



General Standard General Procedures

Version E
July 27, 2019

This air traffic control procedural document is provided for virtual air traffic control in the ZBW ARTCC of the VATSIM network only. It is not for real-world ATC use. These procedures are approved for use as defined by the Boston Virtual ARTCC Administration Team only.

For more information about Boston Virtual ARTCC, visit www.bvartcc.com.

Version Log & Changes from Previous Version

Changes from the previous three versions are listed at the top of every SOP. Changes within the document are emphasized with a vertical blackline beside changed text.

Version E – July 27, 2019

Clarifies required training procedures for Visiting Controllers Page 13

Version D – July 3, 2019

Removes “Off/On-Peak” certification system language and references Multiple Pages

Adds “Student Authorization/ Certification” system language and references Multiple Pages

Updates training procedures for new website capabilities Multiple Pages

Version C – December 1, 2018

Clarifies procedures for managing transponder status/code while aircraft are on the ground, at airports with and without ASDE-X Page 39

Chapter 1: Introduction

Purpose

This document prescribes general air traffic control procedures specific to the ZBW ARTCC. It is required knowledge for all controllers that seeks to address the differences between real-world Order 7110.65 procedures and those in place within our community. It also covers facility-specific policies applicable to providing air traffic control in ZBW.

Welcome to Boston Virtual ARTCC

Boston Virtual ARTCC (BVA) is a community of pilots and air traffic controllers operating on the VATSIM network. If you are a BVA member who has recently taken the step of becoming a VATUSA controller, we're excited to have you as part of the ATC team. If you are new to the community: welcome! Once you pass the VATUSA S1/Basic ATC Examination and request to be part of the ZBW ARTCC, you are also a full-fledged member of our community, with access to the many resources and activities available for our pilots.

All controllers agree to be bound by and comply with BVA's [Terms of Use](#), [Privacy Statement](#), and [Shared Member Expectations](#).

If you are interested in learning more about the pilot side of the community, visit the [About BVA](#) page.

ATC Training Program

Boston Virtual ARTCC provides training and certifications for air traffic controllers for home air traffic controllers in the Boston (ZBW) ARTCC. Controller training represents a major investment in you by the many volunteer ATC Training Staff members who will guide your journey to become a controller in our community. Similarly, we expect a commitment to training from each of our controllers. You can expect to spend a year or more training to achieve your certification to work APP, and at least a further six months refining your controlling to achieve CTR.

Advancing through the ATC program, and particularly advancing beyond the TWR level, requires commitment to training, self-study, and availability.

Norms & Acceptable Conduct

Air traffic controllers are the key frontline service providers of VATSIM and Boston Virtual ARTCC. As such, you represent important points of contact for pilots. Controllers are also often the first point of contact for new members and have a major impact on those members' first impressions of our community.

The following standards of appropriate conduct have been established to provide guidelines into which controllers should strive to fit all operations.

While connected to any part of the community, controllers should always strive to:

- Use a constructive and respectful tone when disagreeing or providing feedback (positive or negative) to a controller, pilot, or member of the training staff;
- Respect and empathize with new members, trying to keep in mind what logging in to the network for the first time was like;
- Avoid the use of profane language; and,
- Approach mentors, instructors, and administrators with questions or concerns about training or the community in general.

Controllers must also be aware of the VATSIM Code of Conduct and Global Ratings Policy to ensure they operate in a manner consistent with those policies. In particular, controllers should be aware of rating/ATC restrictions and visibility ranges.

Appropriate Conduct While Flying

While flying in another controller's airspace, especially while that controller is training, refrain from 'controlling yourself' or challenging controller instructions on frequency. It is not permissible to ignore instructions and suggesting what you think might be better, or to excessively "suggest" unsolicited headings, altitudes, or other instructions.

Even if you are a controller and rated more highly than the controller you are flying with, that controller should receive the same deference you would give to a real-world controller operating that position. Any suggestions you have for the controller should be provided through a private discussion after the fact. Giving an unsolicited "lesson" on a frequency is not acceptable.

Streaming & Recording

BVA's voice channels are considered to be public frequencies, similar to real-world radios, in which anyone can listen. Accordingly, controllers are welcome to record, share, or stream while controlling. However, please be cautious when you are sharing your screen, particularly if it's happening on a live stream. The same norms and acceptable conduct apply. In particular, please ensure that if you choose to live stream or record video from an ATC session, you take precautionary measures that protect against profane or inappropriate content from being shared in the context of a controlling session.

TeamSpeak and Discord

TeamSpeak

Boston Virtual ARTCC's Member TeamSpeak is available to all community members. There are sections that are available to all members, and others that are accessible by controllers only.

TeamSpeak connection information is posted on the [Social](#) page of the forums. The server is intended for members only. On occasion, staff members may provide connection information to non-member guests of the ARTCC. Controllers shall not share the TeamSpeak server information with anyone outside of the ARTCC.

When you first connect to TeamSpeak, ask any Instructor or Mentor (indicated with "I" and "M" permission icons) to assign you the appropriate ATC permissions.

The use of the sterile air traffic control channels in the TeamSpeak server is intended for active controlling only. Controllers should be expecting anyone using an ATC channel to be actively controlling and should be cautious when entering the channel to avoid disruption. While quiet conversation is permitted in any channel, controllers should be conscious of ongoing ATC activities while having non-pertinent discussions in ATC channels.

Discord

Controllers are encouraged to connect to the [Member Discord](#). Controllers are also able to use two specific channels within Discord to promote ATC availability and to request assistance.

The #atc-status channel is viewable to all BVA Discord members and is intended for controllers to advertise their status as a controller to BVA Pilot Members. Air Traffic Controllers may use the following commands within the #atc-status channel:

Command	Variable(s)	Description	Example
?open	[ATC position]	States that you have logged onto the network as a controller.	?open BOS_S_TWR
?closing	[ATC position] [minutes until closed]	States that you are logging off an ATC position in a specified amount of time.	?closing BDL_TWR 30
?closedatc	[ATC position]	States that you have logged off of an ATC position, but that there is still ATC coverage online within the Boston ARTCC.	?closedatc BDL_APP
?closednoatc	[ATC position]	States that you have logged off of an ATC position, and that there are no other controllers online within the Boston ARTCC.	?closednoatc BOS_CTR

The #atc_support_requests channel is viewable ONLY to BVA Air Traffic Controllers and is a way for controllers to request immediate assistance in a situation where a controller finds themselves overwhelmed due to traffic/workload. The Administration Team may also use this channel to request last-minute event support in the case where a controller cancelled or we are in need of additional support.

DO NOT use this channel to inquire whether other controllers are interested in a staff-up. If you're interested in coordinating a staff-up, use the #staff-ups channel.

Controllers may use the following commands within the #atc_support_requests channel:

Command	Variable(s)	Description	Example
?assistance	[additional info]	Requests help from additional controllers, typically due to high workload.	?assistance Busy on CTR, could use an A90!
?responding	[additional info]	Indicates that you are responding to a request for assistance from a fellow controller.	?responding Be there in 5 minutes!

Training

Software

BVA provides training for approved VATSIM air traffic control software, which includes VRC, vATIS, vSTARS, and vERAM. The majority of our training takes place using VRC and vATIS. Controllers are encouraged to explore vSTARS and vERAM after achieving initial certifications.

SOPs

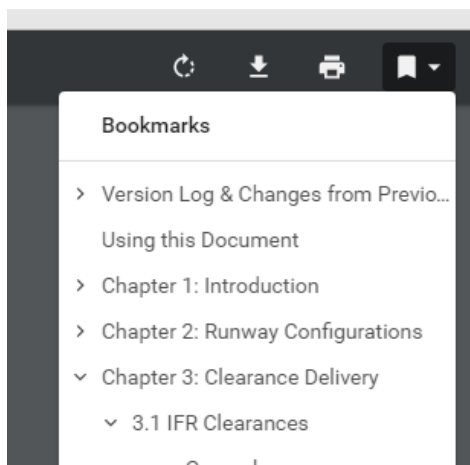
Boston Virtual ARTCC provides a detailed set of standardized operating procedures (SOPs) that define specific air traffic control procedures within this airspace. This General SOP describes some of the specific procedures that apply to controlling the entire airspace. It covers general control items and some of the procedures that are specific to controlling in a simulator environment. The General SOP is required reading material for the SOP Exam.

In addition to this General SOP, facility-specific SOPs are provided for:

- A90 TRACON
- A90 airports, including KBOS, KMHT, and airports in the Cape Area
- ZBW (Boston Center)
- Each Class C facility within ZBW

Finally, an ATC Handbook is available for all positions from Clearance Delivery through Center. The handbook covers the training and reference material required to work each position. The handbook contains required knowledge for the VATUSA ratings exams, as well as knowledge for our facility-specific exams.

When using the SOPs, each of the headings are bookmarked for ease of use. Use the “bookmarks” feature to navigate the documents quickly and easily:



Exams

ATC exams at Boston Virtual ARTCC are administered through the [ATC Hub](#) and the VATUSA Exam Center. ZBW-specific exams, including the SOP Exam, may be requested by the student at any time using the “[Request Exam](#)” link in the “Exams” menu. VATUSA rating exams (e.g., S2, S3, etc.) are assigned when required.

