 4-5-2: Flight Direction](#)
- 6.3.2 [14 CFR 91.159 - VFR Cruising Altitude or Level Flight](#)

6.4 Lowest Usable Flight Level

- 6.4.1 [FAAO 7110.65 4-5-4: Lowest Usable Flight Level](#)
- 6.4.2 [AIM Chapter 7-2-2: Altimeter Setting Procedures](#)

6.5 VFR Clearances

- 6.5.1 [ZBW VFR Tutorial](#)

6.6 IFR Clearances (CRAFT)

- 6.6.1 [FAAO 7110.65 4-2: Clearances](#)
- 6.6.2 [AIM Chapter 4-4: ATC Clearances and Aircraft Separation](#)

6.7 Preferred Routes

- 6.7.1 [FAA NFDC](#)
- 6.7.2 [FlightAware](#)
- 6.7.3 [SimRoutes.com](#)

7 Ground Control

7.1 Responsibility

7.1.1 [ZBW General SOP](#)

7.1.2 [ZBW Ground SOP](#)

7.2 Airport Information

7.2.1 [ZBW Airport Information](#)

7.2.2 [Airport/Facility Directory \(AFD\)](#)

7.2.3 [AIRNAV.com](#)

7.3 Phraseology

7.3.1 [FAAO 7110.65 3-7: Taxi and Ground Movement Procedures](#)

7.4 Helicopter Taxi Operations

7.4.1 [FAAO 7110.65 3-11-1: Taxi and Ground Movement Operation \(Helicopter\)](#)

7.5 Departure Sequencing

7.5.1 [KBOS Tower Cab SOP](#)

When you have reviewed the previous sections and are comfortable with the information you have been provided, you may:

[Request the ZBW Delivery/Ground \(DEL/GND\) exam here](#)

Upon passing, including successful completion of exam corrections, you will begin training with a mentor in the sweatbox until basic competency is demonstrated during an Over The Shoulder (OTS) exam.

Upon passing, you will be assigned the **VATUSA Ground Controller (S1) exam**.

- *VATUSA References*
 - [VATUSA Training Resource Center](#)
 - [VATUSA Basic ATC Guide](#)
 - [VATUSA S1 Training Page](#)
 - [VATUSA S1 Advanced Topics](#)

Note: In the event of a discrepancy between the above VATUSA training material, and that material taught at ZBW, the material taught locally (ZBW) will take precedence.

Upon passing, including successful completion of exam corrections, you may be promoted to the rating of Delivery/Ground Controller (S1) and be awarded your Class C/D Delivery and Ground certifications.

Students enrolled in the Minor Track may now proceed to the Tower Controller (S2) syllabus. Students enrolled in the Major Track may now proceed to the next section.

8 Advanced Delivery/Ground Control

8.1 KBOS / A90 SOP Review

8.1.1 [KBOS Tower Cab SOP](#)

8.1.2 [A90 TRACON SOP](#)

8.2 Taxi Routes

8.2.1 [KBOS Airport Diagram](#)

8.3 Departure Procedures

8.3.1 [KBOS Airport Information Page, including Departure Procedures](#)

When you have reviewed the previous section and are comfortable with the information you have been provided, you may: [**Request the vZBW Advanced Delivery/Ground \(DEL/GND\) exam here**](#)

Upon passing, including successful completion of exam corrections, you will begin training with a mentor online or in the sweatbox until basic familiarization is achieved at KBOS. Upon successful completion of familiarization training, and with the endorsement of a mentor or instructor, you are eligible to work KBOS DEL and/or GND positions during off peak hours (per the vZBW Position Restrictions Policy).

You will then be eligible to begin training with a mentor/instructor for your Class B Delivery and Ground certifications until basic competency is demonstrated during an Over The Shoulder (OTS) exam.

Upon passing, you may be awarded your Class B Delivery and Ground certifications.