

VATCAR VATSIM Caribbean Division



Standard Operation Procedures

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Welcome to Havana FIR (Virtual)!

Thank you for your interest in **Havana FIR**. The geographical location of Cuba makes it a great stepping stone from the United States to the Caribbean and Latin America. This document contains essential information regarding our operations and policies. Therefore, it is **required reading for all Havana FIR controllers**. If you read and understand the SOP, your job as a controller will be much easier.

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2 General Information and Procedures

2.1 VATSIM Code of Conduct

All controllers must abide by the VATSIM Code of Conduct

2.2 Preferred Language Between ATC and Pilots

English and Spanish are both preferred languages in Havana FIR. You may speak English to certain pilots and Spanish to others. However, English is the international language of ATC, so you may not refuse to provide ATC service in English.

On the other hand, those controllers who do not know Spanish may provide English-only ATC service, as long as they clearly indicate that this is so on their text ATIS.

2.3 Politeness Online

Do not argue with pilots online. If a pilot refuses to comply with ATC Instructions, notify a Senior Controller or FIR staff. If none is available, summon a VATSIM Supervisor using the **.wallop** command on ASRC / VRC. (ex. .wallop Need help in Cuba, pilot refuses to follow instructions).

2.4 Fir Charts and Forms

You can download the available charts, forms and reference information from the FIR's website.

2.5 Which Radar Client to Use

At this time there are two alternatives for Radar Client software:

- Advanced Radar Simulation Client (ASRC)
- Virtual Radar Client (VRC)

Havana FIR supports the use of either client, but recommends VRC to those controllers with multiple monitors. Each one has distinct advantages, but VRC is easier to learn. The choice is left to the controller.

3 Radar Software Installations and Setup

3.1 Radar Client Download and Installation

Both radar clients presently available have extensive documentation that explains how to get the most out of them, so the purpose of this section is not to outline the functionality of each client. That said, this section is a starting point to download the radar client of your choice along with its documentation, and then getting that radar client configured for optimal use in Havana FIR.

3.1.1 ASRC – Advanced Simulated Radar Client

- ASRC can be downloaded at <http://asrc.info>.
- ASRC requires all of the files available on the “Downloads” section of our website.

3.1.2 VRC – Virtual Radar Client

- VRC can be downloaded at <http://www.metacraft.com/VRC>.
- VRC requires the POF, sector files and keyboard alias file available on the “Downloads” section of our website.

3.2 File Downloads and Installation

- Havana FIR position file (POF), keyboard alias file, ASRC communications setup files and sector files can be downloaded from our website at the “Download” page. Check the “Latest News” on the website frequently for updates and additional files as they become available.
- Once you have the files your radar client requires for operation, simply place them on the main installation folder of the radar client. Here is some information about these files:
 - ❖ **Position (POF) file** – The staff has created a POF file specific to Havana FIR for all controllers to use. It contains ATC position ID codes and Squawk code ranges that are unique to our FIR. If you encounter any problems using this file, please report them to our local Staff.
 - ❖ **Alias file** – Alias files take advantage of ASRC and VRC variables and the command concatenation feature. The file we have created works for both ASRC and VRC, as long as it is used in conjunction with our POF file. Feel free to add or change commands to your liking as long as they conform to proper phraseology and the POF file ATC ID codes. There are two files, one in MS Word “Rich Text” format for printing purposes, and the other in regular Text format to be used in the radar client program.
 - ❖ **Sector/RIF files** – Sector files are used to display the information on a unique ATC position radar screen. This includes such things as the landmass outlines and all the airport and navigation information.
 - ❖ **Voice Configuration files** – These files are to be used on ASRC to configure the Voice Switching and Control System (VSCS) for operation on Havana FIR.

3.3 Radar Client Configuration

Any item not mentioned below can be left at default settings. NOTE: Configuration settings for ASRC are similar, but not identical. Use the values given as reference.

- ❖ **ATIS** – Set up your ATIS according to the Preferred ATIS Section below.
- ❖ **Conflict Alerts** – These values determine when conflict alerts will be issued based upon your radar type. Set DSR to 5nm and 1000ft. Set ARTS to 3nm and 1000ft. The DSR setting of 1000ft will accommodate the new RVSM Flight Levels; however, above FL410 the alerts will be false as the separation is 2000ft.
- ❖ **Visibility Range Slider** – This controls how far you will be able to see aircraft and also the distance your ATC position will be able to be seen by other controllers. Set it to the minimum range needed for your ATC position to conserve bandwidth. The following are suggested values:
 - ✓ **All GND/DEL** – 5nm
 - ✓ **All TWR** – 30nm
 - ✓ **MUHA_APP** – 150nm
 - ✓ **MUCL_APP** – 120nm
 - ✓ **MUCC_APP** – 120nm
 - ✓ **MUCM_APP** – 100nm
 - ✓ **MUCU_APP** – 150nm
 - ✓ **CTR** – 600nm
- ❖ **Alias and POF File Directory Locations** – Point these to the proper directories of your choice, usually in the main VRC/ASRC directory.