All exams are ‘open book’ and are designed to be completed with the aid of reference material. Students are also permitted and in fact encouraged to work together when studying for exams or preparing for training sessions. However, exams must be completed individually. Collaborating with any other student or controller while completing an exam, or posting Test Corrections, is specifically prohibited. This includes using other students’ corrections as a reference point: students caught viewing and/or copying answers from another controller’s work will be considered in violation of our Member Expectations and will be removed from the roster.

The passing score for all exams is 80%. Regardless of the score, all students are required to post Test Corrections for any questions that were not answered correctly on ZBW-specific exams. A ZBW exam is not considered ‘complete’ until you have passed the exam, posted your Test Corrections, and had those Test Corrections approved by a member of the ATC Training Staff. Test Corrections help the student identify gaps in understanding, and help our community improve reference material. Test Corrections do not have to be completed for VATUSA rating exams; a simple passing grade suffices.

Test Corrections are to be completed in the ATC Hub through the [Exam Center](#); review the post entitled ‘Test Corrections’ for more information on specific requirements.

Students completing Test Corrections are encouraged to be patient while members of our training staff review your work. In the event it has been several days without a response on your corrections, you may email the Training Administrator to inquire about your results. Otherwise, please be patient while you wait for Test Corrections to be approved.

Students who do not achieve the passing score of 80% on a ZBW exam are required to wait seven days after Test Corrections are approved before a subsequent attempt may be made. Students who do not achieve the passing score of 80% on a VATUSA rating exam are required to wait seven days after the date of the attempted exam.

Practical Training

With the exception of Initial Training for the Class C Delivery/Ground certification, practical training takes place both in a simulated environment (the “Sweatbox” server) and on the network. The Mentor or Instructor you work with will determine which environment your

training will take place in. In general, you can expect a mix of on-network and simulator sessions throughout your ATC training,

The Sweatbox server is a dedicated training environment. You may only be connected to the Sweatbox when instructed to do so by a member of the ATC Training Staff.

ATC Certification Structure

Ratings, Certifications, and Authorizations

Ratings refer to VATSIM-wide ATC ratings, including S1, S2, S3, C1, and I1. Students can achieve ratings by training in our ARTCC, and achieved ratings transfer across ARTCCs.

Certifications are issued by BVA and apply only within the ZBW ARTCC. Rated controllers require certifications to control in ZBW. Certifications are given for each position (e.g., Class C Delivery/Ground, Class B Tower, etc.). A certification is issued upon successful completion of an “Over-the-Shoulder” or OTS session. To reduce stress for students, OTS sessions are not generally pre-announced. However, even if they are pre-announced, students should consider an OTS just like any other training/controlling session.

Student Authorizations permit a controller who is close to meeting Class B Certification requirements to control the position without supervision in order to gain additional experience. When training for a Class B Certification, controllers will first be issued a Student Authorization to control and practice on the live network without supervision.

Student Authorization Restrictions

Controllers holding a Class B Student Authorization may control without supervision for a period of 60 days from the time the authorization is issued. However, unless approved by an Instructor, controllers holding a Class B Student Authorization may not control during events.

During or after the 60-day period, the controller will request training for the Class B Certification and complete an OTS.

A Student Authorization may be extended by agreement of the Air Traffic Manager and Training Administrator. Extension requests may be made by emailing atm@bvirtcc.com and ta@bvirtcc.com, and will be considered on a case-by-case basis.

Entry into the Program

Members can join Boston Virtual ARTCC as a pilot by completing the community’s entrance exam or as a controller by completing the VATUSA Basic ATC/S1 Exam. Once an ATC candidate has passed the Basic ATC Exam, the candidate is added to the BVA ATC roster and becomes a member of the community.

When ready, the candidate shall request and complete BVA's SOP Exam. This exam tests knowledge of our air traffic control policies, as well as the information contained in this document. Once the exam is completed, post any required Test Corrections.

Initial Training

To begin training the student shall request and complete the BVA Delivery/Ground Exam (after completing the SOP Exam). Once Test Corrections are approved, the student may request training in the ATC Hub using the "[Request Training](#)" link in the "Training" menu.

All initial training takes place in the simulator environment. Initial training covers the elements required to achieve the Class C Delivery/Ground certification with Boston Virtual ARTCC.

Eventually, students will be given an OTS evaluation (which may or may not be announced). Upon successful completion of the session, the student will be certified for Class C Delivery/Ground and promoted to VATUSA's S1 rating, allowing the controller to provide ATC services on the network.

Following the OTS, students will complete an orientation session on the "live" network with their assigned Mentor/Instructor controlling an overlying position. This orientation session is designed to help new controllers become familiar with the "live" network environment. The orientation session will be completed with the same Mentor/Instructor who completed the OTS. The orientation session is not a prerequisite to controlling on the network.

Selecting a Track

After achieving the S1 rating, the student is able to choose between two certification tracks:

- Major Track
- Minor Track

Students following the Major Track will continue training and receive authorization to control at ZBW's only major facility: KBOS.

Students following the Minor Track will immediately begin training for the Tower Controller (S2) rating and Class C Tower certification. Minor Track controllers can be certified up to the S3 rating for Class C or D facilities. However, these students will not be eligible to control any KBOS facilities or Boston Center.

The majority of ATC students tend to select the Major Track (by requesting their next training at KBOS) and receive certifications to control at KBOS.

The table below outlines the certifications and authorizations that are available. The associated VATSIM ratings are listed first. Any VATUSA rating exams will be assigned after a successful OTS.

Major Track	Minor Track
S1 – Class C Delivery/Ground	S1 – Class C Delivery/Ground
S1 – Class B Delivery/Ground Student Auth.	S2 – Class C Tower
S1 – Class B Delivery/Ground Certification	S3 – Class C Approach
S2 – Class C Tower	
S2 – Class B Tower Student Authorization	
S2 – Class B Tower Certification	
S3 – Class C Approach	
S3 – Class B Approach Student Authorization	
S3 – Class B Approach Certification	
C1 – Center	

The Class C Delivery/Ground certification applies to both GND and DEL. All Class C certifications apply to both Class C and D airports. Class B certifications are valid at KBOS.

In addition to the ratings above, S3 rated controllers are eligible to become part of the ATC Training Staff and achieve the ratings of Mentor or Instructor.

Subsequent Training

After achieving the S1 – Class C Delivery/Ground certification, controllers will progress according to their assigned track.

Controllers on the Major Track should request and complete the Advanced Delivery/Ground Exam, and then request training for Class B Delivery/Ground. Once a sufficient level of proficiency is determined, controllers will be assigned the S1 – Class B Delivery/Ground Student Authorization and be eligible to control Delivery/Ground at KBOS except during events. Controllers should use this authorization to practice and gain familiarity with KBOS, then request additional training. Eventually, the student will pass an OTS before achieving the Class B Delivery/Ground Certification.

Controllers on the Minor Track should request and complete the Local Exam, and then request training for Class C Tower. Once the student passes an OTS, the student will be certified for Class C Tower and VATUSA S2 exam will be assigned. Note that the Minor Track student is eligible to provide Tower and/or Ground services at all Class C and D airports in the ARTCC but is not eligible to control at KBOS.

For S2, S3, and C1 training, the VATUSA rating exam will be assigned by an Instructor upon completion of an OTS. These exams cannot be requested by the student.

Requesting Training

Formal training requests are processed in the ATC Hub using the [“Request Training”](#) link in the Training menu. Controllers should request training only once they have completed the prerequisite exams. When a post requesting training is made, students will be assigned to one or more members of the ATC Training Staff. All initial training requests must be made through the website; students are not permitted to approach Mentors or Instructors for unsolicited training. However, once assigned to an Instructor or Mentor, students are expected to proactively reach out to schedule sessions.

Students are expected to be on time for training sessions and to be prepared, having read and understood the appropriate reference material. Students who are obviously unprepared, or those who arrive more than 10 minutes late, will forfeit the session.

There is no “typical training session,” nor is there a typical timeline for positions. Training sessions are highly dependent on knowledge of the relevant procedures, traffic availability, and the position. The number of sessions required to achieve a certification generally increases with the seniority of a rating. It is normally not possible to achieve a certification in just one session.

Observing

Between sessions, students are encouraged to observe controllers on the network, particularly at positions that the student is training for. Events and regular sessions can offer benefits.

Anyone is permitted to observe on the network. To do so using VRC, open a session profile as you normally would if you were controlling, and connect to the network using:

- A callsign consisting of the prefix “ZBW”, your operating initials, and the suffix “OBS” (e.g., “ZBW_AB_OBS”)
- The Facility “Observer”
- Your current rating

Observers may use a maximum visibility range of 300nm and there are limitations on how long observers can be connected to the network.

Training Staff

BVA's training staff is comprised of Mentors and Instructors. You can find a current list of instructors and mentors on the Air Traffic Control Staff page of the website.

Joining the ATC Training Staff

Training controllers is an important responsibility and requires both outstanding air traffic control knowledge as well as interpersonal skills.

