General

Standard Operating Procedures

Version V

Effective: 7 September 2026

Purpose: This document prescribes general facility procedures applicable to all Boston Virtual ARTCC controllers online.

Warning: This air traffic control procedural document is provided for virtual/online air traffic control provided by Boston Virtual ARTCC. **It is not for real-world ATC or aviation use.**

Authorized Use: These procedures are property of Boston Virtual ARTCC, Inc. and may only be used as and when authorized by the Boston Virtual ARTCC Administration Team.

For more information about Boston Virtual ARTCC or to join our community as a virtual pilot or air traffic controller, visit **bvartcc.com**.

Chapter 1: Administration

CHANGE

1.1. Changes from Previous Version

Changes from the previous version are listed below and emphasized with blue shading throughout the document.

Change 1:	**Clarifies the Regaining Currency Procedure section.**
Section(s):	4.5.2
Background:	Updates have been made to help controllers removed from the roster due to currency better determine how to be reinstated.

Change 2:	**Use of Cross-Coupling (XC) with CRC's Voice Switch.**
Section(s):	4.7.5
Background:	With CRC version 2.18.0, frequency cross-coupling will be enabled by default. This section has been re-written to reflect that functionality, and provide added guidance on how the XC and XCA options work.

1.2. Table of Contents

This document is the primary guiding document for air traffic controllers at Boston Virtual ARTCC (BVA, also referred to as the ZBW ARTCC).

Chapters 2-4 explain the administrative procedures that apply to our community.

Chapters 5-11 identify simulator-specific procedures and/or deviations from real-world FAA 7110.65 procedures applicable at all BVA facilities.

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Chapter 2: Introduction

2.1. Welcome to BVA

Boston Virtual ARTCC (BVA) is an integrated community of pilots and air traffic controllers operating on the VATSIM network.

Members can join the community in one of two ways:

1) By completing the pilot entrance exam and applying for membership via our website, bvartcc.com. Members who join in this way are **pilots**.
2) By requesting to join the ZBW ARTCC as a home, visiting, or transferring controller through VATUSA. Members who join in this way are **pilots and air traffic controllers**.

If you are a BVA pilot 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! Either way, as a **pilot and air traffic controller,** you also have full access to the resources available to our member **pilots**.

Visit About BVA to learn more about the pilot side of the community.

2.2. Air Traffic Control Training Program

BVA provides training and certifications for air traffic controllers who are assigned ZBW as their "home" facility within VATUSA. We also support controllers who wish to obtain "visitor" access to control in our airspace.

ATC training represents a major investment in you by the volunteer ATC Training Staff members who will help shape your journey to become a controller here. 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 radar positions like Approach, and a further 6-12 months refining your controlling to work Boston Center.

Information about our training program for new/home controllers is included in **Chapter 3**. Information for Visiting and Transferring controllers is provided on our website.

2.3. Standard Operating Procedures & BVA Documentation

2.3.1. BVA provides written documentation governing air traffic control procedures within our airspace. The following document types are published:

Document Type	Example	Description
ATC Training Staff	Training Staff Guide	Procedures applicable to members of the ATC Training Staff.
General ATC Procedural Documentation	ATC Handbook General SOP	Procedures applicable to all virtual air traffic operations within our airspace.
Specific ATC Procedural Documentation	KBGR ATCT SOP A90 SOP	Procedures specific to a particular facility.
Quick Reference Documents	Separation Quick Reference	Documents designed to provide timely access to critical information.
Letters of Agreement	ZBW-ZNY LOA	Agreed-upon procedures for the transfer of aircraft between neighboring facilities.
OTS Standards	Class C Ground OTS Standards	The expected standards for training at the specified level.

2.3.2. ATC documents are accessible via the ATC Hub's Controller Resources page. This page also contains vATIS files, OTS standards, and other helpful ATC resource documentation.

2.3.3. The table below provides general guidance on where to find information across various documents:

For…	Use…
• ATC policy and administrative procedures.	General SOP
• Procedures general to all BVA facilities that are applicable within or unique to the online environment.	General SOP
• Procedures general to all BVA facilities that are derived from real-world FAA ATC procedures.	ATC Handbook
• Procedures specific to controlling at an airport or TRACON within BVA airspace.	Facility-Specific SOPs
• Procedures specific to Boston Center.	Boston Center SOP
• Recommendations for Non-ATC Client Software.	Additional Software Guide

2.3.4. **Order of Precedence:**

2.3.4.1. Documentation provided by BVA is designed to conform with VATSIM and VATUSA policy and real-world FAA air traffic procedure.

2.3.4.2. In the event of a conflict between a BVA procedure and a procedure from any other third-party source, including VATSIM, VATUSA, or the FAA, the BVA procedure will take precedence. Controllers are encouraged to report instances where BVA procedure differs using this forum thread.

2.3.4.3. In the event of a conflict within BVA documentation:

2.3.4.3.1. Active Controller Bulletins override published documentation.

2.3.4.3.2. Facility SOPs take precedence over the General SOP.

2.3.4.3.3. T he General SOP takes precedence over the ATC Handbook.

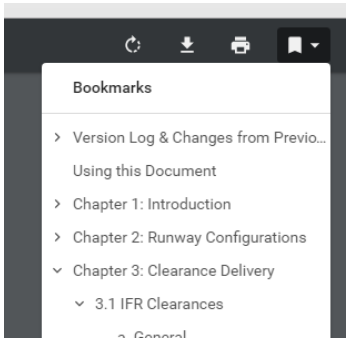
2.3.4.4. BVA documentation is written in “top-down” form to match network coverage procedures. Thus, a Ground controller must be familiar with SOP sections for Ground and Clearance Delivery. A Tower controller must be familiar with Local, Ground, and Clearance Delivery procedures.

In general, information will only be presented once in a given document, in the section corresponding to the “lowest” controller that might need it.

Controllers will need to reference information from the Facility SOP (where published), General SOP, and ATC Handbook regularly.

2.3.5. **Navigating Documents:**

2.3.5.1. Each SOP contains bookmarked headings for ease of navigation. Within your PDF viewer, use these bookmarks to navigate to the desired section:



2.3.5.2. The search feature (CTRL+F) will also work on all PDF documents.

2.3.6. **Referencing Documents:**

2.3.6.1. When referencing documentation, refer to the numbered paragraph. For example, this paragraph would be referenced “2.3.6.1”.

2.3.7. **Phraseology Examples:**

2.3.7.1. Examples of phraseology may appear in-line using blue formatting (e.g., **“DAL31”**), or as a separate paragraph:

> DAL31, Boston Ground, taxi to the ramp via E.

2.3.7.2. In the ATC Handbook only, phraseology examples will normally be written as spoken (e.g., **“DAL31”** will appear as **“Delta thirty-one”**), except where readability is enhanced by using a shortened format.

2.3.7.3. In other BVA documents, phraseology examples will be written to make them as easy to read as possible (i.e., **“DAL31”** would be used).

2.3.8. **Procedure Examples:**

2.3.8.1. To reduce the need for updates, SIDs and STARs will be referenced with a # character in place of the number. For example, instead of “LOGAN4”, the SID at KBOS would be referred to as “LOGAN#”.

2.3.9. **Changes to Documentation:**

2.3.9.1. ATC documentation changes are published on the Controller Resources page of the ATC Hub, on the forums, and in Discord. A detailed description of each change may be found in **Section 1.1** of every document.

2.3.9.2. To report ATC document errors, please use the ATC Document Error Notification thread on the forums. For suggestions or changes, please use the ATC Change Suggestion and Discussion thread.

2.4. Administration Team

The Administration Team (A-Team) runs BVA, alongside other volunteers from across the organization. The A-Team is responsible for the entire membership experience, including both pilot and air traffic control components.

Controllers report to the BVA Air Traffic Manager, who in turn reports to leadership at VATUSA and VATSIM.

A list of A-Team Members and contact information may be found on our website.

2.5. Feedback & Questions

2.5.1. We love feedback! If you have general comments or suggestions for the community, reach out directly to an A-Team member, post in `#the-water-bubbler` channel of our Discord, or use the contact form on our website to reach us; anonymous options are available.

2.5.2. For questions about an ATC document or procedure:

2.5.2.1.1. If you would like an answer only from a member of our ATC Training Staff, type `/ask` along with your question in the `#ask-the-training-staff` section of Discord; or,

2.5.2.1.2. Post your question in `#the-water-bubbler`; any controller will be able to answer; or,

2.5.2.1.3. Reach out directly via email or message.

Chapter 3: Air Traffic Control Training Process

3.1. Introduction

Advancing through the ATC program requires commitment to training, self-study, and availability. You will be expected to connect to the network for training sessions and self-monitored training regularly throughout the process. Once certified, controllers must provide ATC on the network as described in our Currency Policy (see **Chapter 4**).

Before you begin the training process, please take a moment to consider your availability, commitment, and level of interest. You are about to embark upon a multi-year journey that is incredibly rewarding, but entirely commensurate with the work you put in. Are you ready for the challenge? And is now the right time to get started?

3.2. Acceptable Conduct

Air traffic controllers are the key frontline service providers of VATSIM and BVA. 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.

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

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

All controllers agree to be bound by and comply with BVA's Terms of Use, Privacy Statement, and Shared Member Expectations. Controllers must also be aware of and comply with VATSIM policies such as the Code of Conduct. Additional air traffic control policy may be found in **Chapter 4**.

3.3. ATC Training Staff

3.3.1. BVA's training staff is comprised of Mentors and Instructors. You can find a current list of instructors and mentors on the ATC Hub.

3.3.1.1. **Mentors** are BVA controllers authorized to issue most Ground and Tower Certifications. Mentors are promoted by the BVA Training Administrator based on their skill, experience, and teaching ability.

3.3.1.2. **Instructors** are BVA controllers authorized to issue all ATC Certifications and conduct training at all levels. Instructors are promoted by VATUSA based on recommendations from BVA's Training Administrator.

3.3.1.3. ATC Mentors and Instructors report to the Training Administrator, an Administration Team role dedicated to ATC training.

3.3.2. Experienced BVA controllers are invited to review **Section 4.6** for information on joining the ATC Training Staff.

3.4. Observing

3.4.1. Controllers are encouraged to learn from others by watching their sessions, listening to coordination in TeamSpeak, and asking questions.

3.4.2. Anyone is permitted to observe on the network. When using CRC to connect, set your Role to 'Observer'.

3.4.3. Observers must not commence actions that would be restricted to a controller.

3.5. Ratings & Certifications

3.5.1. **Ratings** are issued by VATSIM (through VATUSA for our airspace) and include S1, S2, S3, C1, I1, and I3. VATSIM air traffic controllers achieve Ratings through ATC training provided by a facility like ours and completion of a course and exam administered by VATSIM (through VATUSA). Ratings are network-wide and may be transferred across facilities and regions.

3.5.2. **Certifications** are issued by BVA and apply only within our facility's airspace. A Certification is issued upon successful completion of an "Over-the-Shoulder" or OTS session with at least one member of BVA's ATC Training Staff. A Certification is valid for a controller holding the Associated Rating as shown in the tables below.

3.5.3. The following Certifications are available for Class C and D airports:

Certification	Associated Rating	Class C and D Airports			
		Clearance	Ground	Tower	Approach
Class C Ground	S1	X	X		
Class C Tower	S2	X	X	X	
Class C Approach	S3	X	X	X	X

3.5.4. The following Certifications are available for Class B airports (KBOS):

Certification	Associated Rating	Class B Airports (KBOS)			
		Clearance	Ground	Tower	Approach
Class B Ground	S1	X	X		
Class B Tower	S2	X	X	X	
Class B Approach	S3	X	X	X	X

3.5.5. The Center Certification may be achieved by Class B Approach controllers.

3.5.6. **Student Authorizations** apply to Class B airports (KBOS) and permit a controller who is close to meeting Class B Certification standards to control the position without supervision to gain additional experience.

3.5.6.1. In most cases, controllers training for Class B (KBOS) positions will be issued a Student Authorization before Certification.

3.5.6.2. Controllers holding a Student Authorization may control without supervision for a period of 60 days from the time the authorization is issued. Student Authorization controllers are be restricted from operating Class B positions during events as described in **Chapter 4**.

3.5.6.3. During or after the 60-day period, the controller will request training for the Class B Certification and complete an OTS. A student in training or with a pending training request may continue to exercise the privileges of the Student Authorization beyond the 60-day period.

3.5.6.4. A Student Authorization may also be extended by agreement of the Air Traffic Manager and Training Administrator for students not in training. Extension requests may be made by emailing atm@bvartcc.com and ta@bvartcc.com, and will be considered on a case-by-case basis.

3.5.7. Ratings, Certifications, Student Authorizations, and training reports/records are stored by BVA and transmitted to VATUSA and VATSIM.

3.5.8. Following completion of an OTS, the corresponding Certification and any Associated Rating will be assigned. If a Certification or Rating is missing more than 48 hours after completion of an OTS, the controller may email ta@bvartcc.com for a status update.

3.5.9. A **Temporary Certification** allows a controller to, for a specified period of time, work a position within ZBW for which they do not hold a Certification. This policy is intended to be used only on rare occasions such as events like Tea Party or in situations requiring VATUSA Ace Team coverage.

3.5.9.1. A Temporary Certification may be issued by any Instructor.

3.5.9.2. Controllers do not need to be on the BVA Roster to receive a Temporary Certification.

3.5.9.3. The Temporary Certification may be issued verbally or in writing. The communication must include an “end time” at which the Temporary Certification will expire. Controllers issued a Temporary Certification may not control beyond the specified expiration time.

3.6. Types of Training

Controllers will encounter the following types of training.

3.6.1. **Self-Study**, which comprises most of the training a controller will undertake. It includes reading SOPs and training material, preparing for exams, researching and completing test corrections, and required preparation for other training.

3.6.2. **Written Exams:**

3.6.2.1. **BVA Exams** are administered through the ATC Hub. These include the SOP Exam and procedural exams that must be completed prior to undertaking practical training for each Certification. BVA Exams may be requested using the "Request Exam" link in the "Exams" menu. Exams may be completed as follows:

Controller's Rating	Controller May Request
Observer	• General SOP Exam • Clearance/Ground Exam
S1	• All Observer Exams • Advanced Clearance/Ground • Local • Advanced Local
S2	• All Observer and S1 Exams • Approach • Advanced Approach
S3	• All Observer, S1, and S2 Exams • Center

3.6.2.2. **VATUSA Courses and Exams** are required to achieve Ratings. VATUSA Exams will be assigned to controllers as required.

3.6.2.3. All exams are 'open book' and are designed to be completed with the aid of reference material. Students are permitted and 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. A demonstrated lack of integrity when completing exams could result in immediate roster removal.

3.6.2.4. **Test Corrections:**

3.6.2.4.1. Regardless of exam score, all students are required to post Test Corrections for any questions that were not answered correctly on BVA Written Exams.

3.6.2.4.2. A BVA Written 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.

3.6.2.4.3. Test Corrections help the student identify gaps in understanding, and help our community improve reference material.

3.6.2.4.4. Test Corrections are to be completed in the ATC Hub through the Exam Center; specific instructions are provided in the Exam Center.

3.6.2.4.5. Students completing Test Corrections are encouraged to be patient while members of our training staff review your work. If it has been more than 2 days since you last submitted a correction and you have not received a reply, email the Training Administrator to inquire about your results. Refrain from inquiring about the approval status of Test Corrections in Discord.

3.6.2.4.6. Test Corrections are not required for VATUSA Exams.

3.6.2.5. The passing score for all exams is 80%.

3.6.2.6. Students who do not achieve the passing score of 80% on a BVA Exam are required to wait seven days after Test Corrections are approved before a subsequent attempt may be made.

3.6.2.7. Students who do not achieve the passing score of 80% on a VATUSA Rating exam may be required to wait before a subsequent attempt.

3.6.3. **Practical Training:**

3.6.3.1. Practical training will be conducted by at least one member of BVA's ATC Training Staff via audio and other multimedia tools. A webcam is not required; a controller will not be required to share outgoing video.

3.6.3.2. Training may take the form of a question-and-answer "classroom" session, a simulated network environment referred to as "Sweatbox", or on the live network with actual traffic. The ATC Training Staff member you work with will determine which environment your training will take place in. In general, you can expect to see a mix of on-network and simulator sessions.