- ❖ **VFR Squawk Code** – Change this to 1600.
- ❖ **Transition Altitude** – Change this to 3000 for VRC. For ASRC, set it at 2999. Otherwise, 3000 will be displayed in feet instead of Flight Level, which is incorrect.
- ❖ **Departure and Arrival List Airports** – Enter the ICAO codes for any airports under your control so they can be monitored on the Arrivals and Departures List.

3.3.1 VATSIM ATIS Policy

VATSIM policy requires the ATIS information to be limited to four (4) lines maximum.

3.3.2 Preferred ATIS Information

The Automated Terminal Information Service is used to give pilots important information for a specific ATC facility. An application called ATISMaker, which is built-in on VRC and can be used as a stand-alone addition to ASRC, automatically generates and updates the ATIS with new weather information and other user-dependent input.

The new version of VRC allows the recording of a Voice ATIS. The only ATIS allowed in Havana FIR is **MUHA_ATIS**, frequency 132.500. Only Tower, Approach or Center controllers may record a Voice ATIS. For more information regarding Voice ATIS and its correct use, please consult the VATSIM Code of Conduct.

4 Server Connection Procedures

4.1 Radar Client Login

4.1.1 VATSIM Server IP Address

ASRC and VRC automatically retrieve available servers. You should select the one you want from the available list. If the connection is refused by one server, keep trying until you find one that works.

4.1.2 Logging in as Observer

Before connecting, enter your callsign as HAV_(initials)_OBS. For example, Aldo Alvarez would log in as HAV_AA_OBS. Select the “Observer” facility, and set the range slider appropriately. Then connect to the Server. The Observer position is a privilege, and should not be abused to log hours.

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4.2 Selecting an ATC Position

The following positions, with corresponding callsigns and frequencies, can be staffed within Havana FIR. Use only the proper callsigns, or you might not display in Servinfo.

| Position | Callsign | Frequency |
|----------------------------|------------|-----------|
| Havana Center | MUFH_CTR | 133.700 |
| | MUFH_C_CTR | 123.700 |
| Havana Approach | MUHA_APP | 120.300 |
| Havana Departure | MUHA_DEP | 126.900 |
| Jose Marti Tower | MUHA_TWR | 118.100 |
| Jose Marti Ground | MUHA_GND | 121.900 |
| Santiago Approach | MUCU_APP | 119.400 |
| Antonio Maceo Tower | MUCU_TWR | 118.100 |
| Cayo Largo Approach | MUCL_APP | 120.100 |
| Vilo Acuna Tower | MUCL_TWR | 118.500 |
| Camaguey Approach | MUCM_APP | 121.300 |
| Ignacio Agramonte Tower | MUCM_TWR | 118.500 |
| Cayo Coco Approach | MUCC_APP | 120.400 |
| Jardines de el Rey Tower | MUCC_TWR | 118.800 |
| Juan Gualberto Gomez Tower | MUVR_TWR | 118.400 |
| Frank Pais Tower | MUHG_TWR | 118.000 |

4.3 Logging in as ATC

Before taking any facility position in Havana Fir, you should log in as an Observer, check if Havana Chief, Assistant Chief, Instructor(s) or Senior Controllers are online and obtain approval from them to take the position you are interested in staffing. There are many reasons for this, the primary one being that they may have already approved another individual to take the position. If you do not check in first, you are likely to be asked to vacate a position if another controller has followed the procedure and has been authorized to take it.

Once you have selected a position, disconnect and log back on as the position you will be staffing. Use the proper ATC position code listed above.

Let FIR Staff (and other controllers) know that you are online by typing: **/"Your ATC position" online on xxx.xx (your frequency)**. **/"** will send your message to all ATC's within radio range.

The Director, Deputy Director and Training Administrator will have the responsibility in determining your eligibility and ability to staff a position. If, in their opinion, you are not prepared, they may ask you to relinquish the position to a more senior/capable individual. Refusal to vacate a position by request of FIR Staff is grounds for suspension.

