

San Juan CERAP

VATCAR *VATSIM Caribbean Division*

Standard Operation Procedures

Version 6.0
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Welcome to the San Juan CERAP (Virtual)

You are entering one of the most fascinating Combined Enroute Radar Approach Control facilities in the USA/Caribbean: the San Juan CERAP! You are more than welcome to be a part of our organization. If you follow this SOP and make it a part of your daily work at San Juan, we can say that you will grow to be a good controller much faster. Once again, welcome.

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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 VATCAR Study Guides

ATC in the San Juan CERAP is governed by the procedures found in the VATCAR Study Guides. These can be downloaded from the VATCAR webpage at www.vatcar.org . You must be familiar with those procedures in order to provide ATC service in the San Juan CERAP. This SOP is not meant to be a substitute for those procedures, but to provide additional information and in some cases slightly modify certain procedures in order to standardize controlling in the San Juan CERAP.

2.3 Basic FAA – ICAO Operational Differences

Although the San Juan CERAP is located in the Caribbean area, it is under the control of the United States Federal Aviation Administration (FAA). It is important that you become familiar with the terminology and differences between the FAA and ICAO ATC System. Several fundamentals are very different in FAA controlled airspace and it is worth noting them so that you aren't confused or corrected by other controllers. Some notable differences are:

- Use “position and hold” instead of “line up and hold”.
- Although some charts indicate there are different “Transition Altitudes and Transition Levels”, within the San Juan CERAP, in order to eliminate confusion, the Transition Altitude for the entire area will be 18,000ft. and the Transition Level will be Flight Level 180. Transition Altitudes are used during climbs and Transition Levels are used during descents.

2.4 Preferred Language Between ATC and Pilots

English is the preferred language in the San Juan CERAP. We will try to maintain the simulation “*As Real as it Gets*”; however, we welcome all the Spanish-speaking pilots that want to fly in our CERAP. For this reason, if you speak Spanish and a pilot requests Spanish, don’t force him to use a language that might be hard for him, give the ATC service in Spanish. You may continue speaking English with other pilots while speaking Spanish to the Spanish-speaking pilots.

2.5 Politeness Online

Do not argue with pilots online. If a pilot refuses to comply with ATC instructions, refer him to a senior controller or CERAP Staff Member.

2.6 CERAP Charts and Forms

You can download the available charts, forms and reference information from the CERAP website.

2.7 Links to Other Information

ATC Information Part 7110.65R: <http://www.faa.gov/ATPubs/ATC/>

AIM/FAR Table of Contents: <http://www.faa.gov/ATPubs/AIM>

2.8 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)

The San Juan CERAP 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 Installation 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 the San Juan CERAP.

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

- The San Juan CERAP 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 the San Juan CERAP for all controllers to use. It contains ATC position ID codes and Squawk code ranges that are unique to our CERAP. 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 the San Juan CERAP.

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3.3 Radar Client Configuration

