VATSIM Setup

The VATSIM Network

Founded in July 2001, VATSIM emerged from the collective vision of a group of individuals dedicated to fulfilling the needs of flight simulation enthusiasts worldwide. The initiative aimed to establish an inclusive online community, providing a platform for enthusiasts to connect, while fostering a global community dedicated to learning, sharing experiences, and exploring new opportunities within the virtual aviation realm. This pioneering group is now recognized as the VATSIM Founders, continuing to guide the network's strategic direction.

Organizational Structure

The governance of VATSIM is entrusted to the Board of Governors, comprising individuals tasked with overseeing specific aspects of the network's operations. This board includes Regional Vice Presidents, each representing one of VATSIM's regions, supported by a comprehensive local staff structure. It is noteworthy that all positions within VATSIM are filled by volunteers.

VATSIM's global community is organized into Regions, Divisions, and then local facilities, the names of which vary by location. This hierarchical structure is designed to cultivate and support communities worldwide, providing resources, training, and a forum for sharing the VATSIM experience. Additionally, VATSIM serves as the principal network for numerous established Virtual Airlines and other virtual flying organizations, enriching our skies daily with hundreds of flights.

Our Members: The Core of VATSIM

At the heart of VATSIM are our members, whose participation and engagement are paramount. Members have the freedom to experience VATSIM in their preferred manner, whether through flying, controlling, or both. VATSIM is a platform for everyone, embodying a network that is as diverse and enriching as the members who make it vibrant.

Welcome to VATSIM, a community where your aviation aspirations can soar.

Essential VATSIM Tools

As you prepare to embark on your flight simulation journey, consider integrating a selection of pivotal tools that are extensively utilized by the flight sim community. While the adoption of these tools is at your discretion and not obligatory, they are designed to significantly enhance your flight simulation experience. It's important to note that while some tools offer free versions, others may require a subscription fee.

Navigraph Charts

Navigraph Charts stands out as a premier tool among flight simulation aficionados, compatible with a variety of platforms such as X-Plane 11, X-Plane 12, P3D, and MSFS2020. It offers an exhaustive array of VFR maps, IFR charts, airport diagrams, and interactive enroute charts, serving as an indispensable resource for meticulous flight planning. The Navigraph team commits to regular updates, underscoring its value as a subscription service within the flight simulation ecosystem.

Chartfox

Chart Fox offers a free chart service that includes a broad selection of navigational charts. While it provides extensive coverage in Europe and the United States, it's worth noting that some global regions may not be as thoroughly covered. For pilots who frequently navigate the skies of these well-serviced areas, Chart Fox presents an ideal solution.

Flowpro (MSFS)

FlowPro reimagines the MSFS user interface by eliminating the standard toolbar and introducing an innovative custom wheel feature. This tool simplifies access to functionalities with a straightforward click, enabling you to customize wheels for different aircraft types. For those looking to further refine their MSFS experience, additional FlowPro widgets are available at flightsim.to, offering enhanced utility and immersion.

Ground Services X (GSX)

GSX offers a highly realistic ground crew simulation, encompassing catering, refueling, boarding, and pushback operations. To achieve a truly immersive experience, users can download specific airport profiles from flightsim.to, ensuring that each airport setup is tailored to the unique requirements of your simulation environment.

Integrating these tools into your VATSIM experience can greatly enrich your flight simulation, providing you with the resources and functionalities needed to elevate your virtual aviation journey.