In order to be considered as a Mentor, a controller must:

- Hold at least an S3 rating;
- Be active, participating regularly in event and non-event sessions;
- Have an excellent personal reputation;
- Be willing to host training sessions/seminars at the request of instructors;
- Display a professional and respectful demeanor; and
- Be able to read, speak, and understand English proficiently.

The staff will approach potential mentors to offer the opportunity to become part of the ATC training staff. Controllers who are interested in becoming mentors are also encouraged to put their names forward for consideration.

All instructor certifications require VATUSA approval.

Visiting & Transferring Controllers

Information about Visiting & Transferring is available on the [forums](#).

Visiting Controller Applications

Controllers wishing to apply for visiting status shall email atm@bwartcc.com with:

- The controller's name, VATSIM ID, and current rating
- The controller's home ARTCC and current certification
- Relevant background about the controller's real-world or virtual aviation experience that may contribute to the controller's request to visit
- The reason the controller wishes to visit at BVA

When the Visiting Controller application is approved, a visiting controller becomes a full member of BVA. This membership remains valid until specifically cancelled by the controller, even if the controller becomes inactive or is removed from the ATC program.

Visiting Controllers holding a rank of I1 or I3 in their home ARTCC are not authorized to use those ranks when logged onto a ZBW position. Those controllers should use the rank obtained prior to the Instructor promotion when connected to the live network.

Visiting Controllers are subject to all currency requirements as outlined in the 'Currency Requirements' and 'Roster Removal' sections below. BVA operates in accordance with the VATSIM Executive Committee Policy Transfer and Visiting Controller Global Policy, VATSIM Northern American Region Visiting and Transferring Controller Policy (NARP-03-005), and VATUSA Visiting Controller Policy 09/06.

Checkouts for Visiting and Transferring Controllers

Visiting and transferring controllers are subject to the completion of written and practical tests designed to recognize existing knowledge and to highlight points of difference.

A visiting or transferring controller must meet the following requirements for a checkout.

Controllers Holding an S1 Rating:

1. SOP Exam
2. DEL/GND Exam
3. S1 OTS evaluation (Class C Ground)

Controllers Holding an S2 Rating:

1. SOP Exam
2. Local Control exam
3. S2 OTS evaluation (Class C Tower)

Controllers Holding an S3, C1, or Higher Rating:

1. SOP Exam
2. Local Control Exam
3. Approach Control Exam
4. S2 and S3 OTS evaluations¹ (Class C Approach)

Once a visiting or transfer application has been accepted, the controller should immediately request the appropriate exam and training in accordance with the steps above.

¹ These two sessions are generally held separately but can be combined in a single, top-down OTS covering the standards for S2 and S3 students.

Initially Visiting Controllers will be certified for Class C facilities. Subsequently Visiting Controllers require a Full Certification checkout for any KBOS position. Visiting Controllers wishing to obtain Full Certifications to work KBOS can do so by completing:

- The Advanced DEL/GND Exam
- An OTS on BOS_GND (Full Certification)
- The Advanced TWR Exam
- An OTS on BOS_TWR (Full Certification)
- The Advanced APP Exam
- An OTS on BOS_APP (Full Certification)
- The CTR Exam
- An OTS on BOS_CTR

BVA provides training for home air traffic controllers and transferring controllers only. Visiting Controllers will complete any required exams and then will be given OTS evaluations at the relevant positions. The OTS standards for Visiting Controllers are the same for home controllers and are published on the [Controller Resources](#) page of the ATC Hub.

Each required exam must be completed before the next one may be requested or attempted. For clarity, this means:

- Request and submit the exam
- Complete any required Test Corrections
- Receive approval for your Test Corrections
- Then, request the next exam

There are more students than mentors/instructors, and our focus as an organization is to provide training to home air traffic controllers. Visiting Controllers who are unable to successfully complete an OTS on the basis of one or more GRP competencies will be required to obtain additional training from their home ARTCC before being able to re-apply for visiting status. Visiting controllers who demonstrate a lack of local or BVA SOP knowledge not required by GRP may be provided with additional training and a second OTS.

Roster Removal

Air traffic controllers are expected to remain current and in good standing within our community. In rare instances, most commonly due to inactivity, controllers will be removed from the roster.

Extension requests for any of the deadlines below may be made via email to the ATM or DATM and may be approved on a case-by-case basis under unusual circumstances. This policy does not wish to preclude anyone from participating, but in order to maintain high levels of service, remaining current with the information and material is vital.

All controllers, including visiting controllers, may be removed from the roster for disciplinary reasons, including failing to follow policies outlined in this document, failure to comply with the ATC certification/position restriction standards, being suspended from VATSIM, or an inability to act in accordance with BVA’s shared Member Expectations (found in the Members menu of the forums.) Removal from the roster may also result in referral to VATSIM DCRM.

A controller who has been removed may apply to rejoin the roster no less than 3 months from the date of removal by requesting a transfer to Boston (ZBW) through VATUSA’s transfer process.

Currency Requirements for All Controllers

Controlling aircraft well is a skill that is lost if not consistently practiced. Once you achieve a rating, it is important to control on a regular basis in order to maintain proficiency on the position you have worked to attain.

To remain current, certified controllers must login to an active control position for at least 60 minutes within a 30-day period. Mentors and instructors may not include time spent training a student toward these requirements unless they are working their own position simultaneously.

Controllers that do not meet currency requirements will be considered inactive and will be removed from the active roster. Once inactive, controllers can regain currency as follows:

Last Controlled for 60 Minutes...	Can Regain Currency By:
Between 1-6 months ago	Emailing ATM with intent to return, and familiarizing with SOP and LOA changes
6-12 months	Completing an informal re-certification session with a Mentor or Instructor top-down at the level you wish to be re-certified for
12 months or more	Following the transferring or visiting controller certification process

Controllers who anticipate becoming inactive for a period of time should request a Leave of Absence, or LOA, from the program. An LOA is requested by sending an email to the ATM or DATM and lasts for a period of 90 days. This advises our administrators that the controller will be away for an extended period of time but that the controller is maintaining regular contact with BVA and plans to return to the program eventually. Controllers who are unable to remain active should request an LOA. After 90 days has passed, the ATM or DATM will contact the controller to inquire whether the controller wishes to renew their LOA, return as an active controller, or be removed from the roster.

Controllers returning from an LOA will be subject to the same requirements outlined above.

New Controllers

All new controllers (i.e., all controllers who have not obtained a BVA certification, including transfers and visitors), may be removed from the roster if they have not:

- Completed the SOP Exam within 30 days of joining;
- Completed the next required exam within 30 days of the successful completion of the SOP exam;
- Completed initial exams with a score of 80 percent or higher after three attempts; controllers removed under this section are eligible to rejoin the roster 90 days from the date of the last failure;
- Requested training or a checkout within 30 days of completing their last initial exam;
- Scheduled training or a checkout within 30 days of being assigned a mentor/instructor;
- Completed a session with their mentor/instructor within 30 days of their last session;
- Retained an active account with the VATSIM network; or
- Contacted the ATM or DATM within 30 days of joining with an LOA request.

Visiting Controllers

All visiting controllers will be removed from the authorized visitor list if they have not:

- Completed the SOP within 30 days of being approved for visitor status;
- Completed the next required exam within 30 days of the successful completion of the SOP exam;
- Requested a checkout within 30 days of completing their last initial exam;
- Scheduled a checkout within 30 days of being assigned a mentor/instructor;
- Completed a session with their mentor/instructor within 30 days of their last session;
- Retained an active account with the VATSIM network; or
- Controlled at least 60 minutes in a ZBW control position within the last 90 days.

Visiting controllers may also be removed from the authorized visitor list if they have violated the conditions of the Visiting Controller Policy.

Sign-ups

Use of the ATC Timetable

The [ATC Timetable](#) is a page of BVA's website designed to help pilots understand when and where controllers will be online. Controllers are permitted to optionally sign up for a position they intend to work and are encouraged to also indicate a planned sign-off time.

Signing up on the ATC Timetable does not guarantee any priority nor reserve a position.

Events

There are two categories of events: recurring events and special events. Recurring events include the General Aviation Fly-In, Pack The Pattern, and Regional Circuit. Special events take place throughout the year.

Recurring Events

Controllers are able to sign up online for recurring events by visiting the event page on the website. Once signed up, controllers are expected to be available for, and control in, the event.

In the event plans change, controllers may remove their name from the roster up to 24 hours prior to the published start time of the event.

Controllers who are signed up for events should be online for coordination no less than 10 minutes prior to the posted start time of the event and should be signed in and ready to control by the start time. If it takes you longer than 10 minutes to get set up, be online earlier.

Special Events

Large-scale events such as Cross The Pond, Friday Night Operations, or Tea Party, are staffed by the Events Coordinator. Staffing requests will be posted on the forums, and controllers are encouraged to reply to the thread with position requests and availability. Positions for these events will be assigned by the Events Coordinator based on a variety of factors including experience, availability, activity, and competency.

Event Expectations

The following expectations apply to controllers who are signed up or rostered for an event. Controllers shall:

- Be in TeamSpeak, ready to connect to the network, at the specified briefing start time. If no briefing start time is specified, the controller is expected to be in TeamSpeak, ready to connect to the network, no less than 10 minutes before the posted start time of the event.
- Remain connected and provide ATC services at the rostered position for the entire event.