3.6.3.3. You may only be connected to any Sweatbox server with approval of a member of the ATC Training Staff.

3.6.3.4. The student will be advised via email when a training assignment has been made. The student must reach out to the assigned ATC Training Staff member via email and coordinate timelines and availability. Students are not permitted to approach Mentors or Instructors for unsolicited training; only reach out to your assigned Mentor or Instructor, via email, when your training assignment is received.

3.6.4. **Practical Exams (OTS):**

3.6.4.1. Certifications are issued after successful completion of OTS exam.

3.6.4.2. 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.

3.6.4.3. Following the completion of the OTS, the Training Staff Member will advise the student of the outcome and subsequent training steps.

3.7. Initial ATC Training Flow: Home Controllers

This section outlines the training process for controllers joining BVA through VATUSA as new (or returning from inactivity) S1s, who have completed VATUSA's Basic ATC/S1 Exam and requested to join the ZBW ARTCC.

Controllers who are requesting to visit our airspace, or who wish to transfer from another facility, are encouraged to review this information for Visiting and Transferring Controllers.

Step 1: Addition to the ATC Roster

3.7.1. A controller will normally be added to the ATC Roster within approximately 72 hours of requesting to join the ZBW ARTCC through VATUSA. Exact timing can vary based on availability of our volunteer staff members. New controllers receive an email when they are added to the roster.

Step 2: Completion of SOP Exam

3.7.2. When a new controller has been added to the roster, the next step is to thoroughly review the **General SOP** (this document).

3.7.3. Once a controller is familiar with this document, they will request and complete the SOP Exam. This exam tests knowledge of our air traffic control policies.

The exam is considered complete once the student achieves an 80% or greater score and completes Test Corrections.

Step 3: Completion of Class C Ground Exam

3.7.4. Upon completion of the SOP Exam, including any required Test Corrections, a home controller will request and complete the Clearance/Ground Exam. This exam tests knowledge of Class C and D Clearance and Ground procedures. Controllers are encouraged to read and reference the **ATC Handbook**, which provides the background knowledge for the exam.

The exam is considered complete once the student achieves an 80% or greater score and completes Test Corrections.

Step 4: Request Class C Ground Training

3.7.5. Once a student has completed the SOP Exam, Clearance/Ground Exam, and the associated Test Corrections for each exam, the next step is to request training. Use the Request Training link in the "Training" menu of the ATC Hub. The ATC Hub's Training Center provides an estimate of the timeline to receive a training assignment.

3.7.6. During the interval between the training request and being assigned a member of the ATC Training Staff, students will be directed to self-study videos to help prepare for their initial session with a Mentor or Instructor. This information will be sent via email upon receipt of a training request.

Step 5: Complete Practical Training

3.7.7. The ATC Training Staff member will work with the student through to the Class C Ground OTS, the new controller's first Certification. This typically takes between 5-10 training sessions, though timelines vary based on the student's level of experience, preparation, and availability.

3.7.8. Following the OTS, the student will be issued the VATSIM S1 Rating and the BVA Class C Ground Certification. These allow the student to begin working live traffic on the network immediately. The student will also be provided with an on-network "orientation session" following their OTS that covers practical, on-network elements that cannot be tested in a Sweatbox environment.

Step 6: Gain On-Network Experience

3.7.9. The initial Class C Ground Certification is a "license to learn". Because almost all initial training takes place in a simulated network environment, controllers will experience differences as they handle actual traffic and coordinate with other controllers.

3.7.10. Prior to continuing to the next step, controllers should feel confident in their ability to handle Clearance Delivery and Ground responsibilities at Class C and D airports with up to five aircraft on the ground. Although there is no minimum time requirement, it is recommended that controllers get between 10-20 hours of on-network experience before moving to the next step.

3.8. Subsequent Training

3.8.1. Once a controller has received at least one BVA Certification, subsequent training can happen at any time. There is no minimum interval required.

However, controllers should request training only once they have completed the prerequisite exams and have attained a reasonable level of proficiency working their existing position. For example, a Class C Tower controller should have worked enough time to become proficient before requesting or beginning Class B Tower Training.

For each training request, the TA will evaluate the controller's recent time on position and readiness to complete training prior to assigning training.

3.8.2. Following initial training, a controller may either:

- Request training for Class B Ground; or,
- Request training for Class C Tower.

Most controllers choose to train as follows:

Class C Ground → Class B Ground (Student) → Class B Ground → Class C Tower → Class B Tower (Student) → Class B Tower → Class C Approach → Class B Approach (Student) → Class B Approach → Center

This recommended training flow is based on feedback and historical student success. However, controllers may choose to complete Class C Ground, Tower, and even Approach Certifications before beginning Class B training.

3.8.3. A VATSIM Course and Rating Exam, administered through VATUSA, is required for a controller to obtain the S2, S3, and C1 Ratings. A student will be assigned the course when their corresponding training request is approved:

VATSIM Rating Course	Corresponding Training Request
S2	Class C Tower
S3	Class C Approach
C1	Center Certification

Students are encouraged to complete the course and exam as soon as possible. The Rating will only be issued after a successful OTS and when the VATUSA Course and Rating Exam has been completed.

Chapter 4: Facility Administration

4.1. General Administrative Policies

4.1.1. Working with Pilots & Fellow Controllers

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. Controllers work with others on our team, and the pilots on the network, to be excellent to and for each other.

4.1.2. Pilots Requiring Additional Support

Treat pilots on your frequency as guests. Your aim is to help and educate when opportunities arise, especially for those pilots who are obviously new to the network or to flight simulation. Simultaneously, our role is to provide realistic, professional, enjoyable environments for all pilots on our frequencies.

Pilots are expected to conform to VATSIM's policies, including the Code of Conduct. When a pilot's actions create a negative impact for others, take action to improve the situation. To do so, consider the following:

1) Is the pilot making an effort – can we help by slowing down or simplifying?
2) Could the situation be defused by holding or delaying the pilot?
3) Could the pilot be transferred to a separate frequency and managed individually?
4) Can another controller (or an offline controller) help manage the situation?
5) Will giving instructions textually help?

If the pilot is not making an effort to improve, is non-responsive, or is being intentionally disruptive, and an immediate response is necessary, use the `.wallop` command to contact a VATSIM Supervisor (you can also left-click a radar target while holding the "ALT" key). When sending a `.wallop`, include enough information so the Supervisor can work on it immediately:

```
.wallop ABC123 is in my airspace, not contacting ATC and not replying to multiple requests for contact. First contact request sent at 0100z. No immediate conflict.

.wallop 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.
```

For situations that do not require immediate supervisor intervention, consider reaching out to the pilot. You can politely speak to them on frequency, send a direct message, or use one of BVA's feedback aliases (see **Section 5.17**). Pilots who appear interested in the community may be directed to our website to apply; this makes them eligible to participate in Wings Over New England.

If one-on-one conversation is insufficient, controllers may file a Safety Report (SR), which is designed for post-scenario follow-up. Each SR is logged, reviewed, and addressed, with resolutions up to a referral to the VATSIM Supervisor Department.

4.1.3. Conduct while Flying

While flying in another controller's airspace, refrain from 'controlling yourself' or challenging instructions on frequency. It is not permissible to ignore instructions or "suggest" unsolicited headings, altitudes, or other instructions.

Regardless of your experience level, controllers should receive the same deference you would expect for a real-world controller.

4.1.4. Providing Feedback to Other BVA Controllers

BVA encourages controllers to share their knowledge with others; experience has shown the most effective learning can come from one's peers. Following a session, or while a controller is not busy, it is entirely appropriate to reach out in private:

> Hey, I was listening to your frequency earlier and wanted to share some feedback. Would you have a couple minutes for a quick conversation?

Of course, feedback is a two-way street, and being receptive and empathetic is key to sharing feedback effectively. Keep BVA's Shared Member Expectations in mind.

If a controller is unreceptive to feedback, or if you feel a scenario merits A-Team follow-up, submit a Safety Report, which will then be reviewed by the A-Team.

Many VATSIM facilities have a process designed for pilots to share input about controllers. At BVA, member and non-member pilots can use our Feedback Form. Feedback submitted through this form is published on our forums and/or brought to individual controllers as the situation dictates. The pilot feedback form is designed for non-controller pilot use. As a BVA controller, even if your feedback relates to a flight you were performing in our airspace, provide your feedback directly to the controller or submit a Safety Report rather than using the pilot feedback form.

4.1.5. ATC Timetable

The ATC Timetable is designed to help pilots understand when and where controllers will be online, and for controllers to collaborate for coverage. Controllers are encouraged to optionally sign up for positions they intend to staff outside of event staffing (see the next section). ATC Timetable entries appear on the homepage under the “Expected ATC Coverage” section.

An ATC Timetable sign-up does not constitute a “booking” nor guarantee priority on position. Positions are occupied solely on a “first come” basis.

Controllers on an event roster should not also create an ATC Timetable sign-up. When appropriate, the Events Coordinator may cross-post event rosters to the ATC Timetable.

4.1.6. Streaming & Recording

In accordance with VATSIM policy, controllers may record, share, or stream Audio for VATSIM and on-network ATC frequencies. However, unless prior consent is received from all participants, streaming or recording sweatbox scenarios, TeamSpeak or Discord conversations, or other non-public discussion is prohibited. Be cautious with what you share and remember that the norms listed in **Section 3.2** are especially applicable when you are broadcasting or interacting with the public. We recommend following our Additional Software Guide to ensure only the intended audio sources are shared on streams.

4.1.7. Senior Controller (C3) Designation

Controllers who are recognized under BVA’s Community Recognition Program and who meet VATUSA eligibility requirements for the C3 (Senior Controller) designation may be nominated by the Administration Team in accordance with VATUSA policy.

Further details regarding the Community Recognition Program, including eligibility and nomination considerations, are outlined in the standalone Community Recognition Program Policy.

4.2. Communication

4.2.1. **Email** is considered the official means of communication at BVA. Controllers must maintain a current email address using the Account Settings page.

4.2.2. The **website and forums**, accessible at bvartcc.com, may be used to post questions and contains pilot and ATC-oriented resources. The forums include threads to see ATC Resource updates, notify the A-Team of document errors, request changes to facilities files, submit timelapses, and more. Visit the Controller Talk subforum for more information.

4.2.3. The **ATC Hub**, accessible at atchub.bvartcc.com, is a central place for controllers to download vATIS files and documents, complete exams, request and complete training, review training reports, and sign up for events.

4.2.4. **BVA'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. Controllers use TeamSpeak for internal ATC coordination.

4.2.4.1. TeamSpeak connection information is posted on the Social page. The server is intended for members only. Controllers must not share the TeamSpeak server information with anyone outside of the ARTCC. On occasion, staff members may provide connection information to non-member guests of the ARTCC.

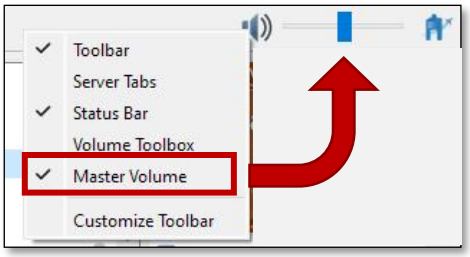
4.2.4.2. When you first connect to TeamSpeak, link your BVA account to assign appropriate ATC permissions as instructed via a message from "Boston John", our friendly TeamSpeak bot.

4.2.4.3. The 'sterile' air traffic control channels in TeamSpeak are intended for active controlling. 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.

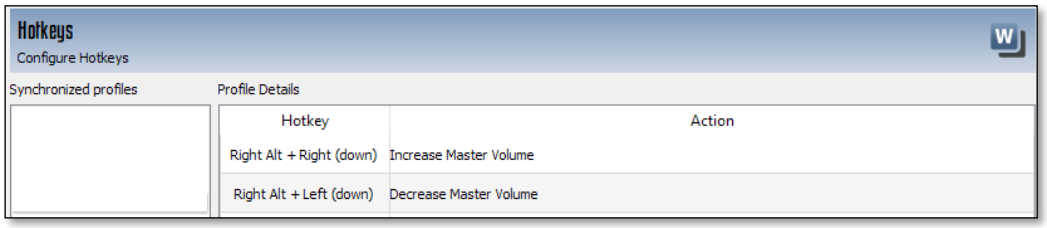
4.2.4.4. While activated on a position, a controller must insert the corresponding "TeamSpeak ID" from the Facility SOP in front of their nickname if not done automatically. If required due to nickname character limits, a controller will abbreviate their name. D-Side positions, or Instructors/Mentors conducting training must manually add [D], [I], or [M] as appropriate.

Examples: `[BOS LCW] Pat Curtin (CU)`, `[ZBW CON37] [I] J. Lovelace (LE)`, `[BOS ID] [M] Dan Goldring (GN)`.

4.2.4.5. Controllers should avoid muting incoming audio in TeamSpeak; this makes it impossible for other controllers to accomplish verbal coordination. Controllers may wish to enable the “Master Volume” slider:



Hotkeys may also be set for TeamSpeak volume adjustment:



4.2.5. **Discord** is available to all members. Along with its role as a social hub, controllers may use ATC-specific channels in Discord to coordinate staffing coverage, request assistance, ask questions, and more.

4.2.5.1. Controllers may join Discord from the Social page. Permissions will be assigned automatically. Optional notification roles are available to obtain through this page as well, such as when a new event is posted, an ATC position is staffed, or when a center controller uses the `/close` command.

4.2.5.2. The following commands are available for use in the `#staffing` channel:

Command	Variable(s)	Use	Example
/close	[position] [details]	Advise other controllers you will be closing.	`/close BOS_CTR at 2300 ET`
/request	[position]	Request help on a specified position. Will “@mention” all eligible controller roles.	`/request BDL_GND`

4.2.5.3. If you wish to try to arrange staffing or are advertising that you plan to close to encourage another controller to take over, use the `#staffing` channel. You may also use this channel to request immediate assistance due to current or expected traffic/workload. The Administration Team may also use this channel to request last-minute event support.

4.3. Events

BVA hosts a wide variety of events, from recurring local events like our Regional Circuit and GA Fly-In to hosting FNOs and Cross the Pond. We also respond to staffing requests to assist our neighbor facilities with events or in response to requests from pilots and virtual airlines. Events are posted on the ATC Hub.

During BVA events, it is recommended controllers avoid staffing positions at non-event airports. Opening an ATC position at a non-event airport can have the effect of reducing traffic at the scheduled event airport.

When you sign up for any event, you are making a commitment to be part of the event from beginning to end. Controllers who are late for briefings or who do not meet time commitments create problematic gaps in coverage. Regardless of event rules, controllers who create staffing challenges for the Events Coordinator may be subject to discipline, including loss of event sign-up privileges and lower priority for enlistment events.

Each event will be tagged with one of the following rules:

Event Rules	Open Signup	Enlistment	Staffing Required	Staffing Optional
Student Authorized Controllers Permitted	No	No	Yes	Yes
Rostering	Sign up for desired position	Sign up, position will be assigned	Sign up for desired position	Sign up for desired position
Roster Closes	24 hours prior	When enlistment ends	24 hours prior	No
Reserves Position	Yes	Yes	Yes	No
Events Policy Applies	Yes	Yes	Yes	No

4.4. Events Policy

4.4.1. Controllers who are signed up or rostered for an event must:

4.4.1.1. Be in TeamSpeak, ready to connect to the network, at the specified briefing time. If no briefing time is specified, the controller is expected to be ready to connect to the network no less than 10 minutes before the event start time.

Note: If a rostered controller is not in TeamSpeak as specified above, their position is considered open and the CIC will attempt to find a replacement.

4.4.1.2. Remain connected at the rostered position for the entire event, unless permission to leave early is received from the CIC and coordination has been completed with all adjacent controllers.

In an emergency situation in which permission from the CIC cannot be received in time, the controller must advise the Events Coordinator via email at events@bvartcc.com as soon as practical.

4.4.2. We recognize that plans and availability can change. The below sections apply to controllers who realize before an event begins that they are unable to participate for the entire duration of the event.

4.4.3. **For 'Open Signup' and 'Staffing Required' events:**

4.4.3.1. Up to 24 hours before, a controller can cancel their sign-up on the ATC Hub.

4.4.3.2. Within 24 hours, a controller unable to participate in the entire event must:

4.4.3.2.1. Attempt to find a replacement; and,

4.4.3.2.2. Email changes to administration@bvartcc.com no less than 60 minutes prior to the published start time of the event.

4.4.4. **For 'Enlistment' events:**

4.4.4.1. While the enlistment period is open, the controller must use the 'Cancel Rostering Request' ATC Hub button to cancel their request to control.