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5 ATC Procedures

5.1 Flight Plan Clearance Delivery Order

Clearances should be given on a “First in – First out” basis, regardless if the pilot is a friend, Havana Staff or a VATSIM staff member.

5.2 Flight Plan Clearance Review

A Flight Plan clearance is not the same as a takeoff, departure release or controlled airspace entry clearance.

Clearances will be issued by the lowest-level online ATC facility that has control over the departure airport.

Prior to issuing a Flight Plan Clearance, ATC should review the following information in the filed Flight Plan.

5.2.1 VFR/IFR Flight type

When a pilot indicates a VFR flight, verify with him that this is correct. Sometimes pilots will forget to check the proper box.

5.2.2 Initial Departure Altitudes

The ATC giving clearances should always assign a “temporary” initial departure altitude based on the ATC facilities that are online at the time. This altitude should not be higher than the base altitude of the next ATC to have control. The preferred temporary altitude is 2,000ft.

5.2.3 Cruise Altitudes

Verify that the cruise altitude filed for follows the standard operational rules for cruising altitudes. Check aircraft capability for RVSM or Non-RVSM approved altitudes if necessary.

5.2.4 Flight Plan Routing

Verify that the origin and destination airports have correct ICAO codes. Note that some aircraft will be using fictitious ICAO codes that they have assigned to “virtual” airports... This is OK. For IFR flight plans, check route to see if a Departure Procedure is available. If the pilot has not entered a DP, ask if he has charts and is willing to fly the DP. However, not all routes require a departure procedure. Use your good judgment to decide when to assign a DP.

Verify that their route of flight conforms to any Letters of Agreement (LOA) with adjacent FIR/ARTCCs.

Some pilots choose to fly long flights using the direct method by using electronic navigation means such as FMC or GPS. Although this is not a preferred method, it is acceptable, even in real life. You can suggest an amendment to their FP, such as the preferred route to his destination, if there is one. Another option is adding one waypoint within 50nm of the departure airport as his first waypoint. Propose the amendment, and if the pilot agrees, wait for him to amend his FP and prepare the clearance based on the initial waypoint. If the pilot refuses to amend his FP, then notify Approach or Center (if you are on Tower or Ground) about the refusal and just give clearance by using the term “as filed”.

Important: You as controller may suggest amendments to the pilot's FP, but you can't force that amendment. If the pilot refuses to change his FP, then you should adapt accordingly.

5.2.5 Remarks

Check remarks for any information that will affect your procedures with the pilot's flight. This includes checking for proper "communications type" codes if entered, /v for "voice", /t for "text" and /r for "voice receive only". If none are entered, you can add the correct identifier to the data tag using the F9 key.

5.2.6 Squawk Code Assignments

For IFR aircraft, squawk codes should be assigned by the ATC controlling departures at the primary airports. The following are the squawk code ranges for the primary airports:

- ❖ **MUHA** 3700-3777
- ❖ **MUCL** 3700-3777
- ❖ **MUVR** 3700-3777
- ❖ **MUCU** 2060-2177
- ❖ **MUCC** 3700-3777
- ❖ **MUCM** 3700-3777
- ❖ **MUHG** 2060-2177

For airports not listed above, squawk codes should be assigned based on the nearest primary airport.

5.2.7 Useful Utilities

To assist in determining the location of destination airports using the ICAO codes, and therefore help determine valid Flight Levels, it is recommended that you have access to some form of airport code verifying utility. "ServInfo" and "Whazzup" are good utilities that can help controllers to verify locations of the destination airports. These useful, comprehensive tools can be downloaded at:

- ❖ **www.avsim.com/hangar/utills/servinfo** for ServInfo
- ❖ **www.schiratti.com** for Whazzup

If you are unfamiliar with the destination even after checking "where" it is, also confirm the direction of flight either from the routing or if none is given, by asking the pilot. In order to not only validate the requested final altitude/FL, but to provide initial departure routing, it is necessary that you are aware of the direction of flight.

5.3 Seaplane / Amphibian VFR Clearances

VFR flight plans for seaplanes and amphibians should be handled the same as land-based aircraft. If departure and/or destination locations are not ICAO recognized water airports such as X66, Charlotte Amalie Harbor, pilots must include the actual location names in the remarks of their flight plan.

5.3.1 Departures

IFR water departures are not permitted. All water departures will be VFR and pilots will be instructed to contact ATC when on course to first waypoint and VFR at or below 3000 feet. Once airborne, a pilot may request an IFR "enroute clearance" if he cannot maintain VFR. This clearance should only be given if he will be able to land under VFR conditions at his destination seaport.