In the event a rostered controller needs to leave the event early for any reason other than an emergency, the controller shall coordinate with the CIC and all adjacent positions before disconnecting from the network or de-activating the frequency.

Changes

Once signed up for an event, the expectation is for the controller to be online, at the rostered position, for the duration of the event. Controllers who are late for briefings or who do not control when they are on the roster create problematic gaps in our coverage for pilots.

Up to 24 Hours before the Event

Up to 24 hours prior to the start time of the event, if a rostered controller's availability changes, he/she shall either remove his/her name from the roster or advise the Events Coordinator of the change in availability.

Within 24 Hours

Rosters are considered finalized within 24 hours of the published start time. Within 24 hours of the event, if a controller is expecting to be late or unavailable, the controller shall:

1. Attempt to find a replacement; and,
2. Inform atcscheduling@bwartcc.com no less than 60 minutes prior to the published start time of the event of any changes.

If the controller follows the steps above, no penalty shall be assessed unless the controller is routinely late or unavailable for events.

Event Restrictions

A controller who is late, or does not appear, for an event and also does not complete the two items above will be tracked by the ATC Training Staff. A controller who misses or is late for three events, or who continually creates scheduling challenges for the Events Coordinator, will be barred from signing up for future events.

Controllers who are barred from signing up for future events:

1. May control in Recurring Events by filling an open slot, but may not sign up in advance;
2. May reply to roster requests on the forums, but can expect to be assigned only if required;
3. May be permitted to sign up for future events provided he/she has controlled for the duration of three successive events after being barred from signing up.

Focus Airports

The administration staff strongly recommends that controllers only staff positions that are advertised as part of the event. Opening an ATC position at a non-event airport can have the effect of reducing traffic at the scheduled event airport.

Working with Pilots

BVA and VATSIM are learning environments, designed to be welcoming, warm, and understanding places for new pilots to become familiar with aviation. There is no tolerance for rudeness, condescension, or disrespect toward pilots or controllers within this organization.

At all times, controllers should endeavor to work with pilots, treating them as guests and helping them in any way possible. This applies particularly for pilots who are new to the simulator or struggling with procedures.

As controllers, our responsibility is to provide realistic, professional, and enjoyable simulation environments for all of the VATSIM pilots on our frequencies. When a pilot's intentional or unintentional actions are creating a negative impact for other members, take action to improve the situation.

In such a situation, consider the following before requesting the support of a VATSIM supervisor:

- Is the pilot making an effort?
- Could the situation be defused by holding or delaying the pilot? Could the pilot be transferred to a separate frequency and be managed individually?
- Can another controller (or an offline controller) help manage the situation?
- Will textual instructions help?

If a pilot is not making an effort to improve, is non-responsive, or is being intentionally disruptive, use the `'.wallop'` command to contact a supervisor, inform them of the situation, and request assistance. When making the request for assistance, include enough basic information so that the Supervisor can begin working the request right away (e.g., "ABC123 is in my airspace, not contacting ATC and not replying to multiple requests for contact. No immediate conflict", "ABC123 seems like he's very new to IFR flying, can you help him out? I'm pretty busy right now and he's having trouble with the ILS").

Pilots who appear interested in the community may be directed to our website to apply. Pilots who apply become eligible to take part in our training programs, including the Virtual FBO and Pilot Ratings Program.

Pilots who create non-immediate scenarios (that create an unusually positive or negative experience on the frequency) that arise through regular network operations can be addressed through the Pilot Safety Report (PSR). Controllers are encouraged to submit a PSR whenever non-supervisor follow-up is required for a pilot. The intent of this form is to track pilots who consistently improve or detract from the overall experience on the network, both for members and non-members, and to help pilots who need extra attention.

Chapter 2: General Control

Controller-in-Charge

The Controller-in-Charge (CIC) is the most senior of the following ATC positions, in the following order:

- During an event, the designated CIC.
- Traffic Management Unit, or TMU, if staffed.
- Boston Center, if staffed.

The CIC is responsible for the overall air traffic control presence. Unless otherwise coordinated, the responsibilities of the CIC include, but are not limited to:

- Overall ATC coordination between all facilities;
- Assistance with problem pilots (individual controllers will still file PSRs as necessary);
- Staffing changes including ATC position changes and early controller departures;
- Communication with supervisors regarding technical issues;
- Handling any operational errors that occur; and,
- Reporting late controllers to ATC Instructors.

Sign On and Sign Off Procedures

Sign On

Prior to logging in or coordinating, you may wish to sign onto the network as an observer (then re-connect with your active controlling login information). When connecting as an observer, use the prefix “ZBW” and include your initials (e.g., “ZBW_AB_OBS”). Mentors, Instructors, and Administration Team members may connect using their positions (e.g., “ZBW_AB_MTR”, “ZBW_AB_INS”, “ZBW_ATM”).

1. Ask the CIC or, if no CIC is online, the immediate overlying controller if they have a preference for where to sign in. You might think BDL_TWR would be the best, but find out that traffic has congregated near KPWM.
2. Confirm with the immediate overlying controller that you will be signing in.
3. If using TeamSpeak, add your ATC position tag to the beginning of your username:
 - a) Enclose your tag in square brackets.
 - b) Use the same format as VRC, shortening as reasonable to save space.
 - c) Do not include your frequency.

Examples: “[BOS_DEP] Camden Bruno (BN)”; “[CTR] Don Desfosse (DO)”.

4. Open the radar client and load the appropriate profile.
5. Connect to the network using appropriate callsign and credentials.
6. Update your controller information in ATISMaker (if applicable).
7. Obtain a briefing from relevant adjacent/overlying controllers.
8. Once you have control, prime the frequency.
9. Create an ATIS, if required.

Controllers must control at the position they are signing on to for a minimum of 30 minutes. This clause may be waived by the CIC, if it is shown to be operationally advantageous to have the controller at a different position.

Controllers opening either a TRACON or CTR position must announce opening on the ATC channel also. DEL/GND/TWR positions shall not use the ATC channel and announce opening through private chat with their surrounding controllers.

Sign Off

Sign Off procedures apply only when a control frequency is closing. If another controller is taking over, provide the controller a full traffic and airspace brief before disconnecting (the briefing may be omitted in the case of a real-world emergency only). The relieving controller shall be connected for a minimum of 5 minutes before taking control. The existing controller shall remain connected for a minimum of 2 minutes after transferring control.

Controllers preparing to close a position shall:

1. Use the “.break” command within 15 minutes of the planned sign off time.
2. Provide a 15-minute warning to the frequency and surrounding controllers. Controllers closing a TRACON or CTR position shall use the ATC channel to announce they will be closing.
3. Ensure that any controller assuming responsibility for their airspace has been provided a full traffic and airspace brief in that area. Controllers must not sign off without providing an adequate briefing, containing all relevant information about operations within the airspace and the controller assuming responsibility has acknowledged as such.
4. Announce when you have signed off to all controllers, the frequency, and (for TRACON or CTR controllers), the ATC channel.

Controller Resources

Facilities Files

Boston Virtual ARTCC facility files may be located on the [Controller Resources](#) page of the ATC Hub. Official facility files are maintained by the Facilities Engineer.

BVA strongly discourages any member from modifying the facility files in any way. As the files are updated on a routine basis, local edits are easy to lose. Instead, we ask controllers who have suggestions or ideas for facility files to post to the [Facility Requests](#) thread on our forums.

BVA members who modify facility files must receive approval from a member of the Administration Team to share their modifications within the controller community. Non-members are not permitted to make any changes to our facility files.

Controllers are not permitted to make amendments to any of the aliases within the “PDC” section of the alias file.

IDS

The IDS serves as a traffic management and situational awareness tool for the ARTCC. It is a central tool for controllers to access tools such as:

- SOP and LOA references
- Manuals and charts
- Airport, Aircraft and Airline lookups
- Preferred routes
- PIREPs, NOTAMs, RVRs, ATCSCC and weather maps
- Built-in FlightAware and SkyVector utilities
- Notepad and controller chat
- Airport status strips

The IDS is available at <http://ids.bvartcc.com>. First, login using your VATSIM credentials. Then, use the “+” symbol to create your custom IDS view with the modules you wish to use. Most controllers will want (at a minimum) Airport Information, Airport/Aircraft/Airline Lookups, and Preferred Routes. The settings icon provides several user functionality options.

Refer to the [IDS Development Thread](#) on our forums for more information.

Preferred Routes

Preferred routes have been established for many city pairs within the ZBW ARTCC, and between major airports in other ARTCCs. Preferred routes help ensure an orderly flow of traffic inside ZBW, and between ZBW and other ARTCCs. Preferred routes are accessible to controllers via airport specific SOPs and the IDS and to pilots on our [Route Finder](#).

If a preferred route has not been established, use the [NFDC Database](#) and [FlightAware](#) to determine the best route for the aircraft.

Any non-preferred routes must be approved by:

- The overlying ZBW sector, if staffed
- An overlying radar controller

Aircraft who simply file “direct” or “GPS direct” to their destination airport should be re-routed (if applicable). If the aircraft is unable to accept a preferred route, attempt to give at least some sort of routing, particularly for flights departing the ZBW ARTCC.