4.4.4.2. If the enlistment period has closed, the controller must email administration@bvartcc.com no less than 60 minutes prior to the published start time advising they are no longer available to participate as rostered.

Note: controllers should not solicit replacements for 'Enlistment' events.

4.4.5. **Events Policy Violations:** Controllers who repeatedly do not meet Events Policy expectations, including by repeatedly failing to meet commitments for 'Staffing Optional' events, may face suspension of their event privileges. Controllers who have their event rostering privileges suspended:

4.4.5.1. May control in events where an open position is available, but will not be permitted to sign up in advance; and,

4.4.5.2. Will only be assigned on Enlistment events if required.

4.5. Currency Policy and Roster Removal

4.5.1. Controlling aircraft is a skill that is lost if not consistently practiced. It is important to control on a regular basis to maintain proficiency. This policy is not written to preclude anyone from participating; however, maintaining currency and proficiency is vital to provide high levels of service to pilots.

Currency Policy. Controllers must activate a position for at least 3 hours every 3 months. Mentors and instructors may not include time spent training a student toward these requirements. In addition, controllers should be up to date with revisions to published SOPs and facility documentation.

In practice, currency is checked on the first day of January, April, July, and October. Controllers who have not controlled for at least 3 hours when currency is checked are subject to removal from the roster.

Extension requests for currency may be made via email to the ATM or DATM and may be approved on a case-by-case basis under unusual circumstances.

CHANGE 1

4.5.2. **Regaining Currency Procedure.** Controllers removed from the roster due to currency wishing to be reinstated may do so following the training plan below.

4.5.2.1. To rejoin the roster and regain Class C Certifications:

4.5.2.1.1. Request and complete the SOP Exam.

4.5.2.1.2. Request training for the highest Class C certification held previously and include the words “Returning Controller” in the ‘General Availability’ box. You will be assigned to a Mentor or Instructor who will conduct an informal re-certification session.

4.5.2.2. To regain Class B Certifications, once returned to the roster:

Former Certification	Regaining Currency Procedure
Class B Ground	• Complete the Advanced Clearance/Ground Exam • Complete a Class B Ground OTS
Class B Tower	• Complete the Advanced Clearance/Ground Exam • Complete the Advanced Local Exam • Complete a Class B Tower OTS, which must also cover sufficient Class B Ground procedure to satisfy a member of the Training Staff that the controller is competent to work Class B Ground
Class B Approach	• Become recurrent for at least Class B Tower • Complete the Advanced Approach Exam • Complete a Class B Approach OTS

Note: completion of exams includes completing associated Test Corrections.

4.5.3. **Returning Experienced Controllers.** A formerly active controller with significant network and ZBW experience may receive a customized training plan to regain currency. The following criteria will be used to bring returning experienced controllers to active status:

4.5.3.1. The controller must have, at one time, held a BVA Certification.

4.5.3.2. The controller must have significant experience controlling on the VATSIM network and/or have made significant contributions to BVA and/or VATSIM.

4.5.3.3. The Training Administrator must confer with two other Instructors, who must both agree that the controller's certifications should be re-issued without following the Regaining Currency Procedure published above.

4.5.4. **Leave of Absence (LOA).** Controllers who anticipate becoming inactive for a period should request a Leave of Absence (LOA). An LOA is requested by sending an email to the ATM or DATM and lasts for a period of 90 days. LOAs may only be issued to controllers holding a BVA Certification.

After 90 days have 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.

4.5.5. **Roster Removal.** 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. Removal may also result in referral to VATSIM DCRM.

4.5.6. **New Home Controllers** who have not obtained a BVA Certification 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 SOP Exam;
- Requested training/checkout within 30 days of their last initial exam;
- Scheduled a training session within 30 days of a training assignment;
- Completed a training session at least once every 30 days; or,
- Retained an active account with the VATSIM network.

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

4.6. Joining the ATC Training Staff

4.6.1. Experienced controllers are encouraged to apply to join the ATC Training Staff. Controllers may apply to become a Mentor if they:

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

4.6.2. Experienced Mentors will be selected for promotion to Instructor by the Training Administrator and VATUSA. Instructor Certifications require VATUSA approval.

4.6.3. Controllers who are interested in becoming Mentors should apply here.

4.7. Air Traffic Control Software

4.7.1. The Facility Engineer is responsible for Facility Files, including airspace maps, airport layouts, aliases, radio frequencies, ATIS configuration files, etc. Suggested changes should be posted on the Facility Requests forum thread.

4.7.2. vATIS is used to connect an ATIS to the network. Configuration files for vATIS are found on the Controller Resources page of the ATC Hub. Initially, controllers download and import the desired profiles, then restart vATIS. After this first download, ZBW-specific airport file updates are downloaded automatically.

4.7.3. Consolidated Radar Client (CRC) is the software used to provide ATC services within BVA airspace. Controllers may also use vStrips (flight strip management) and vTDLS (to issue textual clearances). Collectively, this suite of tools is known as vNAS. vNAS documentation is available on the vNAS website. vNAS configuration information is managed by the Facility Engineer

4.7.4. **Voice Switch** functionality within CRC is used to communicate with pilots. The alias `.lasttx` can be used to identify recent callsigns that have transmitted.

TRAINING TIP

With CRC, controllers can monitor multiple frequencies and can swap frequencies between headset and speaker devices. Volume can also be controlled individually using 'gain' sliders in the 'General Settings' window.

For increased situational awareness, consider monitoring a fellow controller's frequency on your speaker device on low volume. For example, a Ground controller might monitor Local's frequency to hear when inbound aircraft are switched.

CHANGE 2

4.7.5. **Use of Cross-Coupling (XC) with CRC's Voice Switch:**

4.7.5.1. The `XC` option allows pilots out of radio range of each other to hear all transmissions on an ATC frequency. If this option is disabled, pilots within range of a transceiver will hear the controller but may not hear other pilots.

4.7.5.2. The `XCA` option cross-couples the selected frequencies; when enabled, pilots on any cross-coupled frequency will hear all other pilots' transmissions.

4.7.5.3. Controllers who disable cross-coupling should be aware that pilots may be unable to hear other pilots and may unwillingly "step on" transmissions. It is inappropriate to admonish a pilot for stepping on a transmission they are unable to hear because of radio coverage.

4.7.6. **Controller Info** set in CRC is visible via network connection clients and monitoring tools and websites. In CRC, set Controller Info using `CTRL+P`.

We recommend including:

- Expected logoff time, if known.
- Our website (bvartcc.com) for feedback, ATC Timetable, and/or the Airspace Briefing Guide.
- A statement about the community: “Boston Virtual ARTCC is a VATSIM community for pilots and controllers.”

You may also include other information relevant to pilots and ATC such as:

- Airports/airspace covered.
- A hyperlink to your personal livestream.

  Note: Inclusion of such a hyperlink makes the entire stream/recorded session including informal mediums such as a stream chat subject to the VATSIM Code of Conduct.

Examples of information that is not permitted in Controller Info include:

- A controller’s name, rating, or personal information.
- Raw METAR data that has not been decoded.
- Any other information that is not specifically required to conduct ATC on VATSIM.

Per VATSIM’s Air Traffic Control Frequency and Information Management Policy, 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 use:

> Online until 4pm ET (2000z)
> Please read our Airspace Briefing Guide at bvartcc.com/ABG
> Boston Virtual ARTCC is a VATSIM community for pilots and controllers
> Visit bvartcc.com for planned ATC availability, feedback, or to join

4.8. Information Display System (IDS)

4.8.1. The IDS is a traffic management and resources tool that includes:

- A/C (Aircraft), Airline, and Airport Lookup[1]
- Airport Information (Area Status Information)
- Alias lookup
- PIREP
- Preferred Routes
- Route Cleaner
- TMU Message

4.8.2. The IDS is available at ids.bvartcc.com. Login using your VATSIM credentials. Then, use the "+" symbol to create your custom IDS view with the modules you wish to use. Refer to the IDS Development Forum Thread for more details.

4.8.3. To receive notifications about ATIS updates, first load an Area Status Information module for the airport you wish to follow. Then, check the "Subscribe" option.

4.8.4. To request changes to preferred routes, additions or changes to airline callsigns (for example, for a virtual airline), and amendments to aircraft type information, post on this forum thread.

4.9. Charts

4.9.1. Controllers may use the IDS or 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.

4.9.2. Charts for Canadian airports may be accessed by creating a free account at FltPlan.com. Click Navigation > Digital Charts.

[1] To use these lookups, type the desired information into the relevant box and press "Enter". Results will appear in a modal window. In the "A/C Lookup", typing exactly four characters will only return exact designator matches. In the "Airline Lookup", typing exactly three characters will only return exact 3LDs. If you wish to search more broadly (e.g., by manufacturer or airline callsign), enter a different number of characters.

Chapter 5: General Control

5.1. Controller-in-Charge (CIC)

5.1.1. The Controller-in-Charge (CIC) is the first of following positions, in the following priority order:

5.1.1.1. A Traffic Management Unit (TMU) if staffed, either as a dedicated position or in conjunction with an ATC facility.

5.1.1.2. Roster-designated CICs during an event.

5.1.1.3. The highest staffed position within the facility, when required.

5.1.2. The CIC is responsible for the facility's overall air traffic control presence, including airspace-wide coordination between ZBW and external facilities. When rostered during events, the CIC is also expected to:

5.1.2.1. Mediate internal ZBW controller coordination disagreements and make decisions where disagreements cannot be resolved.

5.1.2.2. Report any critical information about event status, controller conduct, or necessary SOP improvements to the BVA Administration Team.

5.1.2.3. Make staffing determinations including:

5.1.2.3.1. What facilities need to be staffed and to what level,

5.1.2.3.2. The need for additional staffing requests, and

5.1.2.3.3. Coordination of staffing changes with the relevant controllers.

5.1.3. The CIC may delegate tasks as necessary to accomplish event/facility goals. The CIC retains ultimate authority and responsibility for delegated tasks.

5.1.4. CICs may be identified by the "CIC" tag and "channel commander" in TeamSpeak. The TMU may be identified with the "TMU" TeamSpeak tag:

TeamSpeak Tag	Position
[BOS46/TMU]	TMU (with no designated CIC or during non-events, the TMU acts as CIC for ZBW).
[ID/CIC]	Controller-in-Charge for Boston sector of A90.

5.2. Coordination

5.2.1. 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, controllers must use their judgement and work as a team to respond to scenarios not covered in documentation.

5.2.2. 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 may "bend" any of the rules if it is operationally advantageous to do so, and everyone is on the same page.

For example, some commonly coordinated changes to SOP include:

- Silent departure releases from satellite airports.
- Allowing TWR to instruct an inbound aircraft to taxi to the ramp.

5.2.3. Except for time-critical safety considerations, ATC coordination takes priority over on-frequency transmissions or responding to pilot requests.

5.2.4. All controllers are assigned unique **Operating Initials (OI)**. All verbal coordination messages must terminate with your OI, which can be spoken individually (**"R-T"**) or using phonetics (**"Romeo-Tango"**).

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

Caller	Receiver
Receiver's position, your position, and the coordination. For longer coordination, state only the type of coordination to be accomplished (e.g., handoff, APREQ[2], etc.).	
	State your position, if necessary to acknowledge the initial request.
State the message.	
	Acknowledge/response to the message, followed by OI.
State OI.	

[2] An APREQ, or approval request, is used for approval of a specific request.

5.2.6. Positions should be identified as follows:

5.2.6.1. Between two facilities that both use numeric position identification, use both the facility and position: **"New York 56, Boston 01"**.

5.2.6.2. Between two other facilities, identify the position in a manner that ensure they will not be confused with another position: **"Concord, Bristol Radar"**, **"Sector 01, Bangor Radar"**, **"Boston Local, Concord"**.

5.2.6.3. Within the same facility, use the position only, unless the facility name is required to avoid confusion: **"Local, Ground"**, **"Concord, Athens"**, **"Boston Local, Boston Ground"**.

5.2.7. Verbal coordination must be effected using the BVA Member TeamSpeak. Coordination may also be effected using textual chat messages (global or private) with other controllers. OIs are not required in text coordination.

5.2.8. If BVA's TeamSpeak is offline, conduct coordination using network-based textual capabilities or the "Screensharing and Training" channel in Discord. Use of Discord for coordination is only appropriate if TeamSpeak is unavailable.

5.2.9. **Controller Coordination Examples:**

> *Caller:* Local, Ground, Information A current, altimeter 30.21

> *Caller:* Concord, Plymouth.
> *Receiver:* Concord.
> *Caller:* Request direct ACK for JBU301.
> *Receiver:* JBU301 direct ACK approved, H-F.
> *Caller:* G-M.

> *Caller:* Rockport, Boston 36, APREQ.
> *Receiver:* Rockport.
> *Caller:* JZA7615 heading 130, descending to 11000.
> *Receiver:* Approved, J-A.
> *Caller:* R-T.

> *Caller:* Gardner, Athens, WINGS.
> *Receiver:* Gardner.
> *Caller:* PTTFF WINGS IFR 18.
> *Receiver:* L-E.
> *Caller:* B-I.

5.3. Traffic Management (TM) Procedures

5.3.1. When TM initiatives are in place, a ZBW controller or VATUSA designee will be identified as a TMU. This could be a controller actively working a Center position or a dedicated TMU. The TMU will include the following IDS message whenever TM initiatives apply to ZBW controllers:

5.3.2. When the TMU is active, all TM-related communication will flow through the TMU. TMUs may use verbal coordination, ATC message, or BVA's IDS to coordinate restrictions. Controllers must comply with all Traffic Management Initiatives (TMIs) issued by the TMU.

5.3.3. Individual controllers must comply with all instructions given by the TMU/CIC. When there is any doubt as to how to implement the instruction, query the TMU/CIC. If the controller determines they are unable to implement the instruction because it will cause a loss of separation or is in conflict with other applicable regulations or policy, inform the TMU/CIC immediately.

5.3.4. If controllers receive a TMI/restriction from any other source, including the vATCSCC Discord or from an adjacent controller, they should:

5.3.4.1. Comply with the immediate direction/request received; and,

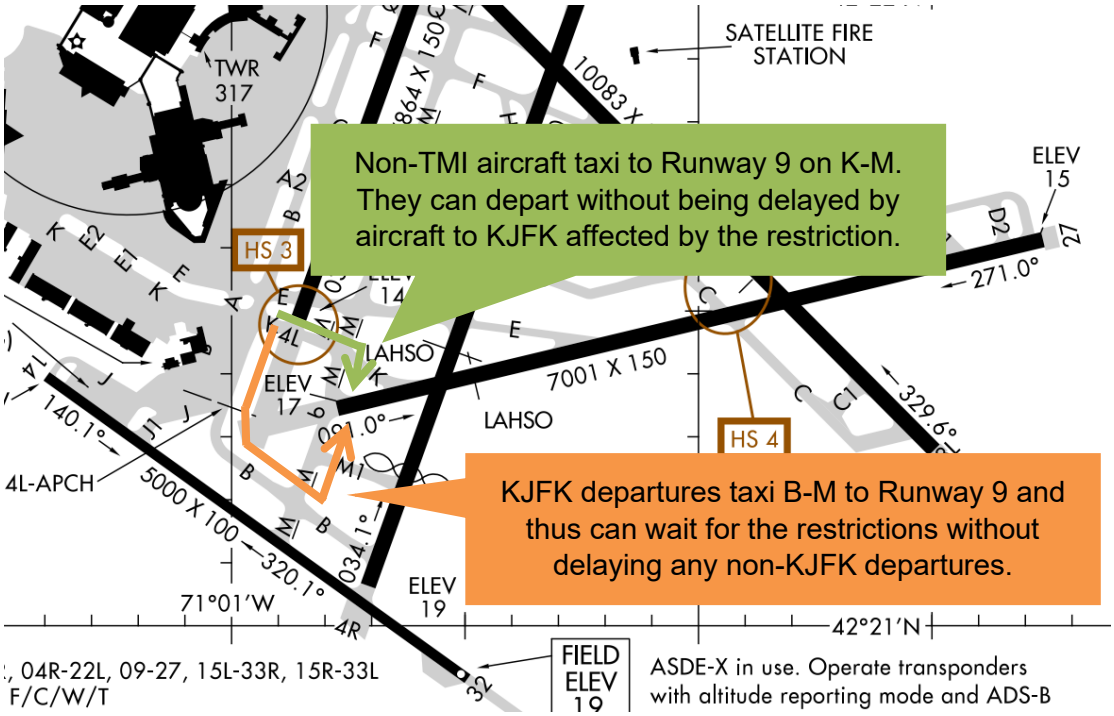
5.3.4.2. Immediately coordinate any new restrictions with the TMU, who will then verify with the appropriate central authority and provide updated information.