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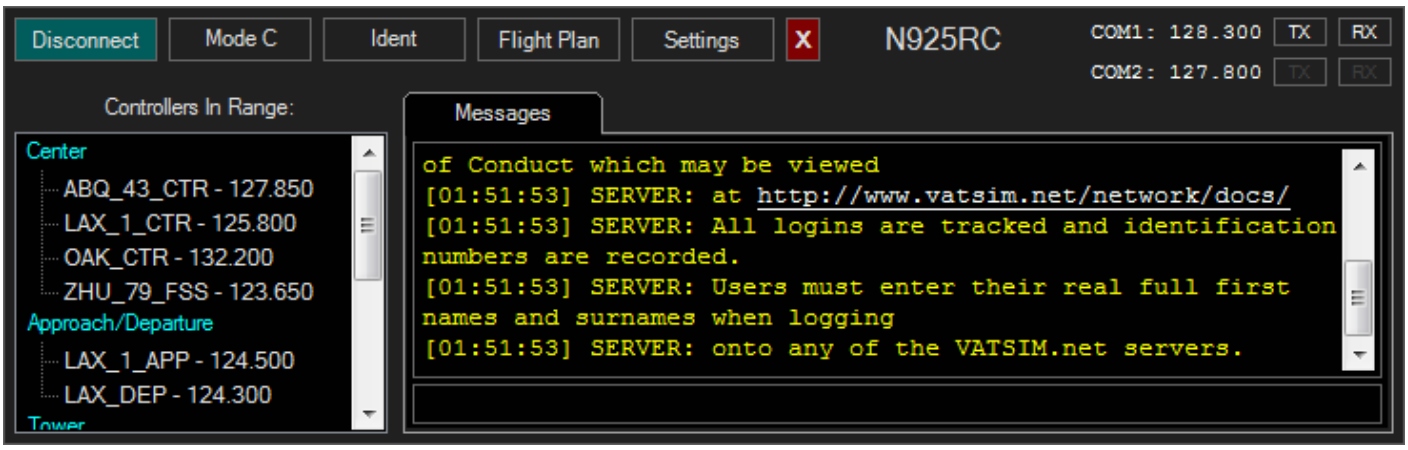
Setting Up Your Pilot Client



Upon initiating your flight simulation session, a crucial first step involves seamlessly integrating into the VATSIM network through your pilot client, such as vPilot or xPilot. This integration is pivotal for engaging with air traffic control (ATC) and ensuring a realistic flight experience. Here's a guide to effectively setting up your pilot client and initiating communication with ATC.

Initial Steps in Your Simulator:

1. **Log into vPilot/xPilot**: Start by logging into your chosen pilot client. This is your gateway to accessing the VATSIM network and its array of online controllers.
2. **Interface Overview**: Upon successful login, you will be presented with an interface that lists available controllers. This interface is intuitive and designed to give you a comprehensive overview of ATC services available in your immediate vicinity.

Establishing Communication with ATC:

The process for identifying which controller to contact depends significantly on the specific airport and its available ATC services. Follow this structured approach to determine the correct point of contact:

1. **Ground Controllers**: Initially, scroll through the list to check for the presence of ground controllers at your location. If available, promptly set your aircraft's radio to the frequency assigned to the ground controller.
2. **Tower Controllers**: In the absence of ground control, your next step should be to look for a tower controller. If a tower controller is listed, adjust your radio frequency accordingly to establish contact.
3. **Approach/Departure Controllers**: If neither ground nor tower controllers are available, the appropriate action is to reach out to approach or departure control. They will guide you in airspace management around the airport.

4. **Center Controllers**: In scenarios where only the center controller is active, it is imperative to communicate with the center. The center controller will provide instructions for your flight across larger sections of airspace.

Summary:

Navigating the ATC communication setup within VATSIM requires a methodical approach, starting with ground control and moving up through tower, approach/departure, and finally, center controllers, based on availability. This structured method ensures that pilots can effectively communicate with ATC, fostering a realistic and immersive flight simulation experience. Remember, clear and proper communication with ATC enhances safety and efficiency, making your VATSIM experience more enjoyable and authentic.

Obtaining Pre-Flight Clearance on VATSIM

Securing pre-flight clearance is a pivotal step before boarding and starting your aircraft from a cold state on the VATSIM network. This section outlines the procedure for obtaining clearance, ensuring you're ready for an immersive and procedurally accurate flight experience. Click here for our useful VATSIM Que Card.

Preparing for Clearance:

1. **ATIS Information**: Before reaching out for clearance, it's crucial to acquire the latest Automatic Terminal Information Service (ATIS) details. This can be done directly through your pilot client, such as vPilot, or by visiting https://datis.clowd.io for real-time ATIS updates.
2. **Contacting the Controller**: With the ATIS information at hand, you are now ready to request clearance from the available controller, typically ground control at your departure airport.