5.3.2 Arrivals

All water landings must be VFR. Arrivals of “enroute IFR aircraft will be handled as follows:

During enroute portion of flight, ATC will verify an approximate landing location to determine initial approach vectors and descent altitudes. ATC will vector the aircraft to the destination and issue descent clearance. ATC should not descend the aircraft below Minimum Safe Altitude (MSA) unless the pilot reports VFR conditions.

If the pilot cannot maintain VFR to landing, you have three options:

- ❖ If the aircraft is Amphibian, the pilot can resume IFR to a “hard surface” airport.
- ❖ The pilot can be vectored to another water landing area that is VFR, if possible.
- ❖ The pilot can continue with the landing at his own risk.

5.4 Havana Center

Center is the main ATC facility within Havana Fir. If you are qualified to control the Center position, it should be the first one staffed if it is available. If no other ATC positions are open, Center must be prepared to handle those responsibilities as well. If you don't feel you are prepared, or do not have the authorization of Havana Staff, do not log onto Center; take Havana Approach, Tower or Ground, or another Control Area position instead.

5.4.1 Shared Center Sectors

When traffic conditions are extremely heavy, such as during a Fly-in and VA Group flights, the Center position may be separated into East and West Center. Both controllers should have experience on the Center position, and must be familiar with “pointout” procedures when coordinating traffic flow.

When the Center sector is split, MUFH_CTR(133.700) has primary control of landings and runways in use at West. MUFH_C_CTR(123.700) will handle aircraft operating East of Cuba. You can see the separation of the two centers in our sector file.

5.5 Havana Approach/Departure

5.5.1 Departure Position Caution

Havana Departure (126.900) shall only be opened with the written authorization of the Havana FIR Director, Deputy Director or local Instructor. This position is only to be staffed under high-traffic training or events.

Departure will coordinate airspace control with Approach and be responsible for maintaining aircraft separation below 10,000ft, or until handoff to Center, if open.

5.5.2 Approach Position Caution

If you are a new student controller, please do not log on as Approach. This is a demanding position that requires training to proficiency, especially when both Approach positions are open.

5.5.3 Plan in Advance

With the Havana and/or other approach airports' charts in hand, try to plan in advance what instructions you will have to give the pilots. It is also imperative for safety that you constantly monitor the aircraft headings and altitudes. It is your job as a controller to avoid aircraft conflicts, or “deals”.

5.5.4 Know your Approaches and Departures

Review all available Approach and Departure Procedures on the "Controller Information" pages on the FIR's website.

5.5.5 Procedures for Vectoring Arrivals

5.5.5.1 from the South

Arrivals from the South should be cleared for the DUTAN1 arrival to cross DUTAN preferably at FL060, but no lower than FL040. Within 20nm of MUHA, they may be not be cleared lower than FL040 before issuing final approach descent to 2,000 ft.

5.5.5.2 from the East

ILS Traffic coming from the East should be cleared to cross UZG intersection between FL080. and FL060.

Depending on aircraft performance (an ATR, for example, Should get FL060, since it cannot descend as steeply as an Airliner). After UZG, the traffic should be vectored to UHA, and further descent to cross UHA at FL030. Once the traffic over UHA, it can be allowed to descend to 2,000ft and cleared for the ils/dme approach rwy 06.

Another arrival that may be used for traffic from the east is the ZARAGO1 arrival, UZG must be crossed at FL080-FL060 then cleared down to FL040 for the arrival.

VFR traffic should normally be cleared to cross UZG at or below 4,000ft, and then cleared direct to HAV VOR(UHA). Aircraft can then be cleared either for the Visual or to join the visual approach by entering the traffic pattern. For the traffic pattern, the pilot should be instructed to report entering the specific traffic pattern leg (downwind, crosswind, etc).

5.5.5.3 from the North

Traffic inbound from the North should be vectored for the NAKU1 arrival NANKU intersection, to cross at FL080-FL060. After NANKU, the traffic can be cleared to cross UPB at FL040.

5.5.5.4 from the West

Traffic from the West may be vectored via CAYABO5 arrival; the traffic may be cleared to cross UCY at FL040.