Charts

Controllers may use the IDS or <http://charts.bvartcc.com> as a quick-reference source for charts for airports within our airspace. Charts are also readily available from publicly-available online sources such as AirNav, SkyVector, and many more.

Coordination

Coordination between controllers is paramount. Due to the complexities of local procedures and the difficulty of composing a single document that could cover every conceivable scenario, deviation from procedures outlined in SOPs is permitted on a limited basis. These deviations must be coordinated between controllers (so each controller is aware of and agrees to the new procedure), and must be executed realistically, professionally, and in a manner consistent with the spirit of the SOP. In other words, you can break any of the rules as long as it is operationally advantageous to do so and everyone is on the same page.

For example, some commonly-coordinated changes to SOP include:

- Rolling departure releases from satellite airports.
- Tower giving inbound taxi and “monitor Ground” instructions.
- Removing or deviating from standard information included in flight strip remarks.

Operating Initials

All ZBW controllers are assigned unique Operating Initials (OI). When coordinating verbally, terminate controller-to-controller messages with your OI.

Coordination Message Format

Use the following format for controller-to-controller coordination:

- Caller and receiver identify their facility and/or position. Between two facilities of the same name, the caller must identify both facility and position.
- Caller states the type of coordination to be accomplished when advantageous (for example, “handoff” or “APREQ”).
- The caller states the message.
- The receiver states the response to the message followed by the receiver’s OI.
- The caller states his or her OI.

APREQs

An Approval Request (APREQ) is used for an approval of a specific request, either from the aircraft or from another facility. A similar format is used as above; identify the facility, state the word “APREQ”, then coordinate. Conclude the coordination with operating initials.

Identification

When coordinating with other controllers using TeamSpeak or the landlines, reference the name or sector of the position being controlled. This information is available in facility-specific SOPs.

Some of the common sector/position names, TeamSpeak position tags, and associated frequencies are provided below as representative examples.

Identifier	Position Name (used for ATC Coordination)	TS Position Tag	Frequency
BOS_CTR	Concord ²	CON37	134.70
BOS_SW_CTR	Danbury ³	DXR34	134.00
BOS_APP	ID	ID	133.00
BOS_N_APP	Rockport	RPT	118.25
BOS_TWR	Boston Local	BOS_TWR	128.80
BOS_GND	Boston Ground	BOS_GND	121.90
ACK_APP	Hyannis	HYA	118.20
BDL_APP	Bristol	BRISTOL	123.95
PWM_APP	Casco	CASCO	119.75

² Use “Boston 37” when coordinating with other ARTCCs or outside facilities.

³ Use “Boston 19” when coordinating with other ARTCCs or outside facilities.

Position Relief

All controllers signing onto the network to relieve an active controlling position must:

- Sign on to the relief position at least 5 minutes before assuming control
- Complete a full traffic and airspace brief of the area they will be controlling

The briefing should include, at a minimum:

- Airport conditions and status: airspace configurations, ATIS, active runways
- Staffing: adjacent and inter-facility staffing, coordination with adjacent controllers
- Airport activities: NOTAMs, events affecting airspace
- Weather: current trends, PIREPs, SIG/AIRMETS
- Flow control: any TMU restrictions
- Training: any known pilot or controller training and active PRP attempts
- Traffic information:
 - Status of all aircraft in airspace
 - Point-outs
 - Status of primary-only targets
 - Aircraft released by not airborne
 - Aircraft handed off but still in airspace
 - Coordination agreements with adjacent controllers
 - Aircraft holding or standing by for service

The Flight Plan

The flight plan can be filed either by the pilot or controller. Only one flight plan can exist at a time for each callsign. A flight plan should exist for every aircraft, even VFR aircraft.

In order to create a flight plan for a VFR aircraft, you need at least the following:

- Call sign (already included)
- Aircraft type
- Direction of flight
- Requested altitude

If you need to create or edit a flight strip for an IFR aircraft, you need this information:

- Call sign (already included)
- Aircraft type
- Route string (“DIRECT” is acceptable)
- Arrival airport
- Cruise altitude

The FAA maintains databases of:

- [Airline codes](#)
- [Aircraft Type Abbreviations](#)

Try your best to keep flight plan notation as consistent and neat as possible. Correct pilots that have entered an improper aircraft type abbreviation and standardize route string entries (i.e., “Bradley SID” should be changed to “BDL#”).

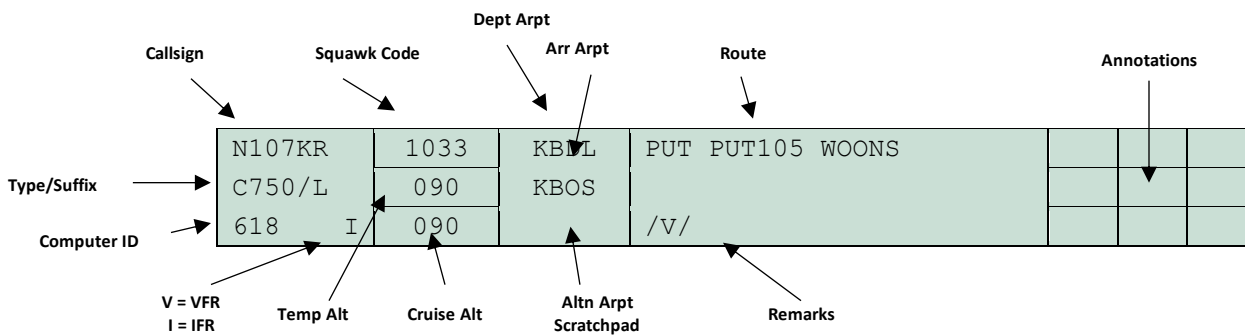
Unless otherwise prescribed by facility SOP, do not include an assigned SID in an aircraft’s flight plan.

If a VFR aircraft has filed or is requesting Flight Following, the abbreviation “FF” should be included in the “remarks” section of the flight plan (place this in front of any pilot-filed remarks). Remember that remarks are visible to all pilots.

The Flight Progress Strip

A flight progress strip can be used by controllers to keep track of aircraft that are within the air traffic control system. It is one of several reference and coordination tools that may be employed in keeping track of the status of aircraft.

The sample flight strip below matches the formatting from VRC:



By default, controllers working DEL, GND, or TWR are expected to use flight strips for departing aircraft as part of regular coordination. However, controllers may decide not to use them. Similarly, controllers working APP/DEP or CTR will generally not use flight strips, but can coordinate their use.

Each flight strip should be viewed as a separate piece of paper. A flight strip can be pushed from controller to controller, but the changes a controller makes to a flight strip will not be reflected on any other flight strips for the aircraft. However, any changes to the aircraft's flight plan will be reflected in any of the aircraft's flight strips.

The temporary altitude and scratchpad elements of the flight strip are modified outside of the flight strip. The only elements that controllers are able to modify on the flight strip directly are in the "annotations" section.

When flight strips are being used, the following standard markings have been identified. Only use markings when operationally advantageous (i.e., if you are working TWR top-down, there may not be an advantage to using flight strips).

				1	2	3
				4	5	6
				7	8	9

- Box 1 – “B” when clearance is given verbally, or “CPDLC” if clearance is given via CPDLC
- Box 2 – Departure runway, if non-standard
- Box 3 – ATIS code or WX if information is issued
- Box 4 – Intersection departure indicator, if required
- Box 5 – Aircraft’s gate number, if required (e.g., if DEL obtains this information and then instructs the aircraft to “monitor Ground”)
- Box 6 – Clearance void time, if required

Additional flight strip notations may include the following elements in Box 7-9:

- GAT = Gate hold program in effect
- NOP = No program (used for events if they are non-event traffic)
- RTE = Clearance or full route clearance required
- RR = Re-route expected or required

VRC Setup

[Videos posted on BVA’s YouTube](#) provide an overview of how to set up and configure VRC.

When setting up VRC, controllers are encouraged to remember the following:

- Controllers may only connect to the sweatbox server when authorized to do so by a member of the ATC training staff
- Visibility ranges shall not be set above the following values⁴:
 - Clearance Delivery or Ground: 20nm
 - Tower: 50nm
 - Approach or Departure: 150nm
 - Center: 600nm
 - Observers: 300nm

⁴ When controlling with vSTARS, the visibility range is pre-set (normally to 150nm). Controllers wishing to use vSTARS for DEL, GND, or TWR will need to edit the visibility range: Open the facility editor (CTRL+F), and modify the “Visibility Range” under the “Airspace” tab.

When configuring communications, the vox server will be 'voice.bvartcc.com', and the vox channel will be the facility name, followed by the frequency (6 digits), unless otherwise specified in a Facility SOP.