5.3.5. Controllers working busy events for the first time are encouraged to review **Chapter 2** of the **CIC and TMU Procedures Handbook** for TMU-related information and techniques for managing busy frequencies.

5.3.6. **Role of Local Facilities for TMIs:**

5.3.6.1. When informed of a TMI, a facility CIC is responsible for working with underlying controllers to effectively implement the TMI. If a facility CIC is not designated, the most senior position must act as the CIC. For example, if Boston Tower and Boston Ground are staffed during non-event periods, Boston Tower must act as the CIC.

5.3.6.2. Work to implement the TMI in a way that allows you to effectively meet the requirements without undue delay to TMI aircraft and with no impact on TMI-exempt aircraft. At most facilities, the most effective way to do this is to taxi TMI aircraft via a different route than non-TMI aircraft. For example, during a TMI requiring 3 minutes in-trail between each KJFK departure, Boston controllers could implement the following:



By doing so, Tower can clear KJFK departures for takeoff every 3 minutes, while allowing other aircraft to depart between the KJFK aircraft.

5.4. Position Longevity

5.4.1. Controllers must control at the position they are signing on to for a minimum of 30 minutes, except in cases of real-world emergency. This requirement may be waived by the CIC if it is shown to be operationally advantageous to have the controller at a different position.

5.5. Use of Frequencies

5.5.1. Approved frequencies are included in the positions available within CRC and listed in facility-specific SOPs and/or event position listings. In frequency tables, the six-digit frequency (e.g., “133.000”) will be displayed. In other areas, except as required for clarity, the frequency will be written as spoken (e.g., “133.0”).

5.5.2. Frequencies must be spoken as follows:

Frequency	Pronunciation
133.000	**“One three three point zero”**
134.700	**“One three four point seven”**
124.525	**“One two four point five two”**

5.5.3. If a frequency receives “bleed” from another frequency (i.e., you hear or see pilot or ATC transmissions from another facility):

5.5.3.1. If available, use another frequency from within your facility to communicate with aircraft temporarily to ensure continuity of ATC service.

Examples: if Boston Ground receives “bleed” on 121.9, aircraft could be switched to the backup frequency of 121.75. Similarly, if Boston Approach on 133.0 is unusable, consider the temporary use of 120.6.

5.5.3.2. Attempt to resolve any conflicts with other controllers directly by having other controllers use alternate frequencies, if possible. For conflicts with ATIS frequencies, the ATIS should be taken offline.

Example: the KILG ATIS frequency is common with our Bristol Radar frequency of 123.95. Pilots approaching KBDL from the southwest may hear the KILG ATIS during descent, interfering with communication on Bradley Approach. While working Bradley Approach, if pilots report this issue, request the controller hosting the KILG ATIS to take it offline.

5.5.3.3. Report the issue on this forum thread.

5.6. Sign On Procedures

The following steps apply each time a controller wishes to operate a BVA ATC position.

5.6.1. Reference the ATC roster to ensure you hold the required Certification(s) and VATSIM Rating for the position you wish to operate.

5.6.2. Ask the CIC (during events) or, during non-event periods, a controller who overlies the position you wish to work prior to connecting to the network.
You might think Bradley Tower would be the best but find out that traffic has congregated near KPWM and decide to work there instead.

5.6.3. If applicable, confirm you will be signing in with the closest overlying controller.

5.6.4. Open CRC and make any required configurations to work the desired position.

5.6.5. Update your Controller Info (if required).

5.6.6. Connect to the network, selecting the applicable Position, Role, Rating, and Environment within CRC. Controllers holding a Student Authorization must select the “Student” role when connecting.

Note: the “Student” role adds an ‘S’ to the callsign in the controller list. Pilots do not see a differentiation between Controllers and Students.

5.6.7. If required, obtain a briefing from relevant adjacent/overlying controllers.

5.6.8. Once you have control, activate the frequency.

Note: controllers may activate the frequency earlier during a position relief briefing and/or as circumstances dictate.

5.6.9. Notify all pertinent controllers.

Approach and Center controllers should also post a message in the “ATC Chat”. Clearance Delivery, Ground, and Local Control positions must not use the “ATC Chat” for this purpose.

5.6.10. If required/desired, connect an ATIS.

5.6.11. Modify your TeamSpeak nickname to include the TeamSpeak Position ID, if not done automatically after a few minutes.

5.7. Sign Off Procedures

5.7.1. At least 15 minutes prior to closing, the controller must:

5.7.1.1. Consider the need for relief based on expected traffic. Consider use of Discord commands as necessary.

5.7.1.2. When advantageous or relevant, provide a 15-minute warning to the frequency and surrounding controllers. Approach and Center controllers may use an ATC chat message.

5.7.2. Prior to deactivating any frequency, the outgoing controller must:

5.7.2.1. Complete any required briefings with overlying or underlying controllers, covering the relevant items from **Section 5.8**.

5.7.2.2. Verbally instruct all aircraft you are in communication with to change to another frequency or to advisory.

5.7.2.3. Make a verbal announcement that the frequency is closed.

5.7.2.4. Make a textual announcement that the frequency is closed.

5.7.2.5. Coordinate airspace or staffing changes with all relevant other controllers and TMU personnel, including a CIC if staffed.

5.7.2.6. For Approach and Center controllers, announce closure in the “ATC Chat”.

5.8. Briefings

5.8.1. When a position remains open but controllers change, a briefing must be completed. Briefings are also required when underlying positions change.

Note: In the case of a network/internet disconnect or real-world emergency only, the briefing and monitoring may be omitted.

5.8.2. The oncoming controller must be connected to the network and monitor the position until they have an overall picture of traffic. This should take at least 2 minutes. Following this monitoring, a briefing will occur.

5.8.3. A briefing must include any of the following that are applicable:

5.8.3.1. *Airport(s):* weather, ATIS, runways, closures/NOTAMs, staffing/coordination for all staffed/relevant airports.

5.8.3.2. *Airspace:* unique adjacent and inter-facility staffing.

5.8.3.3. *Special Activities:* blanket coordination, events, TMIs.

5.8.3.4. *Enroute Weather:* current trends[3], deviations, PIREPs.

5.8.3.5. *Traffic:* status of relevant aircraft, including WINGS flights.

Note: This briefing checklist is available in TeamSpeak ('Briefing Room' channel), the IDS, and in ERAM.

Note: Items covered before the briefing takes place or already understood through prior coordination may be omitted.

5.8.4. Following the briefing, the incoming controller will:

5.8.4.1. Ensure their frequency is activated.

5.8.4.2. State their operating initials to signify they have understood the briefing and have control of the position.

5.8.5. Once the oncoming controller has the frequency, the outgoing controller will monitor for a minimum of 2 minutes before disconnecting from the network.

[3] Controllers are encouraged to review and reference the NOAA ZBW Weather Briefing.

5.8.6. Example: Boston Tower briefing an oncoming Boston Ground:

> ***Airport(s):*** IMC, last breakout at 500' by a Boeing 737 at 1500z. ATIS K, landing 22L, departing 22R. Taxiway B closed between A2 and K, identified on the ASDE-X.
> ***Airspace:*** Departure frequency 134.7.
> ***Special Activities:*** ZNY event, all JFK jet departures off Runway 27 (clearance is issuing their runway and altitude amendment).
> ***Traffic:*** vTDLS and vStrips up-to-date, I'll push the flight strips to your bay once we're done. BVA31 pushing on A, will call you for taxi. I'll keep KAP14 outbound to the runway. N1557B is WINGS IFR 1, he has the PDC but hasn't called yet.
> ***Any questions?***

5.8.7. Example: Boston Approach closing into Boston Center:

> ***Airport(s):*** VMC, no concerns, but there's a strong upper crosswind so 30 or even a 40 degree intercept is working best for aircraft from the east. Boston ATIS N, landing ILS 4R, visual 4L, departing 9, with Boston Tower online below (they have the ATIS). At Hanscom, ATIS O, landing and departing visual Runway 23 with Tower on.
> ***Airspace:*** With Bradley Approach, we were doing direct BDL->BOS handoffs vectored to stay outside of PVD due to your workload so I'll shut that off before I go. I'll also let BOS and BED know that the departure frequency is now 134.7.
> ***Traffic:*** DAL865 cleared for the approach and I'll switch them to Tower.
> ***Any questions?***

5.8.8. Example: Syracuse Approach closing into Boston Center:

> ***Airport(s):*** Marginal VMC over the field, visuals have been working just fine though, most are picking up the field through 4000. ATIS L, Visual 28, landing and departing 28 and 33. Ground staying on, they'll keep the ATIS, and we're doing coordinated crossings on both runways.
> ***Traffic:*** None.
> ***Any questions?***

5.8.9. Example: Providence Ground closing into Boston Center:

> ***Airport(s):*** ATIS D, I'll disconnect it.
> ***Traffic:*** None.
> ***Any questions?***

5.9. Airport Terminal Information System (ATIS) Procedures

5.9.1. See **ATC Handbook, Section 2.8** for the ATIS Message Format.

5.9.1. The ATIS is managed using vATIS.

5.9.2. When available, consider calling and/or accessing the real-world METAR. Phone numbers are available in the IDS. Digital ATIS may be accessed online.

5.9.3. Local is responsible for maintaining (or delegating the maintenance of) an ATIS. The ATIS must be updated:

5.9.3.1. When any new official weather is received.

5.9.3.2. When there is a change in any other pertinent data, such as a runway change, instrument approach in use, etc. This includes when the ATIS is transitioned between controllers, unless measures are taken to ensure the ATIS information remains identical.

5.9.4. Each time an ATIS letter changes, the controller maintaining the ATIS must:

5.9.4.1. Ensure the “Area Status Information” in the IDS reflects the current ATIS letter and airport configuration.

5.9.4.2. Notify pertinent controllers of significant changes to weather or configuration other than the altimeter setting. Pertinent controllers include any other controllers at the same facility (TWR, GND, DEL, etc.) as well as any overlying radar controller(s) responsible for the airport.

Note: during large events or other periods of increased traffic, controllers may additionally use the network’s ATC Message function. This may not be substituted for verbal coordination.

> Ground, Local, information Xray, wind 200 at 12, ceiling 3000 overcast, altimeter 3004.

5.9.5. Notify pilots of the ATIS change as well as any pertinent information:

> Attention all aircraft, Boston airport information Xray now current, wind 200 at 12, ceiling 3000 overcast, altimeter 3004.

5.9.6. The preferred ATIS format (e.g., digital or voice) is prescribed by Facility SOP.

5.9.7. A Local or Ground controller may establish an ATIS at their airport only.

5.9.8. An Approach or Center controller must ensure an ATIS is established for the facility’s primary airport. Once an ATIS is established at the facility’s primary airport, additional connections may be created at other airports.

5.10. Aircraft Types

5.10.1. The aircraft type field in a flight strip contains three parts:

5.10.1.1. Wake category.

5.10.1.2. Type designator.

5.10.1.3. Equipment type suffix (included after the type designator).

5.10.2. The pilot is responsible for indicating their aircraft type to ATC. On VATSIM, ATC is responsible for ensuring each flight plan has a correct Aircraft Type, including any required suffix. Prefixes are added automatically. Examples of correctly formatted aircraft type information include:

I/C172/A	H/B350/G	F/B738/L	D/B703/W
Lower Small Cessna 172, No GPS.	Upper Small Beechcraft King Air 350 with RNAV capability.	Upper Large Boeing 737-800 with RNAV capability.	Non-Pairwise Heavy Boeing 707-300 without RNAV.

Note: Wake categories are displayed in the terminal environment only. ERAM distinguishes Super and Heavy aircraft with an H/ prefix (e.g., `H/B77W/L`).

5.10.3. The following three sections provide information on the three components of the aircraft type: **Wake Category**, **Type Designator**, and **Equipment Suffix**.

5.11. Weight Class & Wake Category

5.11.1. The FAA defines the following **weight classes**:

Category	Maximum Certificated Takeoff Weight	Description
Small (S)	41,000 lbs. or less.	Most general aviation aircraft (e.g., C172, BE58, B190).
Large (L)	299,999 lbs.	Most single-aisle airliners (e.g., B737, A321, DH8D).
Heavy (H)	300,000 lbs. or greater.	Aircraft larger than a Boeing 757 (e.g., B788, A333).
Super (J)	The Airbus A-380 (A388) and ANTONOV An-225 (A225)[4].	

5.11.2. The FAA also defines **wake categories** A through I based on the effect of wake turbulence on other aircraft for the purposes of wake turbulence separation. Terminal automation systems will display the appropriate wake category. The wake categories along with some common aircraft types in each include:

A	B	C	D	E	F		G		H	I
Super	**Upper Heavy**	**Lower Heavy**	**Non-Pairwise Heavy**	**B757**	**Upper Large**		**Lower Large**		**Upper Small**	**Lower Small**
A388	A332	A306	A124	B752	A318	DC93	AT43	E145	B190	BE10
A225	A333	A30B	A339	B753	A319	DC95	AT72	E170	BE40	BE20
	A343	A310	A342		A320	DH8D	CL60	E75X	B350	BE58
	A346	B762	A3ST		A321	E190	CRJ2	E75L	C560	BE99
	A359	B763	A400		B712	GL5T	CRJ7	E75S	C56X	C208
	B742	B764	B2		B722	GLEX	CRJ9	FA7X	C680	C25A
	B744	C17	B52		B737	GLF5	DH8B	GLF4	C750	C25B
	B748	DC10	B78X		B738	GLF6	DH8C	SF34	CL30	C402
	B772	K35R	C135		B739	MD82	E135		FA50	C525
	B77L	MD11	DC85		C130	MD88			H25B	C550
	B77W		DC86		C30J	MD90			LJ35	P180
	B788		DC87						LJ45	PA31
	B789		L101						LJ60	PC12
	C5									SR22

Note: the term “Non-Pairwise Heavy” refers to Heavy aircraft whose wake turbulence impact has not been fully determined. This can be the case for new aircraft, older/legacy aircraft, or aircraft not frequently flown in the United States.

[4] Although the A225 is not currently flown in real life, controllers may encounter it on the network.

5.12. Type Designator

5.12.1. The type designator is an abbreviated form of an aircraft type. Designators can be referenced using the “Aircraft Lookup” in the IDS:

Aircraft Lookup

Desig.	Manufacturer	Model	Class	Eng/Weight	Wake Cat	SRS	LAHSO	LAHSO Rwy Length
B738	BOEING	737-800	LandPlane	2J/L	F	III	8	7000

Header	Details
Desig.	Aircraft type designator: this information must be used in aircraft flight plans.
Manufacturer	The manufacturer of the aircraft.
Model	The model name of the aircraft, including military designators.
Class	The class of aircraft, broken in the following: fixed-wing, gyrocopter, helicopter, and tiltrotor. Amphibians are denoted as “@Fixed-wing” and seaplanes as “$Fixed-wing”.
Eng/Weight[5]	The number of engines and types, using the following abbreviations: • E – Electric • P – Piston • T – Turboprop/turboshaft • J – Jet • R – Rocket The weight class (S, S+, L, H, or J) is indicated following a slash after the number of engines.
Wake Cat.	The applicable Wake Category (A-I).
SRS	The Same Runway Separation (SRS) categorization.
LAHSO	The group and minimum runway length required (at ZBW airports) for LAHSO.

5.12.2. Aircraft type information may also be referenced from FAA Order 7360.1:

Type Designator	Class	Engine Number-Type/FAA Weight Class	ICAO WTC	CWT	SRS	LAHSO	MANUFACTURER, Model
A333	Fixed-wing	2J/H	Heavy	B	III	8	AIRBUS, A-330-300

[5] A “C” is used to indicate a fixed-wing aircraft having two engines coupled to drive a single propeller system.