5.5.6 Procedures for Vectoring Departures

5.5.6.1 to the South

Traffic to the south should be vectored for the DUTAN2 departure

5.5.6.2 to the East

Traffic to the east should be vectored for the ZARAGO2 departure

5.5.6.3 to the North

Traffic to the north should be vectored for the GOLFO3 departure

5.5.6.3 to the West

Traffic to the west should be vectored for the CAYABO4 departure

5.6 Marti Tower

Aircraft must not be allowed to depart until squawking the correct transponder code. Also note that towers do not track, or “tag”, aircraft.

5.6.1 Touch and Go Operations

Aircraft requesting “touch and go” operations should be instructed to maintain “closed traffic” pattern for runway 6. This means that they will fly proper crosswind, downwind and base legs on their own, unless Tower gives other instructions.

5.6.2 Helicopter Operations

After normal “Hover” or “Air” taxi departures (See VATCAR Ground Control Study Guide), helicopters may be authorized, for the purpose of observing airport operations, to “hover over the airport at 1000ft. AGL or lower and are restricted to being over “non-movement” areas only (never over runways, taxiways or ramps).

5.7 Marti Ground/Clearance

Notify pilots that are squawking Charlie to squawk standby while on the ground. Verify aircraft type and position on the airport to determine proper departure runway.

5.8 Traffic Coordination

5.8.1 Pointouts

All controllers should utilize pointouts to optimize the traffic flow. For more information on what a pointout is and how to perform one, see the VATCAR Approach/Departure Study Guides.

5.8.2 Controller Chat Communications

Standard procedure is to respond within a reasonable time to any open chat box or Intercom request from any controller within Havana FIR or adjacent FIRs. Ignoring any form of communication with fellow controllers is prohibited.

When a higher position (ex. Center) gives instructions to a lower position (ex. Tower) in order to correct or improve operations, the instructions should be followed.

5.8.3 Within Havana FIR

Handoffs between Ground and Tower are not necessary. Once given a taxi clearance by ground, aircraft should taxi to the assigned runway and contact Tower when they are ready for departure.

5.8.3.1 Handoff Altitudes and Distances

The handoff altitude for MUHA_APP, MUCL_APP and MUCC_APP shall be FL160. For MUCU_APP, aircraft will be handed off at FL220 and for MUCM_APP, FL120 or the aircraft cruise altitude if lower and/or 10-15nm before entering Approach or Center airspace.

From Approach to Tower, frequency change shall be given after giving Final Approach Clearance, usually 10-15nm from the airport.

5.8.4 Between other ARTCC's

All transfers of aircraft to adjacent ARTCC/FIR's must be coordinated with the controller(s) involved.

Controllers should use the automated "notification and acceptance" procedures (F4 Key sequence) in all cases. This includes when handing off between two voice controllers, as it will provide a backup notification to the next controller.

Handoffs must be "initiated" (not "completed") between adjacent sectors between 15-20 miles prior to the aircraft reaching the airspace sector boundary. This should provide adequate time to "complete" the hand-off before the aircraft reaches the airspace boundary.

One thing to keep in mind is that if a controller rejects a handoff for any reason, the aircraft involved cannot enter the other controller's airspace. In other words, the handoff should be initiated anticipating that the other controller might reject it, and that the pilot might have to remain within your airspace until the neighboring FIR/ARTCC can accept him.

It is not acceptable to let a late handoff drift into neighboring airspace due to lack of planning and then requesting a pointout.

If a controller is too busy to take a handoff, chances are he is too busy for a pointout as well. Controllers should always have a hold available near the handoff point to minimize the disruption of the pilot's flight.

5.8.5 Overflights

Overflights should require the minimum of handling by Center and unnecessary re-routing of enroute aircraft should be avoided. This is not to say that offering a shortcut to aircraft is a bad thing, just try to do so as an option, not as a requirement for the aircraft involved.

Sim rates in excess of 1x should normally be allowed for aircraft transitioning the sector, but confirmation with adjacent facilities should be acquired before allowing a handoff at more than 1x. Any aircraft departing our sector should be advised to resume normal sim rate prior to entering the next ATC controller sector.

5.8.6 Pilots Ignoring ATC

Sometimes pilots overflying Havana FIR may not notice that Center is online, or ignore Center communication requests.

VATSIM policy allows pilots to be off the flight deck for no more than 30 minutes in uncontrolled airspace. In the event that a pilot leaves his connection unattended in controlled airspace, it is left to the ATC's discretion to report these pilots to a VATSIM supervisor for handling.

If you do finally get in communication with these pilots, courteously inform him/her about the possible danger that can be caused without causing an angry discussion. Of course, if you see any possible conflict, either send a private message to the aircraft to contact you for instructions, or vector controlled traffic away from him.