Requesting Clearance:

The format for requesting IFR clearance is straightforward:

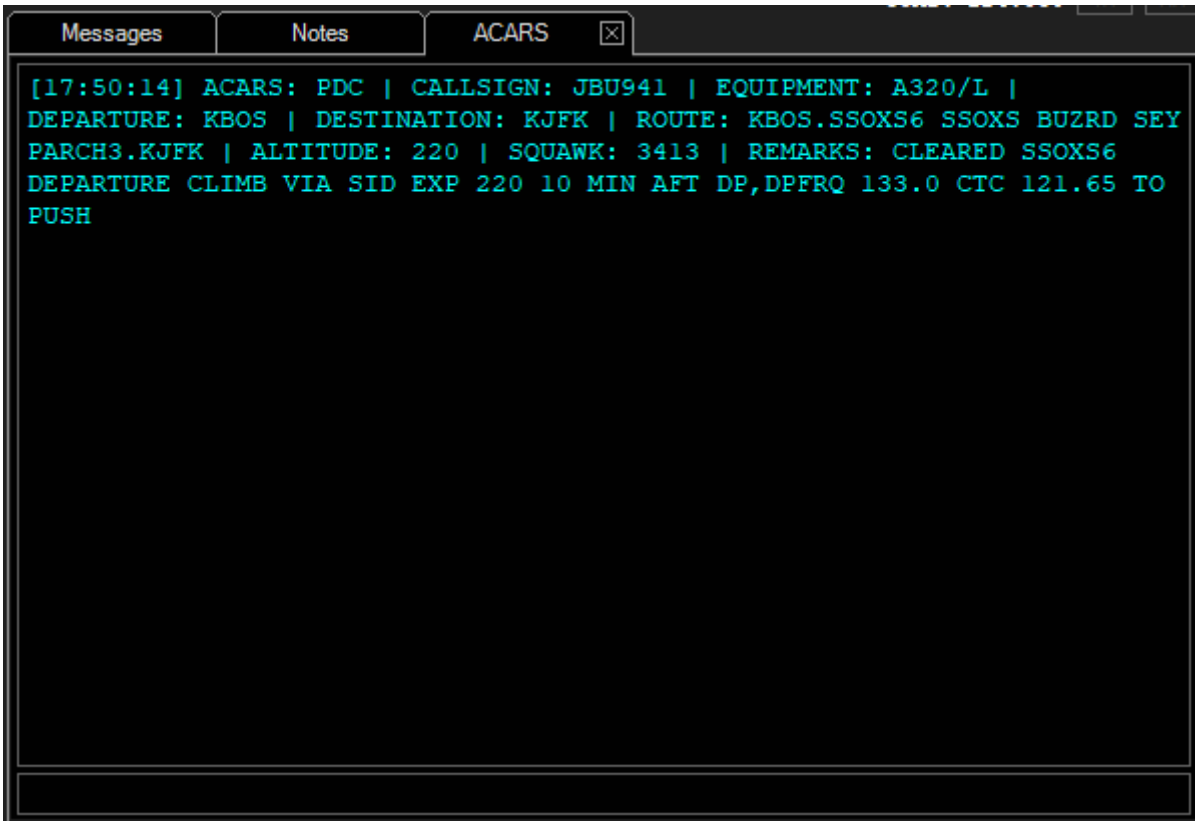
`[Controller ID], [Your Callsign] requesting IFR to [Destination], with [ATIS code].`

Example:

`"Las Vegas Ground, UAL1179 requesting IFR to George Bush Intercontinental, with Echo."`

Upon your request, the controller may provide verbal clearance or issue a Pre-Departure Clearance (PDC) via your pilot client.

Example PDC:



Clearance Read-back:

The clearance provided by the controller typically follows this structure:

`Cleared to [destination airport], via [departure procedure] [transition or radar vectors], then as filed. Climb [via SID/instructions], expect [cruise altitude] [time] minutes after departure, departure frequency [frequency], squawk [squawk code].`

While receiving clearance, it's a good practice to jot down the details in your pilot client's notes. If clarity is needed, don't hesitate to request the controller to repeat the clearance.