5.13. Equipment Suffix

5.13.1. Equipment suffixes provide information about aircraft navigation capabilities.

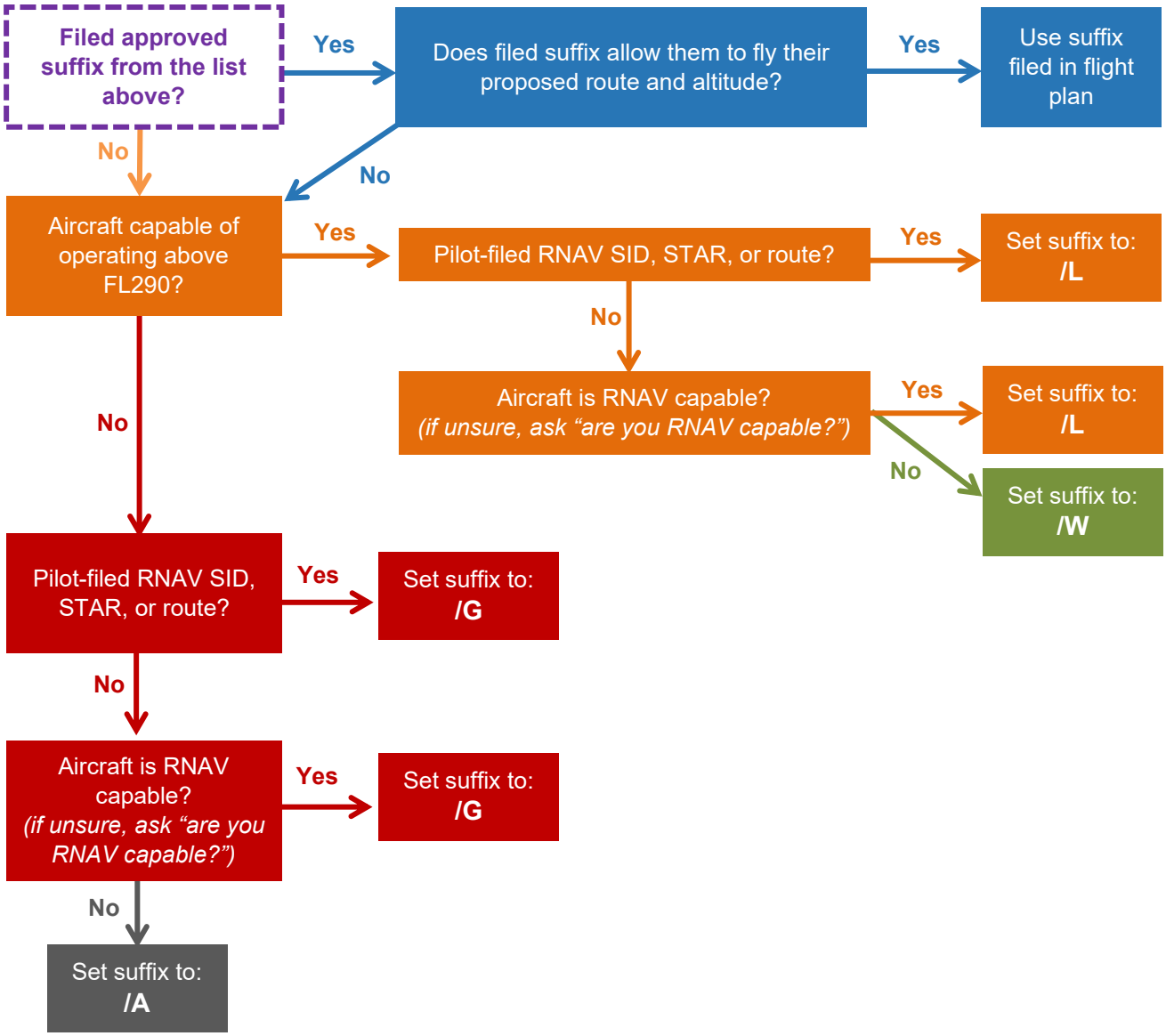
5.13.2. The table below lists all equipment type suffixes approved for use. The most common suffixes are emphasized.

	Nav. Capability	Transponder Capability	Suffix
RVSM[6]	Any	Failed transponder or failed Mode C	/H[7]
	No GNSS, No RNAV	Transponder with Mode C	/W
	RNAV, No GNSS	Transponder with Mode C	/Z
	GNSS	Transponder with Mode C	/L
No RVSM	No DME	No transponder	/X[8]
		Transponder with no Mode C	/T
		Transponder with Mode C	/U
	DME	No transponder	/D[5]
		Transponder with no Mode C	/B
		Transponder with Mode C	/A
	TACAN	No transponder	/M[5]
		Transponder with no Mode C	/N
		Transponder with Mode C	/P
	RNAV, No GNSS	No transponder	/Y[5]
		Transponder with no Mode C	/C
		Transponder with Mode C	/I
	GNSS	No transponder	/V[5]
		Transponder with no Mode C	/S
		Transponder with Mode C	/G

[6] For BVA purposes, aircraft that can cruise above FL290 may be considered RVSM capable.
[7] ATC assigned only.
[8] On VATSIM, all aircraft have a transponder (by means of their pilot client). Even pilots who do not have a built-in transponder in their aircraft can use 'dot commands' in the pilot client to squawk an assigned code.

5.13.3. Every IFR flight plan must include one valid equipment type suffix reflecting the most advanced navigation capability of the aircraft, even if that capability is not going to be used on the flight. For example, if a pilot will fly at 10000' on a flight but is FL290+/RVSM capable, the FL290+/RVSM code should be filed.

5.13.4. Because of the way flight plans are filed on the network, the suffix may not be inserted automatically. Use the following process to input or correct an equipment type suffix:



5.14. Scratchpads

5.14.1. Scratchpad entries appear in the aircraft's data block. Scratchpads transfer between controllers at the same facility (e.g., Boston Tower and Boston Ground), between ZBW ERAM facilities (e.g., ZBW to ZNY, GDM36 to BOS46), and within STARS facilities (e.g., ID to SR).

5.14.2. The following scratchpads must be entered where applicable:

Entry	Meaning
WIN	Aircraft is participating in the WINGS program[9].
V4L	An IFR aircraft is assigned an approach that is not published as the first or primary approach/runway in the IDS.
P24	A VFR aircraft is given pattern entry by an overlying radar controller.

5.14.3. Scratchpad entries for approach assignments are constructed by using the first character for the approach, and the remaining characters for the runway:

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

When parallel runways are in use, the last number and the left/right designator of the runway are entered.

Examples: "I3L", "V4R", "G24".

[9] If the "WIN" scratchpad is used, additional scratchpad information (such as non-standard approach or pattern entry information) can be entered into other scratchpads, or verbally coordinated.

5.15. Flight Plans

5.15.1. Only one flight plan can exist at a time for each callsign. Changes to the flight plan will overwrite the current active flight plan.

5.15.2. Once a flight plan is amended by ATC, or after its corresponding flight strip is removed from the departure printer, pilots are "locked out" of amending their own flight plan while connected to the network; subsequent changes must be made by ATC. If a pilot disconnects from the network and reconnects, their flight plan is unlocked and the pilot can make changes to the flight plan.

5.15.3. Controllers must correct inaccurate aircraft types, input equipment suffix information as described above, and remove non-pertinent information from flight plans (e.g., "DCT", altitude change information, etc.). The "Route Cleaner" within the IDS can be used to assist with this.

5.15.4. **IFR Flight Plans** can be created/filed by pilots or air traffic controllers. Pilots should file their own IFR flight plans; ATC may assist pilots with this if required.

Note: IFR flight plans may appear within vNAS and be edited before a pilot has connected to the network.

5.15.5. Except for the LOGAN# or as otherwise specified in facilities documents, radar vector SIDs are not to be included in routes and must be removed if filed by the pilot. RNAV and pilot navigation SIDs (e.g., CSTL#, NUBLE#, SSOXS#) must be included in the route when issued.

5.15.6. **VFR Flight Plans** filed by pilots are not transmitted to vNAS. When a VFR aircraft will contact an overlying radar controller, a flight plan must be created. VFR flights that will not speak with the overlying radar controller (e.g., local flights, closed traffic when Local is staffed) should be managed using handwritten flight strips.

Exception: all WINGS flights must have a flight plan.

5.15.7. ATC-created VFR flight plans should include, at a minimum:

5.15.7.1. Aircraft type.

5.15.7.2. Direction of flight.

5.15.7.3. Requested altitude, preceded by "`VFR/`".

5.15.7.4. If the aircraft has requested Flight Following, "`FF`" added as a "Remark".

Note: radar controllers are not required to remove this remark if the aircraft later requests to terminate flight following after being radar contacted.

5.15.8. Examples of correctly formatted IFR and VFR flights are shown below.

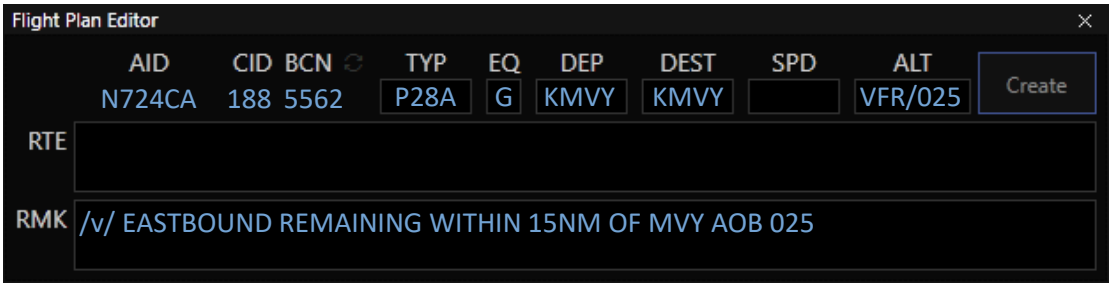
VFR Closed Traffic:

N471MR C172			VFR CLSD TRFC			

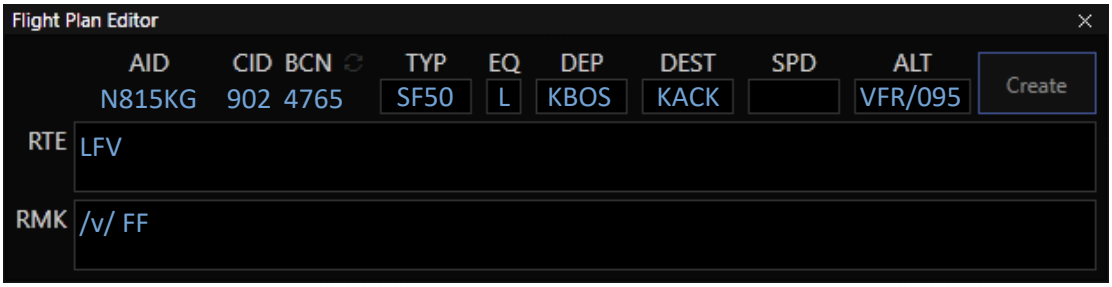
Local VFR Flight:

N724CA P28A/G			EASTBOUND WITHIN 15NM OF MVY AOB 025			

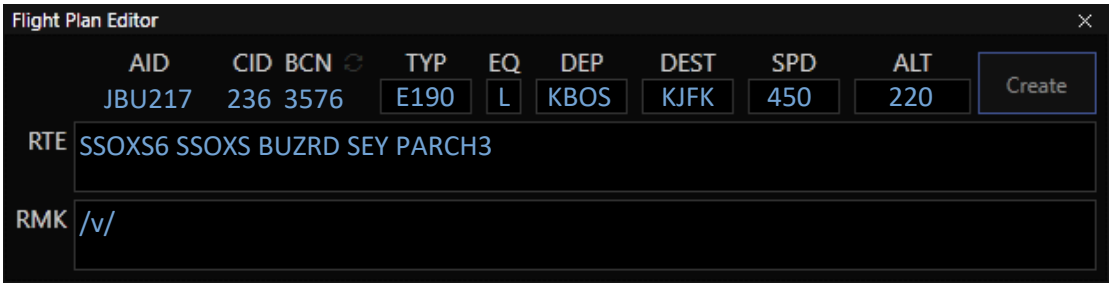
Alternatively, a flight plan can be created for the aircraft if Local is offline and an overlying radar controller is providing top-down coverage:



VFR Flight Following:



IFR Flight:



5.16. Flight Strips

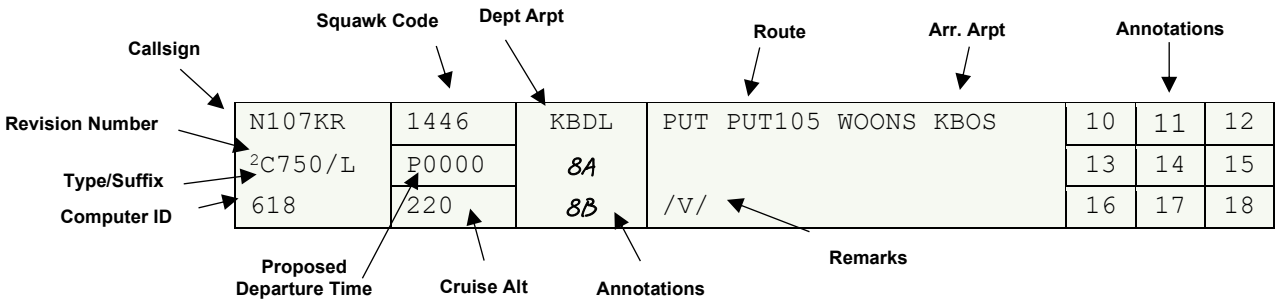
5.16.1. Flight strips, managed using vStrips, help controllers keep track of, organize, and sequence aircraft. vStrips supports both departure and arrival flight strips. The procedures in this section address departure strips as there is no requirement to use arrival strips in our operation.

5.16.2. Flight strips are separate from an aircraft's flight plan. Each flight strip should be viewed as a separate piece of paper reflecting the flight plan's status at the time it was printed. When a flight plan is amended, a new strip will normally appear in the departure flight strip printer reflecting the amendment.

5.16.3. The only elements that controllers can modify on the flight strip directly are in the "annotations" section.

5.16.4. Flight strips can be "pushed" to another controller's bay (they then appear in the default rack for that controller), or "placed" into a specific rack or location.

5.16.5. The flight strip below matches formatting from vStrips as configured at KBOS:



5.16.6. The annotations boxes are used as follows:

Box	Entry
8A	Non-standard departure runway and/or intersection point (e.g., "**24**", "**33L/G**").
8B	Additional annotation space.
10	• "**B**", when clearance is given verbally. • "**C**", when clearance is given via TDLS. • "**R**", if a re-route is required. • "**V**", if a voice clearance with no route amendment must/will be issued.
11	Reserved.
12	ATIS letter obtained from the aircraft (use "**WX**" when weather is issued verbally or not required).
13	Gate number if required by facility coordination (i.e., at KBOS).
14	Reserved.
15	Clearance void time, if required.
16-18	Reserved for use during events.

5.16.7. Controllers working Clearance Delivery and Ground must:

5.16.7.1. Use a flight strip for each departing aircraft.

5.16.7.2. Mark the strip as described above.

5.16.7.3. Push the flight strip to the LC bay when handing off a departing aircraft.

5.16.8. Controllers using vStrips must:

5.16.8.1. When an amendment is made that causes a new flight strip to print, retrieve the flight strip from the printer, transfer markings, and delete the old strip.

5.16.8.2. Not add, remove, or edit any typed separators.

Separators may be relocated within a controller's bay. Controllers may add handwritten separators but must delete them at the end of their session.

5.16.9. The following practices are recommended within vStrips:

5.16.9.1. Using the strip printer, open a pilot's flight strip and check for any required changes (e.g., route, equipment, etc.). Use the CRC Flight Plan Editor to make any required changes before removing the flight strip from the printer or selecting the flight plan in vTLDS.

5.16.9.2. When physical flight strips are being used, strips should only be put into holders after initial contact (to prevent running out of flight strip holders).

5.16.9.3. Flight strip movement and separator use (see also this video):

Separator	Recommended Use	Order
NEEDS VOICE CLNC	Place below while waiting for pilot to call for clearance. Move above once cleared.	Alphabetical.
GATE HOLD	Place below when being held on the gate (e.g., due to taxiway congestion).	First to be released on the bottom.
EDCT HOLD	Place below when an EDCT must be met.	Soonest time on bottom.
PUSHBACK	Place below when given push.	First to call on bottom.
OUTBOUND TAXI	Place below when is issued taxi.	In the sequence the aircraft will depart.
HOLD/CROSS	Place below when issued crossing instructions for a common holding point. (Example: place below when a KBOS 33L departure is cleared to cross Runway 27.)	In the sequence the aircraft will depart.
RUNWAY	Place below when cleared to enter the runway. Offset when cleared for takeoff. Delete once switched to departure.	In the sequence the aircraft will depart.