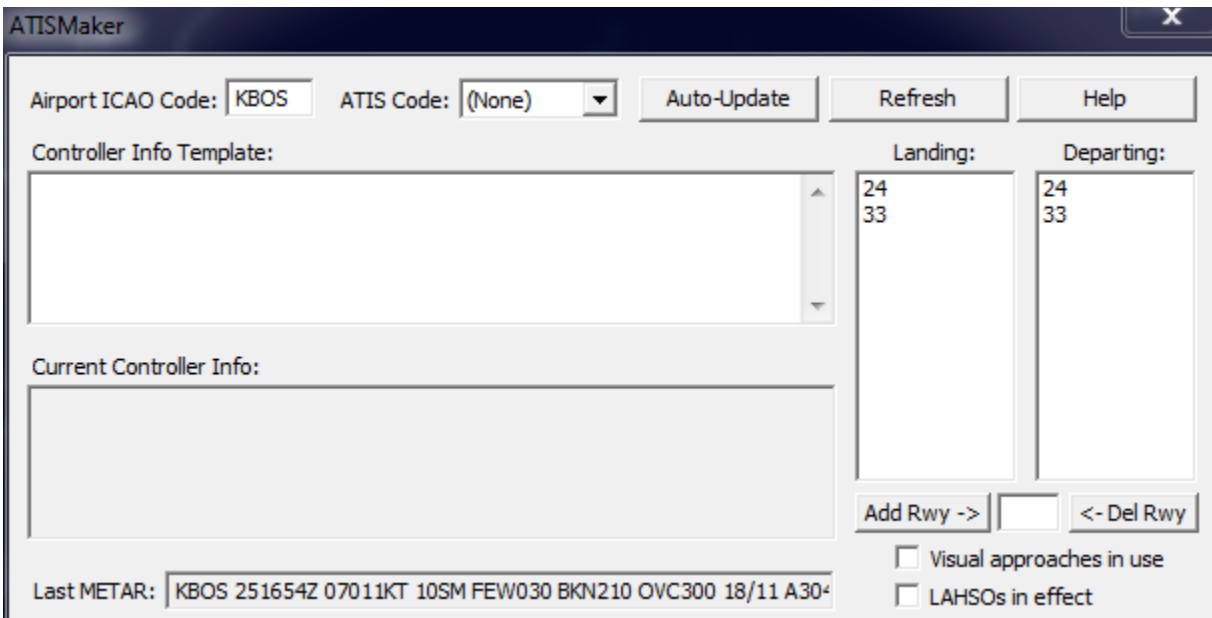
Controllers should forward the following three ports to properly enable voice communications within VRC:

Port	Protocol	Data Type
6809	TCP	Aircraft positive updates and general network data
3782	TCP	Voice communications
3290	UDP	Voice communications

Port forwarding is accomplished through your router. An internet search should result in the instructions specific to your configuration.

Controller Info Template

Your controller information is displayed through pilot and ATC clients, and on network monitoring tools such as VATSpy or VATTASTIC. On VRC, you set this using ATISMaker:



We recommend including:

- How long you plan to be online
- A link to our website for feedback: <http://www.bvartcc.com/>
- The link to the ATC Timetable: <https://lindbergh.bvartcc.com/timetable>
- A statement about the community: "Boston Virtual ARTCC is an integrated pilot and ATC community. Visit www.bvartcc.com to apply."

You may also wish to include:

- Voice channel or network information
- Airports covered
- Frequency to contact first
- Appropriate aviation-safety related operational information

You are not permitted to include:

- Your name or rating
- Raw/undecoded METAR information

Per GRP, you may include a maximum of 4 lines (network information does not count), and each line can be a maximum of 76 characters.

Below is a sample you may wish to base your own information template on:

```
Online until 4:00pm ET (2030Z)
See planned ATC at bvirtcc.com/Timetable
Boston Virtual ARTCC is an integrated pilot and ATC community
Visit www.bvirtcc.com to apply
```

Temporary Altitudes & Scratchpads

The procedures below represent standard coordination for temporary altitudes and scratchpads. When operationally advantageous, coordinate different procedures.

Temporary Altitudes

Temporary altitudes appear in the aircraft's datablock on certain radar modes, and appear in the aircraft's flight strips. Temporary altitudes can be assigned by using the F8 function key or by right-clicking on the target.

Temporary altitudes should be used:

- For departures, when the aircraft is given a non-standard departure climb/restriction
- For arrivals, a fix crossing altitude when "cross (fix) at (altitude)" has been accepted
- For arrivals issued a "descend via" clearance (use a temporary alt of "111")

Controllers who are using a radar mode that does not display temporary altitudes are not required to issue or clear temporary altitudes.

Temporary altitudes should be removed when the aircraft is given an approach clearance.

Scratchpads

Scratchpad entries are 3-character entries that appear in the aircraft's datablock. Scratchpads can be assigned by using the "INSERT" key. Scratchpad entries should be used for IFR arrivals when a non-standard approach is used, or when approaches to multiple runways are in use. Scratchpad entries are not used for departures.

The first character of the scratchpad shall be used to identify the approach:

Entry	Approach Type
I	ILS
C	Contact
V	Visual
G	GPS (GPS)
L	Localizer
N	NDB
R	RNAV (RNP)
O	VOR
P	VFR Pattern Entry Assigned

The remaining characters are used to specify the runway. If parallel runways are used, then the last number and the left/right designator of the runway are entered (e.g., "3L, 4R, 2L").

Entry	Runway
24	Runway 24
3L	Runway 33L
4R	Runway 4R
5R	Runway 15R

Facility SOPs may prescribe additional scratchpad entry requirements.

Controller-Pilot Datalink (CPDLC) Clearances

Clearances may be issued textually through CPDLC for IFR aircraft where prescribed by facility SOP. CPDLC clearances are issued using the **.pdc** and **.route** aliases. Where CPDLC is authorized, the following rules shall apply.

Clearances issued through CPDLC shall contain at least the following information:

1. Standard Instrument Departure (SID)
2. Departure frequency
3. Frequency information for push/taxi

All control instructions, including interim altitude assignments, headings to be flown, etc., that differ from what is contained in a SID shall be issued verbally.

Controllers are encouraged to send aircraft a clearance or amendment as soon as a flight plan is transmitted. In this way, an aircraft does not need to make an initial call requesting clearance. If a pilot does request clearance, the controller may decide to issue clearance verbally or via CPDLC.

Amendments

If an amendment is required, revised or amended flight plans and full route clearances shall use the **.route** alias:

.route (new route) < Enter > (example: .route SSOXS4 SSOXS BUZRD SEY PARCH2)

This alias instructs the pilot that a new route has been issued and prompts for a reply. In the event the pilot accepts, the route/flight plan can be changed and a clearance issued using the **.pdc** alias as described below. If the pilot cannot accept the change, he/she is expected to advise on frequency.

Clearances

When CPDLC clearances are being issued, whether or not an amendment has been applied, the controller must first ensure the flight plan contains all required information, including an assigned squawk and an applicable departure procedure, prior to issuing clearance.

If the phrase “climb via SID” is applicable, issue clearance using the following aliases:

.pdc (2 Letter Position Identifier) < Enter > (example: .pdc SR)

The following variations can be used:

.pdc (used to assign own frequency as departure)
.pdcu (used to assign UNICOM as departure frequency)

If the phrase “climb via SID” is not applicable, issuing clearance using the following aliases:

.pdcM (SID Top Altitude) (2 Letter Position Identifier) < Enter >
(example: .pdc 4000 2B)

The following variations can be used:

.pdcM (SID Top Altitude) - used to assign own frequency as departure
.pdcMU (SID Top Altitude) - used to assign UNICOM as departure

When calling for push or taxi, the pilot must verbally confirm the departure procedure.

Common Aliases for Text-Only Pilots

The ‘bostonalias.txt’ file in the sector file package contains a full set of aliases that can be used to shorten common text instructions to pilots. There are hundreds of shortcuts that can be used covering almost every possible instruction.

The ‘bostonalias.txt’ file can be opened using Notepad or any other text editor.

Aliases in the file use the following format:

- The first word (immediately following the .) is the alias typed into VRC
- The rest of the line is what it will be replaced with
- Elements like ‘\$squawk’ represent variables taken from an aircraft’s flight plan (you do not have to type in)
- Elements like ‘\$1’ are variables typed by the controller

For example, take the alias ‘.cto’. It appears as follows in the file:

```
.cto Wind $wind($dep) Runway $1 cleared for takeoff
```

This alias takes the wind from VRC, the departure airport from the aircraft’s flight plan, and then references the runway number specified by the controller. If a controller types **.cto 29** to a radio-selected aircraft, the message “Wind (current wind), Runway 29, cleared for takeoff” will be transmitted to the pilot.