Example Read-back:

`"Cleared to Houston Intercontinental, via NIITZ3 departure, SSKEE transition, then as filed. Climb via SID, expect flight level 370, 10 minutes after departure. Departure frequency 125.8, squawk 4733."`

Following your read-back, the controller will confirm with "readback correct" or provide necessary corrections.

Final Steps:

- After the clearance read-back is confirmed, the controller will instruct you on the next steps, typically to "contact when ready for pushback and start" or "contact when ready for taxi."
- If instructed to "contact when ready for taxi," you have the discretion for pushback. Conversely, if the controller specifies "Call for push and start," you must obtain ATC approval before pushback to ensure coordination and safety on the ground.

This process underscores the importance of clear communication and adherence to ATC instructions for a seamless pre-flight setup on VATSIM, enhancing the realism and enjoyment of your virtual flight experience.

Requesting Taxi Clearance on VATSIM

Requesting Taxi Clearance on VATSIM

Once your pushback is complete and you've coordinated with the ground crew (if using GSX for ground services), your next step is to request taxi clearance from ATC. This procedure is vital for integrating seamlessly into the active airport environment and proceeding to the runway in a manner that ensures both your safety and the efficiency of airport operations. Below is a guide to properly request and confirm your taxi clearance on VATSIM.

Before Requesting Taxi:

- **Squawk Mode C**: Ensure your transponder is set to "Mode C" to transmit your altitude information. This setting is crucial for ATC to track your aircraft on ground radar accurately.
- **Format for Request**: Your request should succinctly communicate your readiness to taxi, including your current location and the ATIS information you've received.

`[Controller ID], [Your Callsign], at [location/gate], with Information [ATIS letter], ready to taxi.`

Example Request Controlled Airports:

`"Las Vegas Ground, UAL1179, at gate D9, with Information Delta, ready to taxi."`

Example Announcement for Uncontrolled Airports:

`"Las Vegas traffic, UAL1179, at gate D9, taxing to runway 8L, Las Vegas Traffic."`

Receiving Taxi Instructions:

- The controller will respond with your taxi clearance, outlining your path to the assigned runway. It's essential to note these instructions in your pilot client for reference.
- Pay careful attention to any instructions regarding hold shorts or runway crossings, as these are critical for maintaining safe ground operations.

Example Instruction and Readback:

Instruction from ATC:

`"UAL1179, taxi to Runway 19R via taxiways Charlie, Golf, Delta, hold short of Runway 19L."`

Your Readback:

`"Taxi to Runway 19R via Charlie, Golf, Delta, hold short of Runway 19L, UAL1179."`

During Taxi:

- As you taxi, remain vigilant for other aircraft on your path and any intersecting taxiways. Adhering to your assigned route and any hold short instructions is paramount for safety.
- Approaching the runway, ATC may direct you to switch to another controller (e.g., tower) for takeoff clearance or provide further instructions.

Transition to Takeoff:

- Upon nearing the runway, if instructed by ATC to change frequency, acknowledge the handoff with a readback of the new frequency and proceed to contact the next controller.

Key Takeaways:

Requesting and receiving taxi clearance on VATSIM requires clear communication and adherence to ATC instructions. By following the established protocol and maintaining awareness during taxi, pilots contribute to the smooth operation of virtual airport environments, enhancing the realism and enjoyment of the VATSIM experience for all participants.

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Pre-Departure and Takeoff Procedures on VATSIM

Following the transition from Ground to Local frequency and completion of your final pre-departure checks, it's time to initiate contact with the tower for takeoff clearance on VATSIM. The process involves precise communication and adherence to the instructions provided by the air traffic controller. Here's a step-by-step guide to the pre-departure and takeoff procedures:

Initial Contact with Tower:

1. Tune into the tower frequency as instructed by the ground controller. Pay attention to any specific instructions given by the ground controller, such as "Monitor Tower," which indicates that you should wait for the tower controller to initiate contact.
2. When initiating contact, adhere to the following format:

`[Controller ID], [Your Callsign], short of/coming up on [runway], ready for departure.`

Example Contact:

`"Las Vegas Tower, UAL1179, short of 19L, ready for departure."`

Takeoff Clearance Format:

1. The tower controller will respond with your takeoff clearance, providing essential information for a safe departure.

`[Callsign], [Controller ID], Wind [wind direction + speed], [after takeoff instruction], runway [runway], cleared for takeoff.`

Example Takeoff Clearance:

`"UAL1179, Las Vegas Tower, wind 170 at 6, RNAV to DEREW, runway 19L, cleared for takeoff."`

2. Ensure you read back the entire takeoff clearance, including any after-takeoff instructions, headings, or RNAV points specified by the controller.
3. The typical format for a takeoff clearance includes details like wind direction and speed, after-takeoff instructions, assigned runway, and the explicit clearance to take off.

Example Readback:

`"RNAV to DEREW, runway 19L, cleared for takeoff, UAL1179"`

Execute Takeoff:

1. After receiving the takeoff clearance and confirming with a readback, execute your takeoff procedures, including engaging the Takeoff/Go-Around (TO/GA) mode.
2. Follow any specific instructions provided by the tower, such as flying RNAV to a designated point or adhering to a specified heading.

Important Note:

- Always pay attention to the controller's instructions and read them back accurately to ensure a smooth and coordinated departure.
- Be prepared to comply with any additional instructions or clearances that may be issued by the tower during the departure phase.

By following these procedures, you contribute to the realistic and organized flow of traffic on VATSIM, enhancing the overall experience for yourself and fellow virtual aviators.

Post-Takeoff Procedures and Transition on VATSIM

As you ascend into the skies, your interaction with air traffic control (ATC) evolves, transitioning from departure control to en-route Center controllers on VATSIM. The following outlines the procedures and communication formats during and after takeoff:

Contacting Departure Controller:

1. **Post-Takeoff Contact:**
   - Once airborne, you'll receive instructions to contact the departure controller. Tune into the provided departure frequency from your preflight clearance and wait for an appropriate moment to initiate your call.
   - Format for initial contact with Departure:

`"UAL1179, Las Vegas Departure, radar contact, climb and maintain FL190."`

2. **Handoff to Center:**
   - Departure will guide you to a certain altitude, at which point you'll be handed off to a Center controller.
3. **Contacting Center Controller:**
   - Upon handoff, readback the new frequency and initiate contact with the Center controller.
   - Format for contacting Center:

`[Controller ID], [Your Callsign], climbing through [current altitude] for [assigned altitude], [SID name or D-TO].`

4. **Cruise Level Instructions:**
   - The Center controller will instruct you to climb to your assigned cruise level. If necessary, you can request a different cruise altitude or heading deviation due to weather conditions.
   - Example Request and Acknowledgment:

`"Pacific Center, UAL1179, requesting FL350 due to turbulence."`
`"UAL1179, climb and maintain FL350, approved."`

5. **Handoff to Subsequent Centers:**
   - As you approach the boundary of the current Center's airspace, you'll be handed off to the next Center, either within the same FIR/ARTCC or a neighboring one.
   - For each handoff, follow the same procedure of reading back the new frequency and initiating contact.
6. **Unicom Frequency Transition:**

- In instances where the next controller is not online, Center will hand you off to Unicom on frequency 122.800.
- During this phase, no specific calls are required until you reach the approach/landing phase.

Key Notes:

- **Clear and Concise Communication:**
  - Maintain clear and concise communication with ATC, adhering to their instructions and promptly responding to any queries.
- **Proactive Request for Changes:**
  - Feel free to request changes in altitude or heading if needed, and the controller will either approve the request or provide an alternative.
- **Smooth Handoff Process:**
  - The handoff process between controllers ensures a seamless transition and organized airspace management.

By following these procedures, you contribute to the realism and efficiency of the VATSIM network, enhancing the overall experience for yourself and fellow virtual aviators.