5.17. Text Aliases

5.17.1. Textual commands or aliases are configured for CRC by our Facility Engineer. There are hundreds of shortcuts that can be used covering almost every possible instruction.

5.17.2. Aliases use the following format:

5.17.2.1. The first word (immediately following the .) is the alias typed into CRC.

5.17.2.2. The rest of the line is what it will be replaced with.

5.17.2.3. Elements like '$squawk' represent variables taken from an aircraft's flight plan (that you do not have to type in).

5.17.2.4. Elements like '$1' are variables typed by the controller.

5.17.3. For example, take the alias '.cto'. It appears as follows in the IDS:

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

This alias takes the wind from CRC, 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.

5.17.4. Available aliases and their meanings may be found using the 'Alias Lookup' feature of the IDS. A list of the most commonly used aliases is shown on the following pages.

5.17.5. Controllers may create their own aliases. Personalized controller aliases (i.e., those included in the 'myaliases.txt' file) cannot include phraseology that implies or creates the perception of being "official" messages from BVA. For example, a custom alias using the phrase "the following message is sent from BVA Air Traffic Control" would be prohibited.

5.17.6. Controllers can also use text aliases to access charts using the format `.XXXYYYYY` where `XXX` is the three-letter FAA ID of the airport followed by a code for the desired chart type. Examples:

Airport	Chart Type	Detail	Command
BOS	Approach	ILS RWY 4R	`.bosi4r`
PVD	STAR	JORDN	`.pvdjordn`
PWM	SID	NUBLE	`.pwmnuble`
UUU	Takeoff Minimums	N/A	`.uuutm`

5.17.7. General:

Alias	Variables	Sample Transmission	Sample Result
.closing	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

5.17.8. Feedback:

Alias	Variables	Sample Transmission	Sample Result
.callsign	Encourages the aircraft to use a realistic airline or GA callsign.		
.abg	Encourages the pilot to review our Airspace Briefing Guide.		
.getcharts	Links the pilots to our Charts page.		
.feedbacksid	Provides information about correctly loading and flying RNAV SIDs.		
.feedbackstar	Provides information about correctly loading and flying RNAV STARs.		
.feedback33	Provides information about flying the RNAV X and Light Visual Approaches to Runway 33L.		
.wings	Encourages the pilot to learn more about our WINGS program.		
.feedbackhs	Provides information on hold short instructions (designed for use when a pilot stops on rather than short of the hold short point). Use the following format (in this example, the pilot was told to taxi on B and hold short of K): `.feedbackhs B K`		

5.17.9. Clearance Delivery:

Alias	Variables	Sample Transmission	Sample Result
.xpdc	N/A	.xpdc	You will receive your clearance via CPDLC over private message. Readback is not required.
.cld	Top altitude, departure position ID (if applicable)	.cld 5000 D	Cleared to KDCA via (aircraft's route). Maintain 5000, expect FL320 10 minutes after departure. Departure frequency 133.00. Squawk 1301.
.prefroute	Opens the ATC Hub Preferred Routes page for the aircraft's flight plan.		
.prefroute2	Opens the FlightAware IFR Route Analyzer for the aircraft's flight plan.		

5.17.10. Ground:

Alias	Variables	Sample Transmission	Sample Result
.taxio	Runway, taxiways	.taxio 29 C A	Runway 29, taxi via C A
.hsr	Runway	.hsr 4R	Hold short of Runway 4R
.taxii	Parking location, taxiways	.taxii Signature C B	Taxi to Signature via C B
.taxiopd	Runway	.taxiopd 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	.taxiipd	Taxi to the ramp via pilot's discretion, cross all runways.

5.17.11. Tower:

Alias	Variables	Sample Transmission	Sample Result
.cto	Runway	.cto 29	Wind 180 at 4, Runway 29, cleared for takeoff
.ctoh	Runway, heading	.ctoh 29 270	Wind 180 at 4, fly heading 270, Runway 29, cleared for takeoff
.land	Runway	.land 33L	Wind 180 at 4, Runway 33L, cleared to land

5.17.12. Radar Controllers:

Alias	Variables	Sample Transmission	Sample Result
.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

Alias	Variables	Sample Transmission	Sample Result
.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 ROBUC 22L	Descend via the ROBUC# arrival, Runway 22L, the KBOS altimeter 3012
.robuc	Runway number	.robuc 4R	Descend via the ROBUC# arrival, Runway 4R, the KBOS altimeter 3000
Note: arrival aliases exist for the procedures we manage regularly (e.g., ".ccc", ".poppp", ".jfund", etc.).			
.ils	Heading, altitude, runway number (must have 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

5.18. Weather Settings

5.18.1. Pilots are encouraged, but not required, to use real-world weather. However, pilots are required to use current, real-world wind, pressure, and temperature.

5.18.2. All controllers must issue weather reports and control airports based on real-world reported METARs. If 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. Standard IFR separation must be provided, however the use of visual separation is authorized.

5.18.3. This section does **not** apply to a pilot who has specifically requested Special VFR (SVFR). However, if a pilot's request for SVFR is denied, or if SVFR is unavailable (e.g., fixed-wing aircraft at KBOS), they may instead be treated in accordance with this section.

5.19. Time Compression

5.19.1. With approval from ATC, VATSIM policy allow pilots to use time compression features. Upon request from the pilot, controllers may approve time compression. Before authorizing this procedure, be aware of the impacts time compression may have on vectors, in-trail sequencing, and other aircraft.

Note: unless coordinated, aircraft must be at 1x simulation rate for all handoffs.

5.20. Requests to Leave Frequency

5.20.1. Pilot requests to temporarily leave the frequency may be granted at the discretion of the controller.

5.20.2. Ensure the request will not conflict with any instructions that would be necessary (e.g., handoffs, descents, etc.). If necessary, provide a time or location by which the aircraft must return to the frequency.

5.20.3. Requests to temporarily leave the frequency may be approved as follows:

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

5.21. Notices to Air Missions (NOTAMs)

5.21.1. NOTAMs or additional operationally-pertinent information that is applicable to the simulated environment may be simulated. Examples include runway or taxiway closures, bird and construction activity, hazardous weather information, frequency closures. Operational information that cannot be effectively simulated on VATSIM such as lighting outages, non-standard hold short markings, etc. must not be included.

5.21.2. Relevant NOTAMs must be included in the facility's ATIS and IDS. They must also be included in briefings unless depicted on the facility's ASDE-X.

5.21.3. For runway and taxiway closures, controllers may choose not to instruct aircraft to use closed surfaces. However, if a pilot mistakenly enters a closed surface, the surface must be treated as if it is open. It is inappropriate to admonish a pilot solely for entering a closed surface.

For other NOTAMs that are being simulated, if a pilot requests to operate contrary to the NOTAM, first advise the pilot of the NOTAM. If the pilot still requests to continue, the operation must be allowed.

5.22. Special Use Airspace and Temporary Flight Restrictions (TFRs)

5.22.1. Generally, Prohibited Airspace, Restricted Areas, and Warning Areas are not simulated. Military Operating Areas (MOAs) and Military Training Routes (MTRs) may be activated by appropriate aircraft request.

5.22.2. Military intercepts, non-reciprocal requests for formation flights, and use of MOAs and MTRs are restricted to aircraft that are part of an approved VATSIM Special Operations Administration (VSOA) organization. The Boston Virtual ARTCC Special Operations Group (or BVASO) is a VSOA. If you are unsure if a pilot/request is coming from an approved VSOA, ask the pilot. If a pilot does not confirm membership of an approved VSOA, decline the request/use of airspace and involve a VATSIM supervisor if required.

5.22.3. 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 generally not enforced on VATSIM by controllers. However, upon request or pilot inquiry, controllers should be familiar with TFRs in their airspace.

5.23. Facility Operating Hours

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

5.23.2. BVA controllers should be aware that other VATSIM facilities may simulate operating hours and that pilots who fly in other parts of the country/network may be expecting operating hour simulation.

5.24. Accommodating Pilots of All Abilities

5.24.1. Flight simulation allows pilots who may not qualify for an aviation medical to participate in simulated aviation. Controllers must make reasonable efforts to accommodate pilots of all abilities while remembering that a flight may not declare itself to have priority over another.

5.24.2. Software allows visually impaired and/or blind pilots to fly online. These pilots may not be able to perform all maneuvers, such as taxiing, and will normally require clearance for an instrument approach. Controllers may approve requests to re-position aircraft if they are unable to taxi. These requests must be coordinated with affected controllers.

5.25. Use of Frequency 121.5 (Guard)

5.25.1. Guard may be monitored using the '`Add Secondary Frequency`' button and adding the '`Guard`' position associated with the current facility (radar positions) or the overlying radar facility (local positions).

5.25.2. Controllers using Guard must ensure that cross-couple ("XC") or cross-couple across ("XCA") functionality is not used with the Guard position.

5.25.3. Controllers may attempt to contact an aircraft by transmitting on 121.5 in addition to the use of other network features designed for this purpose (e.g., private message, 'contact me', etc.):

> JBU119, Boston Center on guard, if you hear this transmission, contact Boston Approach on 133.0.

5.26. Concorde and Supersonic Operations

The VATSIM network allows for the use of “legacy” aircraft that are no longer flying in the real world. Most of these aircraft share similar performance characteristics to aircraft that are operating today. However, one aircraft common to the network that presents challenges due to its unique performance characteristics is the Concorde. The following are recommended controlling procedures for the Concorde.

5.26.1. **Departure:**

5.26.2. There are no differences in handling a Concorde at the Terminal level. Clearances, taxi, and initial departure are handled the same as all other aircraft.

5.26.2.1. When Center receives the aircraft:

5.26.2.1.1. Issue a climb to FL280.

5.26.2.1.2. Once level at FL280 and when at least 35 nm offshore, issue a “high-speed” climb to the requested/appropriate cruise altitude.

> Speedbird Concorde 1, high-speed climb approved. Climb and maintain FL570.

5.26.2.1.3. Handoff to next sector or offline airspace as normal.

5.26.3. **Arrival:**

5.26.3.1. Due to its unique performance characteristics, it is recommended to issue descents at the pilot’s discretion (except for STAR restrictions). An initial descent to FL280 is recommended; the Concorde will normally slow to subsonic speeds by this point if normal procedures are followed. Make sure this descent is completed prior to 35nm from any shoreline. Further descent instructions may be given “as normal.”

5.26.3.2. Due to its unique shape and aerodynamics, the Concorde has a higher approach speed than most conventional airliners. Use caution and provide extra space between a Concorde and other arrivals.

5.27. Simulated Emergencies

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.

5.27.1. When a controller will not accept/allow a simulated emergency, advise the pilot:

> CJA211, unable emergency *(optional: due to workload, traffic, etc.)*. Please resume normal operations or disconnect from the network.

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

5.27.2.1. Aircraft identification and type (from flight plan or data block).

5.27.2.2. Nature of the emergency.

5.27.2.3. Pilot intentions.

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

5.27.3.1. Fuel remaining in time or pounds.

5.27.3.2. Number of souls on board.

5.27.3.3. Dangerous goods / HAZMAT on board.

5.27.4. The emergency squawk code is 7700. This code may be assigned when a pilot declares an emergency and the aircraft is not radar identified:

> Squawk Mayday on 7700.

5.27.4.1. After radio and radar contact have been established, you may request other than single-piloted helicopters and single-piloted turbojet aircraft to change from Code 7700 to another code appropriate for your radar beacon code environment:

> Radar contact *(position)*, if feasible, squawk *(code)*.

5.27.5. Simulated hijacking (use of squawk code **7500**) is never permitted on the network. If an aircraft calls in simulating a hijacking, advise the aircraft to terminate the situation immediately; call a VATSIM Supervisor if required.

5.28. Lost Communications

5.28.1. Lost communications may occur because of a technical issue or because the pilot intentionally wishes to simulate lost communications. Pilots may use the squawk code **7600** to signal loss of communication.

5.28.2. 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:

> *Via Text:* we appear to have lost two-way radio communications. Would you like to proceed via lost communications procedures, or would you like me to communicate instructions via text?

5.28.3. If the pilot can hear you, but not reply, continue giving instructions. Ask the pilot to confirm instructions by 'squawking ident'.

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

5.29. Workload Management

5.29.1. Workload management is ultimately left to the discretion of the controller.

5.29.2. Quality of air traffic control services is paramount. If workload becomes, or is predicted to become in the near-term, overwhelming, controllers should:

5.29.2.1. Provide services based on normal duty priority (e.g., provide separation before providing approach clearances before providing local services, etc.).

5.29.2.2. Request assistance from other controllers using TeamSpeak or the dedicated Discord commands. Consider splitting airspace and adding underlying controllers.

5.29.2.3. Where possible, shed workload by ceasing to provide services that are "workload-permitting" such as Wings Over New England flights.

5.29.2.4. Discontinue provision of additional services, such as VFR flight following and services to VFR aircraft, with a preference towards providing separation between IFR aircraft.

5.29.2.5. As required, implement traffic management initiatives, such as enroute holding, miles/minutes in trail, reroutes, or altitude capping.

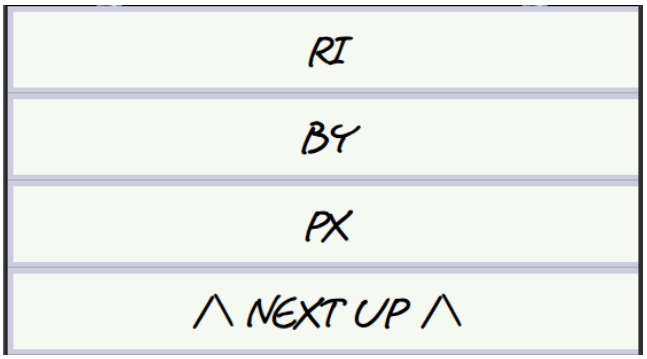
5.30. Break List & Position Rotation

Rosters may feature a 'break list' to allow for controllers to rotate between positions over the course of the event. The procedures in this section apply when a 'break list' is rostered.

5.30.1. Controllers are expected to be in TeamSpeak per **4.4 Events Policy** and will begin the event by working the position next to their name on the roster.

5.30.2. Controllers will be offered breaks at various points throughout the event. In most cases, they will have the choice of accepting a break or staying on position. Controllers are expected to accept at least one break during the event.

5.30.3. The controller beginning on break will create the break list in a relevant strip bay in vStrips by creating one handwritten flight strip for each controller. Strips are ordered so the person who has been on longest is at the bottom:



5.30.4. When returning from break, controllers will offer breaks to controllers, starting with the controller who has been on position the longest (i.e., from bottom to top of the break list). This is called "running the break list".

5.30.5. The break list can be used even when not all rostered controllers are certified to work all available positions. (Example: an S1 is returning from break and BOS LC wants relief. The S1 will take over BOS GC or CD from an S2, who will then provide relief to the S2 working BOS LC.)

5.30.6. If everyone on the list declines a break, a controller may offer to staff Radar Associate or Radar Coordinator (if applicable), while periodically running the break list. Alternatively, after 30 minutes of break, a controller may 'force out' the controller who has been on position for the longest amount of time.

5.30.7. A staffed facility and/or event CIC has final authority over staffing decisions.

5.30.8. **If a dedicated facility CIC is staffed:**

5.30.8.1. The CIC will update the break list once it is created.

5.30.8.2. Controllers must advise the CIC when going on break and when returning.

5.30.8.3. The CIC will advise returning controllers whether to 'run the break list' or whether to relieve a specific sector.

Chapter 6: Wings Over New England (WINGS)

Wings Over New England (WINGS) is a self-guided training program available to members of BVA flying in ZBW airspace. The program includes several VFR and IFR flights, each with associated reference material and Test Standards. The objective of the program is to help pilots better operate their aircraft within the online air traffic control system.

Controllers may view a summary of the flights and the associated Test Standards in the WINGS Test Standards document.

6.1. Beginning the Flight

The following procedures apply when a pilot makes a request to complete a WINGS flight.

6.1.1. Pilots attempting a WINGS flight may request WINGS monitoring separately or as part of their request for taxi or clearance.