The following common aliases cover most of the scenarios we encounter:

Alias	Variables to Include	Sample Transmission	Sample Result
Delivery/Ground			
.xpdc	N/A	.xpdc	You will receive your clearance via CPDLC over private message. Readback is not required.
.pdc	Two-letter identifier of departure controller	.pdc 37	As described in the previous section
.route	Amended route	.route HYLND4 HYLND MHT	ATC has issued an amendment to your route of flight to better facilitate air traffic movements. If you are able to accept the amendment, please reply to this message and expect to receive clearance via CPDLC. If you are not able to accept the amendment, have any questions, or would prefer a different route, please contact BOS_DEL on 121.65. The proposed amended route for your flight is HYLND4 HYLND MHT.
.cld	Top altitude, departure frequency (if applicable)	.cld 5000 ID	Cleared to KDCA via (aircraft's route). Maintain 5000, expect FL320 10 minutes after departure. Departure frequency 133.00. Squawk 1301.
.prefroute	Opens the FlightAware IFR Route Analyzer for the aircraft's flight plan.		
Ground			
.taxio	Runway, taxiways	.taxio 29 C A	Runway 29, taxi via C A
.hsr	Runway	.hs 4R	Hold short of Runway 4R
.taxii	Parking location, taxiways	.taxii Signature C B	Taxi to Signature via C B
.taxiopd	Runway	.taxipdo 9	Runway 9, taxi pilot's discretion. Cross all other runways. Hold short of Runway 9. Advise this frequency when ready for departure.
.taxiipd	N/A	.taxipdi	Taxi to the ramp via pilot's discretion, cross all runways.
Tower			
.cto	Runway	.cto 29	Wind 180 at 4, Runway 29, cleared for takeoff
.ctoh	Runway, heading	.cto 29 270	Wind 180 at 4, fly heading 270, Runway 29, cleared for takeoff
.land	Runway	.land 33L	Wind 180 at 4, Runway 29, cleared to land

Alias	Variables to Include	Sample Transmission	Sample Result
Approach/Center			
.rcdeph	Heading, altitude	.rcdeph 090 5000	Radar contact passing 3000, fly heading 090, climb and maintain 5000
.rcdep	Altitude to climb to	.rcdep 14000	Radar contact passing 1600, climb and maintain 14000
.rcvor	VOR identifier	.rcvor ENE	Radar contact 18 miles northeast of ENE at 15000
.sq	N/A	.sq	Squawk 1331
.id	N/A	.id	Ident
.lma	N/A	.lma	Leaving my airspace, no further ATC available at this time. Radar service terminated, frequency change approved.
.dvia	Arrival, runway number (Have arrival airport weather loaded)	.dvia ROBUC2 22L	Descend via the ROBUC2 arrival, Runway 22L, the KBOS altimeter 3012
.robuc	Runway number	.robuc 4R	Descend via the ROBUC2 arrival, Runway 4R, the KBOS altimeter 3000
<i>Note: arrival aliases exist for the procedures we manage regularly (e.g., “.ccc”, “.poppp”, “.jfund”, etc.).</i>			
.ils	Heading, altitude, runway number (Have arrival airport weather loaded)	.ils 070 8000 22L	Fly heading 070 descend and maintain 8000 Expect vectors ILS Runway 22L approach, KBOS altimeter 2973
.xils / .xvis	Runway number	.xils 29	Expect vectors ILS Runway 29 approach, KPWM altimeter 2992
.dm	Altitude	.dm 5000	Descend and maintain 5000
.cm	Altitude	.cm FL240	Climb and maintain FL240
.fast	Speed	.fast 250	Increase speed to 250
.slow	Speed	.slow 190	Reduce speed to 190
.tl / .tr	Heading	.tr 150	Turn right heading 150
.fh	Heading	.fh 330	Fly heading 330
.join	Heading, runway number	.join 200 22L	Fly heading 200 join the Runway 22L localizer
.cils	Fix, heading, altitude, runway	.cils NOLEY 200 4000 22L	You are 5 miles from NOLEY, fly heading 200, maintain 4000 until established on the localizer, cleared ILS Runway 22L approach
General			
.closing	Number of minutes until you close	.closing 5	**ATTN** BOS_TWR will be closing in 5 minutes
.closed	N/A	.closed	**ATTN** PWM_GND is now closed

Pilot Ratings Program

The Pilot Ratings Program (PRP) is a self-guided training program available to members of Boston Virtual ARTCC in ZBW airspace. The objective of the program is to improve pilot proficiency within the ATC system. The program includes several VFR and IFR flights, each with associated reference material and test standards that focus on radio phraseology and procedural knowledge. Pilots work through the program successively, with each flight building upon material from the last. The program is recognized as an official VATSIM ATO.

More information, as well as a listing of the PRP flights, can be found on the [PRP website](#). The objective of the program is not to create perfection but rather allow pilots to learn more about flying in a simple way. The PRP is not intended as an intensive training program with strict requirements but instead as a means of giving pilots some of the feedback we already give them in session in a more formal way.

Controller Responsibilities

Controllers evaluate a pilot's performance on each flight by reviewing the objectives for that flight and rating candidates against them (see below for additional details on coordination). The objective is not for pilots to perform flawlessly but rather to demonstrate consistent and applied knowledge. If a pilot knows not to fly through Class C airspace but then penetrates it by 100', the pilot does not necessarily need to fail the rating. Similarly, a pilot that has made a small mistake at the beginning of a flight shouldn't have to wait an hour for the end of the flight to be given feedback.

Monitoring PRP flights is conducted on a workload-permitting basis, and pilots are required to request PRP monitoring prior to attempting the flight. Based on workload, monitoring of a PRP flight may be terminated mid-flight or declined entirely. Where possible, attempt to hold or delay the pilot instead of terminating the flight entirely.

If a pilot makes a mistake that would result in failing the PRP flight, inform the pilot of the mistake and, workload permitting, give him the option to try that portion of the flight again. For example, if a pilot has filed an incorrect altitude, a controller could inform the pilot of the mistake and ask to get an appropriate altitude. If the pilot understands the theory, then the pilot could be permitted to continue the rating.

If a pilot is obviously unfamiliar with a procedure, the pilot should not be permitted to continue to the next flight (because that next flight will rely on successful completion of previous ratings). Similarly, if a pilot makes a mistake that shows the knowledge required to move to the next level is not present, inform the pilot of the mistake and that he will need to re-attempt the flight.

Should a pilot fail a rating, give him the option to re-start it; there is no need for a pilot to complete a flight he has already failed.

Do not evaluate the pilot on any criteria except those listed in the flight's test standards. Your job is not to become the pilot's flight examiner. Ensure the pilot successfully completes the flight's objectives, and leave flight instruction to other members.

Coordinating PRP Flights

Pilots attempting a PRP flight may request PRP monitoring separately, or as part of their request for taxi or ATC clearance.

Prior to approving a request for a PRP flight, check the workload of the overlying controller(s) who will monitor the flight. If they appear busy, check before approving the PRP. If the PRP flight cannot be completed, advise pilots of a suitable alternative (e.g., try later, tomorrow, etc.).

If overlying ATC approves the request, or if traffic is slow, inform the pilot that the flight has been approved and coordinate the flight with other controllers as follows:

- Input the PRP flight in the "Remarks" section of the flight plan (e.g., "PRP VFR 3")
- Make a scratchpad entry with the letters "PRP"⁵
- Verbally coordinate the PRP flight number and status when a handoff is issued

Each PRP flight contains approximately 4-5 objectives that a pilot will work to accomplish. In order to earn a rating, the pilot must meet all of these objectives. The objectives for PRP flights can be found on the flight's corresponding page on the [PRP website](#).

A PRP flight continues as long as the pilot continues to meet the test standards for that flight. Each controller is required to monitor the relevant standards.

If at any time a pilot fails the flight, the controller monitoring at the time will inform the pilot of the mistake and, workload permitting, provide an opportunity to re-attempt the procedure. If the flight will be discontinued, the controller must remove any remarks from the pilot's flight plan and clear the "PRP" scratchpad entry.

Submitting the Rating

Pilots that do not successfully complete PRP flights will be informed of their mistake by the controller monitoring the pilot at the time. Thus, only pilots that arrive at their destination with "PRP (flight number)" remaining in the "Remarks" section of the flight plan, and the "PRP" scratchpad entry, have passed.

The last controller to have contact with a PRP pilot is responsible for submitting the rating through a form found on the [Controller Resources](#) page of the ATC Hub. On the form, enter the

⁵ This scratchpad entry takes the place of the typical approach-related scratchpad entries. However, it is only required to be present when a handoff takes place. If a controller wishes to clear this remark or use a different remark while the pilot is being tracked, that is permissible. However, the "PRP" scratchpad entry should be re-inputted before a radar or verbal handoff is initiated.

pilot's name and the flight the pilot completed. Accurate entry of the pilot's name is important to ensure the rating is attributed to the correct person. Once the entry has been made, remove the "PRP" scratchpad entry.

Weather Settings

Pilots are encouraged, but not required, to use real-world weather settings.

All controllers shall issue weather report and control airports on the basis of real-world reported METARs. In the event that a pilot requests to depart VFR in IMC, first inform the pilot of the weather conditions.

N99103, Nantucket Tower, the airport is currently under IFR conditions. Visibility is ½ mile and the ceiling is 500' overcast. Confirm you would like to proceed VFR?

If the pilot still requests to depart, permit the departure, and then provide IFR separation between that aircraft and any arriving or departing IFR or SVFR aircraft.

Notices to Airmen (NOTAMs)

NOTAMs can be simulated for the controller's primary airport, and optionally for other airports in the airspace. However, only relevant NOTAMs that can be simulated should be forwarded to pilots. Runway closures, approach restrictions, or airspace changes are examples of NOTAMs that should be simulated. Items such as "non-standard hold short markings" or "missing hold short sign" should not be included.