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Descent and Approach Procedures on VATSIM

As you commence your descent towards the destination airport, adherence to proper procedures and effective communication with air traffic control (ATC) is essential. Below are guidelines for navigating the descent and approach phases on VATSIM:

Transition from Center to Approach:

1. **Top of Descent (TOD) Instructions:**
   - As you approach the Top of Descent, the Center controller will issue either a 'descend via' instruction, instructing you to follow published procedures, or provide specific altitudes for descent.
   - Example 'Descend Via' Instruction:

`"UAL1179, descend via the DRLLR5 arrival, the Houston altimeter, 29.81."`

2. **Handoff to Approach:**
   - When nearing a certain altitude, the Center controller will instruct you to contact Approach.
   - Format for Approach Check-In:

`[Controller ID], [Your Callsign] descending [current altitude] for [assigned altitude], Information [ATIS]" OR "descending via [STAR name], Information [ATIS].`

   - Example Check-In:

`"Houston Approach, UAL1179 descending through 10,000 for 3,000, Information Echo."`

3. **ATIS Verification:**
   - Prior to approach handoff, ensure you have the current ATIS information for your destination airport. This is crucial for selecting the correct approach runway and verifying the arrival procedure endpoint.

Approach Clearances:

1. **Approach Information:**
   - Approach will respond with the current altimeter setting and the expected approach procedure.
   - Example Response:

`"UAL1179, Houston Approach, expect ILS 26R, the Houston altimeter, 29.81."`

2. **Final Approach Clearance:**
    - As you near the final approach corridor, Approach will issue your final approach clearance, including position, turn, altitude, and the overall approach clearance.
    - Example Final Approach Clearance:

`"UAL1179, 6 miles from CHUBS, turn right heading 240, maintain 3,000 until established on the localizer, cleared ILS 26R approach."`

3. **Readback Procedure:**
    - Read back the turn, altitude, and clearance components of the approach clearance.
    - Example Readback:

`"Turn right heading 240, maintain 3000 until established, cleared ILS 26R approach."`

Handoff to Tower:

1. **Handoff from Approach to Tower:**
    - Approach will hand you off to the Tower controller sometime before reaching the final approach fix.
2. **Acknowledgment and Contact with Tower:**
    - Acknowledge the handoff and make contact with the Tower controller for further instructions.

By diligently following these procedures and maintaining effective communication, you contribute to the realism and efficiency of VATSIM airspace management, ensuring a safe and enjoyable virtual flight experience.

Landing and After-Landing Procedures on VATSIM

Successfully completing your flight on VATSIM involves careful execution of landing and post-landing procedures. The following outlines the steps to be taken during and after landing, ensuring a smooth conclusion to your virtual flight:

Landing Procedures:

Prior to landing, Tower will issue your landing clearance, including wind information and the cleared runway once you have contacted them.

Example Contact From Pilot:

`[Controller ID], [Your Callsign], [What approach and runway you are flying].`

`Houston Tower, UAL1179, established ILS runway 08R`

Example Instruction From Tower:

`[Pilot Callsign], [Controller ID], [wind information], [Runway], [landing clearance/instructions]`

`UAL1179, Houston Tower, winds are 170 at 5, runway 08R, Cleared to land.`

Example Readback From Pilot:

`[Clearance], [Runway], [Any instructions if given], [Pilot Callsign]`

`Cleared to land, Runway 08L, UAL1179`

`Cleared to land, Runway 08,Exit left and Hold short taxiway FA, UAL1179`

Contact with Tower after Landing:

After landing and rollout, promptly exit the runway as directed by ATC. Tower will then instruct you to contact Ground or provide temporary instructions for runway crossings. Instructions may be given on the initial contact with tower, or they may wait until you touch down.

Example Instruction From Tower on Rollout:

`[Callsign], [left/right] when able, [taxi instructions], contact ground [frequency].`

`UAL1179, exit left when able, hold short FA, Contact ground on 121.625`

Example Readback From Pilot:

`[Vacating Instructions], [Taxi instructions], [Freq. Instruction], [Callsign]`

`Exit left when able, hold short FA, contact ground on 121.625, UAL1179`

After Exiting Runway:

- Upon exiting the runway, initiate contact with Ground using the following format:

`[Controller ID], [Your Callsign], just exited [runway], parking at [Gate or Terminal].`

`Houston ground, UAL1179, holding short AE, parking at C5`

Gate Selection:

- When handed over to Ground, be prepared to state your preferred gate or terminal. Having a specific location in mind streamlines the taxiing process.