6.1.2. Check the workload of the overlying controller(s) who will monitor the flight:

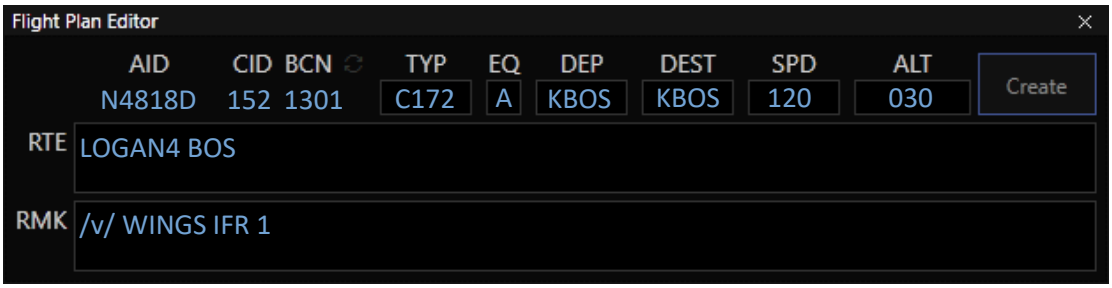
6.1.2.1. If the airspace is not busy, and you have reasonable certainty ATC availability will permit flight completion, approve the flight immediately.

6.1.2.2. Otherwise, check with the immediate overlying radar controller, who will coordinate as required with other controllers to obtain approval.

6.1.3. If the WINGS flight is approved:

6.1.3.1. Inform the pilot.

6.1.3.2. Input the WINGS flight number in “Remarks” (e.g., “WINGS IFR 1”):



6.1.4. If the WINGS flight is not approved, inform the pilot and provide a suitable alternative (e.g., call back in 15 minutes, try after the event, etc.).

6.2. Monitoring the Flight

6.2.1. Ensure “WIN” appears in the STARS or ERAM data block.

6.2.2. To provide controller awareness, verbally coordinate the WINGS flight number and status each time a pilot is switched to a different controller:

> CASCO, Concord, N19313 WINGS IFR 3.

> ID, Boston Local, next departure DCM913 will be WINGS IFR 1.

6.2.3. Each WINGS flight includes Test Standards that pilots will be evaluated against. Each controller is required to monitor relevant Test Standards. A WINGS flight continues while the pilot meets each Test Standard; the pilot must meet all Test Standards to receive a rating.

6.2.4. If a pilot **does not meet** a Test Standard, the controller monitoring at the time will inform the pilot of the mistake and, workload permitting, provide an opportunity to re-attempt the procedure. 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.

6.2.4.1. 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. Similarly, if it becomes evident that knowledge required to move to the next level is not present, provide feedback to the pilot and have them to re-attempt the flight.

6.2.4.2. 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 re-attempt the rating. Do not evaluate the pilot on any criteria except those listed in the flight’s Test Standards.

6.2.4.3. Learning opportunities should be addressed in as timely a manner as possible. Do not allow a pilot who has made a mistake to fly for an hour, finish the flight, and only then find out about an issue that happened on departure that will preclude them from passing the rating.

6.2.5. Based on workload, monitoring of a WINGS flight may be terminated mid-flight or declined. Where possible, attempt to hold or delay the pilot instead of terminating or declining the flight.

6.3. Concluding the Flight

6.3.1. If the flight will be discontinued, the controller must inform the pilot, remove WINGS-related remarks from the flight plan, and clear the “WIN” scratchpad. Thus, only pilots that arrive at their destination with the “WIN” scratchpad and corresponding remarks have passed.

6.3.2. The last controller to have contact with a WINGS flight must inform the pilot and assign the rating using the WINGS Entry form on the ATC Hub or IDS.

CRC aliases are available to simplify the process of submitting the rating. Select the aircraft and enter a WINGS alias to open the WINGS Entry Form, pre-filled with the corresponding flight number and the pilot’s CID. For example, use `.passpre3` for Pre-Flight 3, `.passv1` for VFR 1, and `.passi1` for IFR 1.

6.3.3. If you are unable to assign the rating via the form, email the name of the pilot, the pilot’s CID, and the flight number that was completed to wings@bvartcc.com.

Chapter 7: Clearance Delivery (DEL)

7.1. Overlying Controllers Offline

7.1.1. Inform departures when no overlying radar controller is available. Assign SID and top altitude information as normal.

> DAL3, cleared to Boston Airport, BDL#, then as filed. Maintain 4000. Departure offline. Squawk 7313.

7.2. Transponder (Squawk) Code Assignments

7.2.1. Network or ATC client functionality is used to assign squawk codes.

7.3. Assignment of Departure Frequency

7.3.1. A departure frequency should be issued in all IFR clearances and to VFR aircraft requesting flight following.

7.3.2. For IFR clearances, if the departure frequency in use is published on the assigned SID, the departure frequency may be omitted.

7.3.3. If the pilot will remain on the current frequency for initial radar identification (i.e., top-down coverage), the departure frequency may be omitted.

7.4. Preferred Routes

7.4.1. Preferred routes have been established to ensure an orderly flow of traffic for many city pairs within the ZBW ARTCC, and between neighboring airports.

7.4.2. Preferred routes are accessible to controllers via the IDS and ATC Hub, and to pilots on our Route Finder. These sources incorporate Letter of Agreement requirements with our adjacent facilities. If a preferred route has not been established, FlightAware may be used to determine an appropriate routing.

Note: altitudes shown are generally “at or below” altitudes.

7.4.3. On the IDS and other sources, you may encounter Tower Enroute Control (TEC) routes. These may be identified by the route type or because the altitude is restricted to 10000. TEC routes are established to keep aircraft travelling over short distances inside the TRACON environment.

Aircraft on TEC routes must be issued an altitude appropriate for direction of flight, at or below 10000.

7.5. Verbal Route Amendment Procedures

7.5.1. When it is necessary to update a pilot's route, make the change using the Flight Plan Editor as soon as the flight plan is received. ATC amendments should be completed before the pilot calls to request clearance.

7.5.2. Except at TDLS facilities, the contraction `FRC` or `FRC/(fix)` must be inserted as the first remark when a route is amended by ATC but has not yet been read to the pilot. This contraction, meaning "Full Route Clearance Necessary", is an indicator that ATC must read a full route clearance to the specified fix, or, if no fix is specified, for the entire route, when the pilot requests their IFR clearance.

7.5.3. The `.cld` alias may be used for text pilots and/or voice capable pilots who struggle to copy/receive amended routing verbally.

7.6. Evaluating Pilot-Filed Routes

7.6.1. Look up IFR preferred routes in the IDS or ATC Hub.

7.6.2. If the pilot has filed a route shown in the IDS or ATC Hub that is appropriate, clearance should generally be issued for the filed route.

If a preferred route exists but differs from what the pilot has filed, consider the factors below to determine if the flight should be assigned a different route.

7.6.3. Controllers must apply discretion when reviewing filed routes and determining if a preferred route or amendment will improve the flow of traffic and adjacent controller workload. Consideration should be given to the following:

- **Overall Airspace Status & Configuration:** During events, specific routes may be required. When the airspace is busy, or when multiple Center sectors are online, use of certain routes and altitude restrictions can assist in managing traffic.
- **Aircraft Equipment & Type:** The route should be appropriate for aircraft's navigation capability and equipment. For example, a SID or STAR that is available only to jets must not be assigned to a non-jet.
- **Use of SID:** If the first waypoint filed by the pilot is not shown on the map of waypoints on the requested/assigned SID, this may be an indication the aircraft's route goes "against the flow" and a route from the IDS or ATC Hub may be preferential.
- **Weather:** Pilots may file non-standard routes because they found them on FlightAware during active weather. If you see the route being used on FlightAware for weather avoidance, it is likely fine to leave the pilot on it.

7.6.4. For long-distance flights, such as those to the west coast or overseas, more route flexibility may be afforded. Pilot-filed routes that are similar to preferred routes may be acceptable. However, an inaccurate or “direct” route to destinations in neighboring ARTCCs like New York or Cleveland should be corrected to a preferred route.

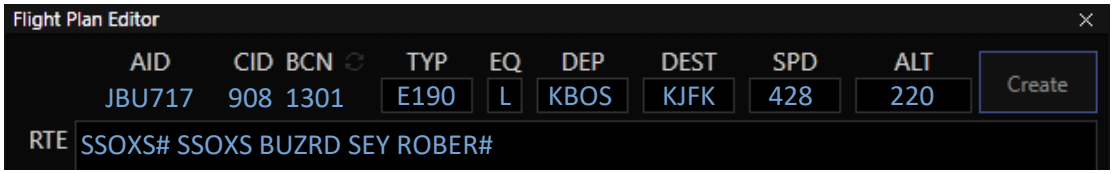
7.6.5. Where you are unsure of the best route to assign a pilot, coordinate with:

7.6.5.1. An overlying radar controller, or, if unstaffed,

7.6.5.2. The overlying ZBW sector, when staffed.

7.6.6. Several examples to illustrate best practices for amending filed routes follow.

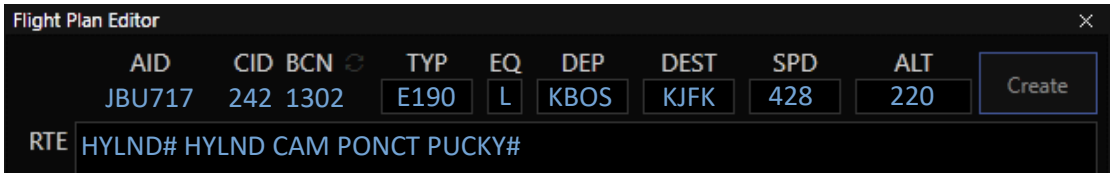
Example #1:



The route is similar to the IDS route, though the STAR is no longer published.

- **Decision:** Replace the ROBER# with the PARCH# in the IDS-preferred route.

Example #2:



The route is not found in the IDS. A review of FlightAware shows one real-world aircraft is flying this route now, and you notice the route tracks around adverse weather.

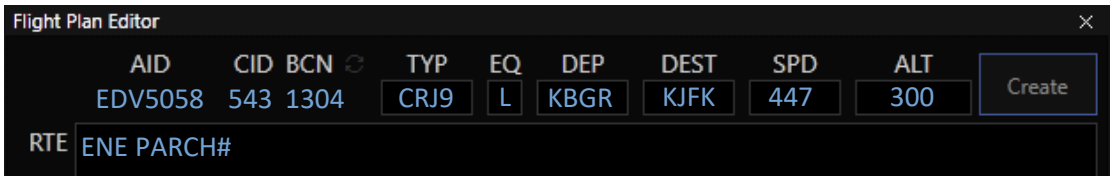
- **Decision:** During a quieter/non-event evening, the pilot has likely filed this route for weather and may be cleared as filed. During busier periods, validate the route with overlying the radar controller before issuing it.

Example #3:

The filed route is available to turbojet aircraft. However, this is a DH8D (non-jet).

- **Decision:** Amend route to an IDS-preferred route for non-jet aircraft.

Example #4:



The IDS preferred route would restrict the aircraft at 100. However, a review of FlightAware shows this route is used by real-world airliners at higher altitudes.

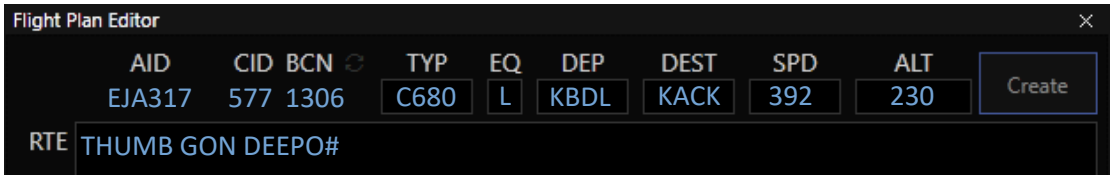
- **Decision:** Issue clearance as filed.

Example #5:

The route is similar to the IDS preferred route with a SID and STAR.

- **Decision:** Issue clearance as filed.

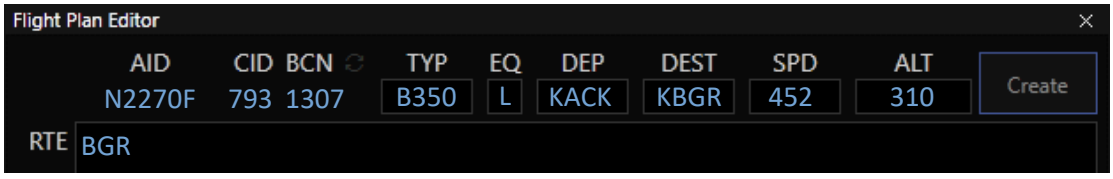
Example #6:



It's a busy event but no specific routes have been established. The IDS preferred route is a TEC route of **PVD PVD167 NEWBE DEEPO** *with a maximum altitude of 10000.*

- **Decision:** Re-route the pilot to the IDS preferred route, at 9000.

Example #7:



The IDS preferred route is a TEC route of **FREDO BOS PEASE ENE T295 BGR** *with a maximum altitude of 10000. However, it's not busy and Boston Center is the only overlying controller.*

- **Decision:** Issue clearance as filed (optionally, you check with CTR to make sure this route and altitude work for them first).

7.7. Use of TDLS

7.7.1. TDLS facilities in ZBW are: KALB, KBDL, KBOS, and KPVD. At these facilities, IFR clearances may be issued using TDLS or verbally. Clearances sent through the vTDLS software appear in the aircraft's pilot client from "ACARS".

Note: Aircraft do not need to be connected to the network for a clearance to be sent. The clearance will appear as soon as the pilot connects.

7.7.2. **Issuing Clearance:** First, ensure the flight plan reflects the aircraft's approved route, altitude, and aircraft equipment information. Changes to this information are made using the Flight Plan Editor in CRC.

Once the flight plan reflects the aircraft's approved route, altitude, and aircraft equipment, send clearance through vTDLS.

7.7.3. Control instructions such as unpublished altitude restrictions not optioned in vTDLS or heading assignments that differ from a SID must be issued verbally.

7.7.4. Controllers must send aircraft a clearance or amendment as soon as possible after receipt of a flight plan. Aircraft should generally not need to call to receive a clearance.

If an aircraft calls for an IFR clearance, the controller may issue clearance verbally, via vTDLS, or refer the pilot to a previously-issued TDLS clearance.

7.7.5. Where it is necessary to specify a different departure frequency, use the "Override Dep Frequency" feature in the vTDLS menu. Frequencies should be formatted as spoken. Examples: `134.7`, `133.0`, `123.95`.

Chapter 8: Ground (GND)

8.1. Overlying Controllers Offline

8.1.1. When no overlying controller is available, Ground will issue departure runway assignments in accordance with facility runway selection procedures. Ground may not refuse a pilot's request to depart from any runway.

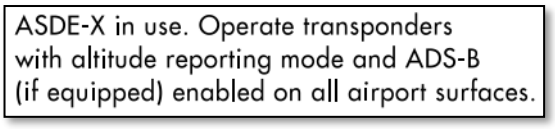
8.1.2. If an ATIS is published, runways must be listed as **"suggested runway(s)"**.

8.1.3. Ground may authorize aircraft to cross runways. When inbound traffic is present, only issue the crossing instruction if the departure can be clear of the runway before the arrival has reached a 5nm final. Consider that aircraft may be arriving on any runway and use good situational awareness and information from available radar displays to identify traffic conflicts.

8.2. Ground Surveillance Radar (ASDE-X)

8.2.1. Ground surveillance capability exists at KBDL, KBOS, and KPVD; accordingly, these three facilities have an ASDE-X window available. Controllers are expected to use full ASDE-X capabilities at these facilities.

Note: an airport's ASDE-X capability may be identified on Airport Diagrams:



8.2.2. **Transponder Simulation:** At KBDL, KPVD, and KBOS, controllers must verify aircraft in movement areas are squawking the correct code and Mode C before changing them to another frequency. At all other airports, controllers should assume the transponder status/code is not visible and must not provide instructions about transponders until the aircraft is observed on airborne radar.

8.2.3. **Safety Logic Runway Closures:** The open/closed status of runways (i.e., putting an "X" on the runway) will reflect NOTAM-based availability of the runway. Only runways closed by NOTAM, disabled aircraft, etc. will be shown as closed.

8.2.4. **Safety Logic System:** The safety logic system must reflect the active runway configuration. Tower controllers must have the "GC,LC" setting enabled. Ground controllers may elect to use only "GC" to minimize nuisance alerts.

8.2.5. **Conflict Alerts:** When an ASDE-X alert is generated that specifically states “GO AROUND”:

8.2.5.1. An arrival aircraft still airborne and prior to the landing threshold must be issued go around instructions.

Exception: Alerts involving known formation flights, as they cross the landing threshold, may be disregarded if all other factors are acceptable.

8.2.5.2. An arrival aircraft that activates a warning alert to a taxiway or wrong surface landing must be issued go around instructions.