Relevant NOTAMs shall be included in the facility's ATIS and briefed verbally amongst controllers. NOTAMs can be searched [online](#).

In the event a pilot requests to operate contrary to a NOTAM, first advise the pilot of the NOTAM. If the pilot still requests to continue, then allow the operation.

Temporary Flight Restrictions

Temporary Flight Restrictions (TFRs) are restrictions on the use of airspace put in place by the FAA for various reasons including special events, emergencies, disaster relief, VIP movement, or flight hazards. The size, shape, altitude, duration, and associated restrictions of a TFR will vary based on the type of TFR and the specific requirements of the event or movement.

TFRs are not simulated on VATSIM, and controllers must not restrict airspace or procedures because of a TFR. However, controllers should be familiar with any TFRs in their airspace.

Operating Hours

Operating hours of local facilities are not simulated. Top-down service shall be available at any time controllers are online, workload permitting.

Transponder Codes on the Ground

Some VATSIM ATC clients allow controllers to view an aircraft's transponder status and/or squawk code while on the ground. However, this is not always realistic.

At airports where the following note is present on the Airport Diagram (BDL, PVD, and BOS):

ASDE-X in use. Operate transponders with altitude reporting mode and ADS-B (if equipped) enabled on all airport surfaces.

It is recommended controllers [configure a ground radar as shown in this post](#). Ground controllers will be required to ensure the aircraft's transponder is on Mode C, and the aircraft is squawking the correct code, before the aircraft is issued a frequency change.

At all other airports, Ground controllers should assume the transponder status and code is not visible and shall not provide instruction about transponder status or code until the aircraft is observed on airborne radar.

Simulated Emergencies

Emergencies: Squawk Code 7700

Controllers have the discretion to accept or deny an emergency based on workload and the quality of the overall simulation experience. In general, realistically-simulated emergencies should be allowed provided the impact to other pilots is minimal. However, an emergency that will disrupt the overall simulation environment or that takes place in a high workload scenario such as an event should not be permitted.

CJA211, unable emergency at this time due to workload. Please cancel the emergency or disconnect.

When a simulated emergency is authorized, provide maximum assistance to the aircraft, and enlist the services of adjacent facilities as required. Obtain:

- Aircraft identification and type (this can be gathered from a flight plan or datablock)
- Nature of the emergency
- Pilot desires

Once initial actions are taken (e.g., vectoring the aircraft toward the airport), obtain other pertinent information as necessary, including:

- Fuel remaining in time or pounds
- Number of souls on board

Lost Communications: Squawk Code 7600

In the event of lost communications, use your discretion as to how you wish to proceed. Texting the pilot is always possible; however, it may also be worth the learning experience to simulate proper lost communications procedures.

If the pilot can hear you, but not reply, continue giving instructions and ask the pilot to confirm each instruction by squawking “ident”.

If two-way radio communications are lost, the standard assumption is that the pilot will continue on the filed flight plan. Review applicable STARs for lost communications procedures and protect the airspace surrounding the aircraft as best as possible until the aircraft is on the ground.

Hijacking: Squawk Code 7500

Simulated hijacking is not permitted. If an aircraft calls in simulating a hijacking, advise the aircraft to terminate the situation immediately, and call a supervisor as required.

Workload Management

IFR workload management is ultimately left to the discretion of the controller. However, it is recommended that CTR provides service using the following priority:

- Provide full enroute services in Class A airspace
- Provide full top-down service to the level of the next low controller for all Class B airspace
- Provide IFR service for all Class E airspace
- Serve Class C airspace
- Provide full top-down service down to the level of the next lower controller for all Class D airspace/airports, on a workload-permitting basis

Quality of air traffic control services is paramount with vZBW. In the event that workload becomes, or is predicted to become in the near-term, overwhelming, Center controllers should:

- Provide services based on normal duty priority (e.g., provide separation services before providing approach clearances before providing local services, etc.)
- Attempt to open a sector split with another Center controller or add subordinate TRACON controllers, as needed
- Shed workload by ceasing to provide services that are indicated as “workload-permitting” above at the lowest possible level (e.g., Pilot Ratings Program, reduce clarity of taxi instructions at a Class D airport, terminate service for a Class D arrival when the aircraft is approaching a final approach fix and would otherwise normally be cleared to land, then the same for Class C, etc.).

- Discontinue provision of additional services, such as VFR flight following and services to VFR aircraft, with a preference towards providing required separation services between IFR aircraft
- As required, implement traffic management initiatives, such as enroute holding, miles or minutes in trail, reroutes, and altitude capping to reduce workload

Operating with Overlying Controllers Offline

Occasionally local controllers (Ground or Tower) will be online without an overlying radar controller. In those scenarios, some adjustments must be made to standard operations.

Clearance Delivery

IFR clearance phraseology remains the same whether or not there is an overlying radar controller. However, the aircraft should be informed of the UNICOM frequency instead of the departure frequency in the clearance. SIDs (vector and pilot navigation) may still be assigned.

Delta Three, cleared to the Boston airport via the Bradley # departure, then as filed. Maintain four thousand; expect one one thousand one zero. minutes after departure. Departure offline; UNICOM on one two two point eight. Squawk two three two four.

Ground

When operating Ground control without an overlying local or radar controller, identify a departure runway and assign departing aircraft that runway. Ground may not refuse a pilot's request to depart from any runway.

Consider that aircraft may be arriving on any runway. Use your own situational awareness, along with information from the radar client, to identify potential traffic conflicts and provide services to pilots.

As required, Ground may authorize aircraft to cross runways. If an aircraft is observed to be inbound toward a runway that must be crossed, only issue the crossing instruction if the departure can be clear of the runway before the arrival has reached a 5nm final.

Tower

When no overlying radar controller is online, maintaining the ATIS is imperative so that IFR arrivals can navigate to the correct final approach course. IFR arrivals and departures are handled the same way: for arrivals, identify yourself, provide the wind, and give the appropriate clearance; for departures, clear the aircraft for takeoff with heading instructions where necessary. There remains no need to radar contact IFR departures or arrivals.

N322CF, wind 210 at 5, fly runway heading, Runway 24, cleared for takeoff. (Then), N2CF, leaving my airspace, no further ATC online, frequency change to UNICOM is approved (as required: UNICOM frequency).

IFR arrivals may call you outside of your airspace requesting vectors to final. You should treat this scenario as an opportunity to educate the pilot as to the correct procedure and also to encourage them to land on the correct runway. Use the following phraseology:

CJC4955, no radar controllers are online. As the Tower controller, I am unable to provide you with vectors to final. Per the ATIS, Runway 3 is active. Call me between a 5-10nm final. Frequency change back to UNICOM is approved.

Approach/Departure

While IFR departures when no overlying Center controller is online are normally quite straightforward (give the normal instructions, instruct the aircraft to climb to your ceiling, then switch the aircraft to the advisory frequency), some IFR arrivals may call late, early, or well above your airspace because TRACON boundaries are often not available to pilots.

If Center is offline, send an inbound aircraft a “contact me” when the handoff would occur.

In the case that a pilot calls you well outside of your airspace or thousands of feet above it, instruct the pilot to “proceed at your discretion” and issue a descent instruction as necessary. Have the pilot continuously monitor your frequency and advise the pilot when you notice the aircraft enter your airspace, or give the pilot a specific reporting point.

AWE45, you are currently outside of my airspace. Descend at your discretion to maintain 11,000 at or before Providence VOR, report crossing Providence.

It is not acceptable to simply state “you are outside of my airspace, call me when you are entering”, or to say “you are outside of my airspace, I cannot provide you with vectors”.

IFR Aircraft Entering/Departing Controlled Airspace

Aircraft may file flights into or out of controlled airspace. Consequently, some compromises with respect to realism must be made when handling an IFR arrival that departed from outside of controlled airspace, or for an IFR departure that leaves controlled airspace.

For IFR arrivals from uncontrolled airspace, provide the aircraft with a squawk code and then radar contact the aircraft, making reference to a specific VOR or waypoint along the aircraft's flight plan and to confirm the altitude. Treat the aircraft normally thereafter.

AAL234, Boston Center, squawk 2532; (then), American 234, radar contact one zero miles west of JFK, maintain FL240.

For IFR departures into an airspace where there are no controllers online, treat the aircraft normally until the aircraft reaches your boundary. Then, advise the aircraft that the adjacent facility is offline, and to monitor the advisory frequency.

UAL2, New York Center is offline, radar services terminated, frequency change approved.

Time Compression

Time compression is allowed per VATSIM policy, at controller discretion. It is completely up to the controller on if they want to allow it, but before deciding to allow it, keep in mind that if a pilot is using time compression, they will be harder to vector. Ensure that if a pilot is using time compression that they will not disrupt other pilots and that they will be at 1x speed prior to the boundaries of ZBW airspace. Controllers may tell a pilot to end time compression at any time.

Requests to Leave the Frequency

Pilot requests to temporarily leave the frequency may be granted at the discretion of the controller. Ensure the request will not conflict with any instructions that would be necessary (e.g., handoffs, descents, etc.). Approve requests to temporarily leave the frequency as follows:

AAL391, approved as requested, advise back on frequency, no longer than (time) minutes.