Taxi Instructions to Parking:

- Ground will issue taxi instructions to guide you to the designated parking location.

`[Callsign], [Controller ID], taxi to [Gate or terminal] via [taxi instructions].`

After-Landing:

1. **Taxi to Parking:**
   - Follow Ground's instructions to taxi your aircraft to the designated parking spot.
2. **Shutdown Procedures:**
   - Once parked, initiate shutdown procedures for your aircraft.
3. **PIREP Filing:**
   - File a Pilot Report (PIREP) on SmartCARS or the applicable platform used by your virtual airline.

Conclusion:

By meticulously following these procedures, you wrap up your virtual flight on VATSIM in a realistic and professional manner. These steps contribute to the overall efficiency and immersion of the virtual airspace, enhancing the experience for both pilots and controllers. Congratulations on completing another successful flight for FlyUnitedVirtualAirlines!


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Oceanic Procedures on VATSIM

Obtaining Oceanic Clearance:

1. **Filing Flight Plan:**
   - Before entering Oceanic airspace on VATSIM, file your flight plan with either Gander (Atlantic Eastbound) or Shanwick (Atlantic Westbound) Oceanic Centers.
2. **Clearance Filing Links:**
   - Use the following links to directly access the clearance filing pages:
     - Atlantic Eastbound Clearance
     - Atlantic Westbound Clearance

Special Oceanic Procedures: SELCAL:

1. **SELCAL System:**
   - Aircraft flying transatlantic or transpacific routes must be equipped with an HF radio due to VHF limitations over the ocean.
2. **SELCAL Code Entry:**
   - Enter your aircraft's SELCAL code in the pilot client or refer to the real SELCAL at rzjets.net.
   - 

3. **ATC Contact Using SELCAL:**
   - Ensure your SELCAL is entered in your flight plan, allowing ATC to contact you using this unique identifier.

Special Oceanic Procedures: Position Reports:

1. **Position Reports in Oakland Oceanic Airspace:**
   - In areas without radar coverage, pilots must make occasional position reports to maintain separation.
2. **Oakland ARTCC Format Generator:**
   - Use the Oakland ARTCC format generator for position report message generation.

Special Oceanic Procedures: Radio Telephony:

1. **ATC Communication in Oceanic Airspace:**
   - Within Oceanic Airspace, pilots communicate with a messenger, often referred to as "Radio," who relays instructions from enroute controllers.
2. **Sample Communication:**
   - Use phrases like "Gander Radio, UAL948 Heavy is overhead 50N040W, time 1840 Zulu" when contacting "Radio."

North Atlantic (NAT) Oceanic Procedures:

1. **Advisories for Crossing the Atlantic:**
   - Be alert to SELCALs, traffic advisories, and weather. Request climbs or descents to avoid weather.
2. **Check-Ins with Gander/Shanwick:**
   - Regularly check in with Gander/Shanwick to avoid missed handoffs, especially when approaching 030 West.
3. **Handoffs Between Gander and Shanwick:**
   - Be prepared for handoffs between Gander and Shanwick approaching 030 West.

Pacific Oceanic Procedures:

1. **Continuous Contact with San Francisco Radio:**
   - Unlike the Atlantic, expect continuous contact with "San Francisco Radio" without frequent handoffs.
2. **Position Reports for Oakland Oceanic:**
   - In Oakland Oceanic airspace, inquire with San Francisco Radio about the need for position reports.
3. **Hawaiian Islands Clearance:**
   - Oakland Oceanic does not control the Hawaiian Islands; do not request clearance from them.
4. **Radio Check and CPDLC:**
   - If you lose radio communication with San Francisco Radio, request a radio check. If issues persist, switch to CPDLC services.

By adhering to these procedures, pilots contribute to the orderly and safe flow of traffic over oceanic airspace on VATSIM, enhancing the realism of their virtual flights.