8.2.5.3. On intersecting runways, when an alert is activated, the controller will issue go around instructions or take appropriate action to ensure intersecting runway separation is maintained.

8.2.5.4. Good judgement and evaluation of the situation at hand should be applied to conflict alerts. For example, during a busy event when a pilot who is struggling sets off an alert, it is acceptable to allow the pilot to continue their landing rather than risking significant disruption to the event.

8.2.6. **Use of ASDE-X Scratchpads:**

8.2.6.1. Scratchpads will be automatically added for departures. Definitions are available within facility SOPs.

8.2.6.2. For arriving aircraft, when Tower and Ground are staffed separately, Tower must input arrival parking/gate information if, in the Tower controller’s opinion, that information would be helpful for the Ground controller.

Note: at KBOS, use the same formatting as for strip markings (e.g., “C18”, “SC”, etc.). At other facilities, use easily understood entries.

8.2.7. **Simulation of Closures:** Closures that are being simulated may be depicted on the ASDE-X. To close a runway or taxiway within your area of jurisdiction, mark the area with the red “closed” box.

8.2.7.1. This box can only be removed when the surface is re-opened or when directed by the CIC during an event.

8.2.7.2. Controllers wishing to "ignore" boxed closures added by other controllers may "hide" the closure/temp data entered by other controllers.

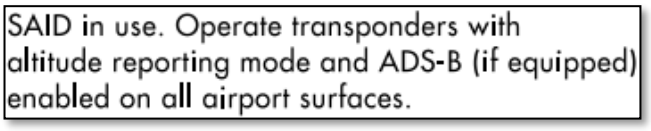
8.2.7.3. Closure information published in Facility SOPs or other directives must be depicted and simulated at all times.

8.3. Surface Awareness Initiative Display (SAID)

8.3.1. SAID is a tool designed to increase controller awareness of airport movements at facilities where Airport Surface Detection Equipment (ASDE) is not present. SAID is not a decision support tool and is intended to provide controllers enhanced situational awareness. SAID does not provide or guarantee any form of separation and does not provide safety logic or alert features.

8.3.2. SAID exists at KMHT; accordingly, KMHT has a SAID window available, accessible by selecting the ASDE-X display type. Controllers may use this depiction in lieu of or in addition to other vNAS ground monitoring capabilities.

Note: an airport's SAID capability may be identified on Airport Diagrams:



8.3.3. **Transponder Simulation:** At KMHT, controllers should verify an aircraft is squawking the correct code and Mode C before changing them to another frequency.

8.3.4. **Simulation of Closures:** Closures that are being simulated may be depicted on the SAID in accordance with the procedures under the ASDE-X simulation section on the previous page.

Chapter 9: Local (TWR)

9.1. Overlying Controllers Offline

9.1.1. When no overlying radar controller is online, maintaining the ATIS is imperative so that IFR arrivals can navigate to the correct final approach course.

9.1.2. Tower must not provide the services that would normally be offered by the overlying radar controller.

9.1.3. Provide a departure frequency change at an appropriate time:

> N2CF, no further ATC coverage available, frequency change approved.

9.1.4. 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 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 approved.

9.2. Opening and Closing Announcements

9.2.1. An announcement must be made upon resuming or terminating service on any frequency that doubles as a Common Traffic Advisory Frequency (CTAF). Frequencies that also act as CTAFs may be found in the VATSIM AIP.

9.2.2. Except when overlying ATC is online, when opening a Local control position, use the following phraseology:

> Attention all aircraft, (facility) is now in operation. Class (class) services are now available. (Facility, class airspace) airspace in effect.

> **Example:** *Attention all aircraft, Hanscom Tower is now in operation. Class Delta services are now available. Hanscom Delta airspace in effect.*

9.2.3. Except when overlying ATC is online, when terminating/closing a Local control position, use the following phraseology:

> Attention all aircraft, (facility) is now closed. Class (class) services are no longer available. Class G airspace in effect.
> *And if appropriate:* Use caution, other aircraft in (or entering) traffic pattern/area. (Exchange traffic if appropriate).

> **Example:** *Attention all aircraft, Hanscom Tower is now closed. Class Delta services are no longer available. Class G airspace in effect.*

9.3. Runway and Airspace Configuration Changes

9.3.1. When considering or implementing a runway configuration change, coordinate the change with all affected controllers. This will require collaborative decision-making with overlying radar facilities to determine the most efficient point to effect the change.

9.3.2. Coordination must include the specific callsign of the last planned departure and arrival aircraft from the old and new configurations.

> *BDL_TWR:* Bristol Radar, Bradley Local, configuration change.
> *BDL_APP:* Bristol Radar.
> *BDL_TWR:* Changing to landing and departing Runway 33. Last Runway 15 departure will be RPA4912.
> *BDL_APP:* Landing and departing Runway 33, last Runway 15 arrival will be JZA910, R-I.
> *BDL_TWR:* K-F.

9.4. Radar Release of Departing Aircraft

9.4.1. A departure release is required for all IFR aircraft, VFR aircraft at Class C or Class B airports, Opposite Direction Operations (ODO), and Special VFR.

Note: the **ATC Handbook** contains ODO coordination/release requirements.

9.4.2. At all **Class B or C** airports, and at **Nantucket (KACK)**:

9.4.2.1. IFR and VFR departures are automatically released (silent releases) for aircraft on coordinated departure runways and on assigned headings or departure corridors as specified in facility SOPs.

Note: Rolling calls may be required by individual facility SOPs.

9.4.2.2. Automatic releases do not apply to the below; a verbal release is required:

9.4.2.2.1. Intra-TRACON IFR departures.

9.4.2.2.2. Prior to departing the first aircraft associated with a new runway configuration.

9.4.2.2.3. Opposite Direction Departures.

9.4.2.2.4. Special VFR departures.

9.4.3. **At Class D airports (except KACK),** a release is required from the overlying radar controller unless otherwise coordinated.

9.5. Releases for Intra-TRACON IFR Departures

9.5.1. Due to the condensed, high-workload environment of Terminal airspace, Local must obtain a release from the overlying radar controller for any IFR departures destined for an airport within the same TRACON.

> *PWM_TWR:* CASCO, Portland Local, release.
> *PWM_APP:* CASCO.
> *PWM_TWR:* Request release, KAP14, Cessna 402, Augusta, 3000.
> *PWM_APP:* Heading 360. Released. L-E.
> *PWM_TWR:* N-N.

9.5.2. For Boston TRACON (A90) airports, a release is only required if the aircraft is destined for an airport within the same area (MHT, BOS, or ACK). For example, an aircraft flying ACK-HYA requires a release while ACK-BOS does not.

9.6. Obtaining a Release

9.6.1. Verbal release requests must include the call sign, type aircraft, departure exit fix or destination (if applicable), altitude, and departure runway (unless it is the only coordinated departure runway). Local must request the release:

> *GON_TWR:* Rhody, Groton Local, release.
> *PVD_APP:* Rhody.
> *GON_TWR:* Request release N123AB, Cessna 182, DEEPO, 5000.
> *PVD_APP:* Heading 090, maintain 2000. Released. P-S.
> *GON_TWR:* R-Q.

9.6.2. Where applicable[10], STARS F13 functionality may be used to obtain a release.

9.6.2.1. Aircraft must be entered into the F13 tabular list in the same order as the departure sequence.

9.6.2.2. The departure is released when the overlying radar controller has steadied the flashing departure request. This release will also constitute a rolling call for the aircraft.

9.6.2.3. Within the remarks section, enter any non-standard or non-advertised runway, heading, and altitude (in that order), as applicable, with an “R”, “H” & “A” preceding the numeric values.

Example: An aircraft departing the advertised Runway 29 at BED assigned heading 270: **`<F13>(LISTID) (ACID OR BEACON) H270 <ENTER>`**

Example: An aircraft departing the advertised Runway 14 at LWM on runway heading but climbing to 3000: **`<F13>(LISTID) (ACID OR BEACON) A3000 <ENTER>`**

[10] STARS F13 functionality is available at the following facilities if an overlying STARS radar is available: BDL, BGR, PVD, ACK, ASH, BED, BVY, EWB, GON, HYA, LWM, MVY, OWD, and PSM.

9.6.1. In response to a release request, the overlying radar controller can instruct Local to hold a departure, release the aircraft immediately, or provide a time for the release:

> *PVD_APP:* Hold for release, P-S.

> *PVD_APP:* Released, P-S.

> *PVD_APP:* Heading 190, maintain 3000, released, P-S.

> *PVD_APP:* Released at 2103Z, P-S.

9.6.2. If an immediate release is given, the release is valid if the aircraft becomes airborne within 3 minutes. (The overlying controller must be advised if the aircraft cannot be airborne within that time.) If a timed release is given, the aircraft can be airborne 2 minutes prior, and up to 1 minute after, the coordinated release time.

9.6.3. Use caution if using line up and wait while requesting an aircraft's IFR release; if the release is not approved, the aircraft may conflict with other traffic:

> N2CH, hold short Runway 16, awaiting IFR release.

> N332, Runway 16, line up and wait, awaiting IFR release. Traffic, Cessna 172, eight mile final.

9.6.4. The overlying radar controller can authorize use of visual separation between an arrival and a departure when issuing an IFR release:

> Visual separation approved between *(departure)* and *(arrival)*, *(departure)*, released.

Note: TWR must advise the radar controller if unable to apply visual separation.

9.6.5. TWR controllers may coordinate "on course departures" with APP. This may be of particular use for VFR departures with on course headings outside of published departure corridors.

9.6.6. TWR controllers may coordinate approval for VFR departures to remain on the TWR frequency until leaving associated Class C airspace. When approved, TWR will terminate the aircraft:

> Radar service terminated, squawk one two zero zero, change to advisory frequency approved.

9.7. Use of Rolling Calls

9.7.1. Rolling calls are required if specified in a facility SOP or requested by the overlying radar controller. When required, rolling calls can be fulfilled by pushing a flight strip, STARS F13 functionality where applicable[11], or verbally:

> ID, Boston Local, DAL142 Boeing 737 off Runway 22R.

9.7.2. Where STARS F13 functionality is used for a rolling call:

9.7.2.1. Aircraft must be entered into the F13 tabular list in the same order as the departure sequence.

9.7.2.2. The F13 must not be initiated more than 3 minutes from when the aircraft can depart. If an aircraft has been F13'd and it cannot depart, the appropriate STARS sector must be advised.

9.8. Anticipated IFR Departure Separation

9.8.1. Separate like-type IFR departures:

9.8.1.1. For the same destination: 8nm.

9.8.1.2. On the same Pilot Navigation SID and/or ATC-Assigned Heading: 5nm.

9.9. VFR Arrivals

9.9.1. At **Class D and TRSA** airports, APP will not provide any sequencing for VFR arrivals unless otherwise coordinated.

9.9.2. At **Class C** airports, APP must sequence VFR arrivals and insert the corresponding scratchpad prior to transferring communications to TWR. Aircraft that contact TWR directly will be instructed to:

> Remain outside Charlie airspace, contact *(frequency)*.

Alternatively, TWR may issue pattern entry and landing instructions with coordinated approval from APP. When approval is received, TWR will be responsible for provision of Class C service.

[11] STARS F13 functionality is available at the following facilities if an overlying STARS radar is available: BDL, BGR, PVD, ACK, ASH, BED, BVY, EWB, GON, HYA, LWM, MVY, OWD, and PSM.

9.10. Missed Approaches and Go Arounds

9.10.1. Unless a pilot has specifically requested to fly a published missed approach, aircraft that abandon their approach and that will return to the radar environment must initially be instructed to fly runway heading and climb to 3000 (or as prescribed by facility SOP). Coordination will then be conducted with an overlying radar controller in case additional instructions must be provided.

The process for handling a go around is summarized below.

First, communicate with the pilot:

> *KAP28:* Tower, KAP28, going around, unstable approach.
> *TWR:* KAP28, fly runway heading, climb and maintain three thousand.
> *KAP28:* Fly runway heading, climb and maintain three thousand.

Next, coordinate with the overlying radar controller, stating the issued go around instructions and the reason for the go around, if known:

> *TWR:* Departure Radar, Local, go around.
> *DEP:* Departure Radar.
> *TWR:* KAP28, runway heading, 3000, unstable approach, K-M.
> *DEP:* C-T

Note: coordinate an alternative heading or altitude as required.

Finally, instruct the aircraft to contact the overlying radar controller:

> *TWR:* KAP28, contact Boston Departure, one two six point one.

9.10.2. If not indicated during coordination, the radar controller will obtain the reason for the go around from the aircraft:

> *DEP:* KAP28, say reason for go around.

9.10.3. Except as prescribed by facility SOP, an unplanned missed approach and/or go around suspends automatic releases. The overlying radar controller must state **"departures released"** to reauthorize automatic releases.

9.11. Use of Radar

9.11.1. KBOS, KACK, and all Class C Tower facilities are considered “radar facilities”. Radar availability at other Class D facilities is prescribed in the **Class D Facility Coordination Procedures** document.

9.11.2. Radar facilities are authorized to:

9.11.2.1. Provide radar separation between:

9.11.2.1.1. Successive departures.

9.11.2.1.2. Successive arrivals.

9.11.2.1.3. Arrivals, departures, and overflights.

9.11.2.2. **“Radar contact”** and track an aircraft, at Class C facilities and KBOS only.

9.11.2.3. Issue a direction, suggested heading, and/or radar vector.

9.11.2.4. Issue radar traffic advisories.

9.11.2.5. Issue visual approach clearances.

9.11.3. At non-radar facilities, ATC client radar functionality must be used for situational awareness but must not be the primary means of separation. Radar separation, vectors, or traffic advisories must not be used.

9.12. Frequency Change Coordination

9.12.1. Controllers must coordinate the use of “monitor” or “contact” within the airport environment (i.e., handoffs from Ground to Tower, between Local positions).

9.12.1.1. **“Monitor”** means the pilot will change to the specified frequency but stand by for instructions. ATC is expected to establish communications.

9.12.1.2. **“Contact”** means the pilot will establish communication with the specified frequency.

9.12.2. The use of “monitor” is recommended when it will alleviate frequency congestion (i.e., there are multiple departures at the runway, and no advantage is obtained by having the third departure in line contacting Local).

9.12.3. When aircraft are instructed to “monitor” the next frequency, a process must be established to ensure the receiving controller is aware the pilot is monitoring. This may be accomplished by blanket coordination (i.e., “have everyone monitor”), verbal coordination per aircraft, or flight strips.

Chapter 10: Approach (APP)

10.1. Overlying Controllers Offline

The following procedures apply for Approach controllers when Boston or an adjacent Center is offline.

10.1.1. Climb **departures** to your airspace ceiling altitude and ensure they are “on course” prior to terminating service.

10.1.2. For **arrivals**, send the aircraft a “contact me” through network functionality at approximately the location a handoff from Center would occur.

10.1.2.1. If a pilot contacts you well outside of your airspace, instruct the pilot to **“proceed at your own risk”**, issue a descent as appropriate, and provide instructions for when/where the pilot should contact you:

> UAL45, outside of my airspace. Proceed at your own risk to cross CDOGG at 11000. Contact my frequency 10 miles west of CDOGG.

Note: it is not acceptable to state “you are outside of my airspace, call me when you are entering”. Pilots must be given enough information to know where and when to re-establish contact.

10.1.3. Because ATC is not always available, enroute aircraft may enter or leave the airspace where ATC is online.

10.1.3.1. For aircraft entering airspace, radar contact the aircraft with reference to a waypoint along their flight plan (where possible):

> AAL234, Boston Approach, squawk 3405; *(then),* American 234, radar contact one zero miles west of PROVI, descend via the ROBUC# arrival, Runway 22L.

10.1.3.2. For aircraft exiting ATC airspace, treat the aircraft normally until the aircraft reaches your boundary. Then, advise that the adjacent facility is offline:

> UAL2, Boston Center offline, further climb at your own risk, radar service terminated, frequency change approved.

10.2. Consolidation Procedures

10.2.1. STARS consolidation must reflect the configuration of staffed TCPs and associated airspace.

10.3. Surveillance Approaches

10.3.1. BVA does not provide training or procedures for PAR or ASR approaches. Controllers, referencing the 7110.65 and other applicable procedures, may issue radar/surveillance approaches at their discretion as workload permits.

10.3.2. Controllers who will not offer surveillance approaches should inform the pilot:

> I am not authorized to provide that type of approach. Say intentions.