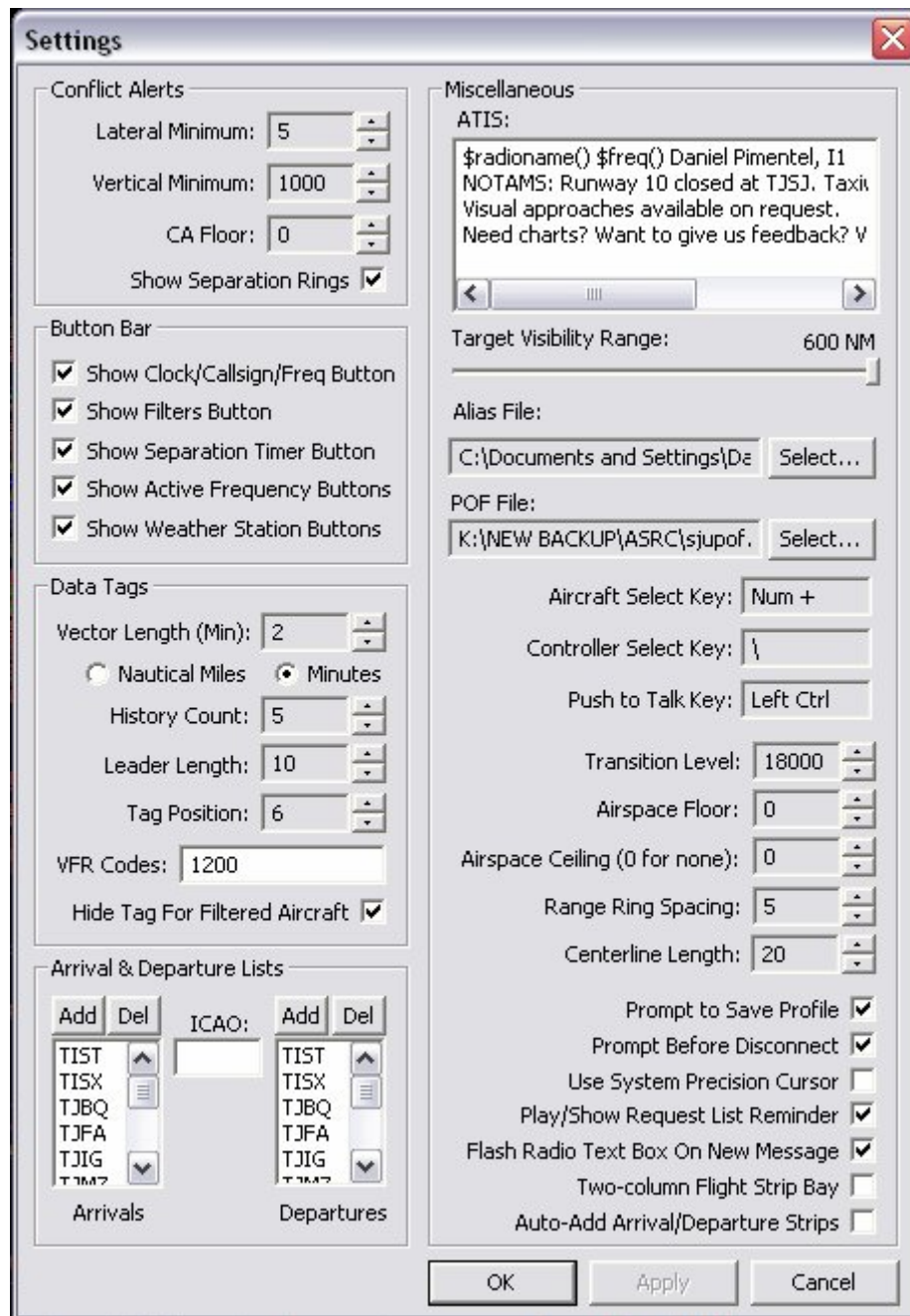


Figure 1 – VRC 1.0 Settings Dialog Box

Option Settings Dialog Box: (Fig. 1) 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. Suggested values are:

- GND/DEL – 5nm
- TWR – 30nm
- APP/DEP – 120nm
- CTR – 400nm

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 – Leave this at 1200.

Transition Altitude – Leave this at 18000 for VRC. For ASRC, set it at 17999. Otherwise, 18000 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. Here is an example of an ATIS generated by ATISMaker with slight modifications:

San Juan Tower 132.050 John Doe, S3
Information BRAVO Winds 080 at 5 Vis 10SM Sky FEW050 Alt 2989
Landing and departing rwy 8.
Runway 10 closed. Taxiway H between H5 and H9 closed.

The chart below presents the preferred ATIS information for each position. While not mandatory, they are good starting points for customized information. Note that the suggestions below contain variables that will allow flexibility on different positions.

| | |
|-----|---|
| DEL | \$radioname() \$freq() %name%, %rating% |
| GND | Charts and pilot information available on www.sjucerap.org |
| TWR | \$radioname() \$freq() %name%, %rating% Information %id%: Winds \$wind(%icao%) Vis %vis% Sky %clouds% Alt \$altim(%icao%) %runways% Charts and pilot information available on www.sjucerap.org |
| APP | \$radioname() \$freq() %name%, %rating% <types of approach in use> Charts and pilot information available on www.sjucerap.org |
| CTR | \$radioname() \$freq() %name%, %rating% Weather information available on request Charts and pilot information available on www.sjucerap.org |

For more information on ATIS variables, see your client's manual.

3.4 Operation Tips

- To quickly navigate your sector, use the “.center” command and type any airport, fix or navaid in your sector to center it on your scope.
- Aircraft squawking VFR reveal only limited information in their tags. However, VRC allows you to see more information in the Arrivals and Departures List, under the aircraft list.
- To coordinate with other controllers, use the G/G mode on ASRC, or the “ic <ID>” command on VRC. The controller 2-letter ID is on the Controller List.
- VRC allows group chats, where all the controllers in an area can participate in a group conversation. This is especially useful both for coordination and for interaction. To add a controller to a chat window, simply use the “.a CALLSIGN” command as described on the client’s documentation.

4 Server Connection Procedures

4.1 Radar Client Login

4.1.1 VATSIM Server IP Address

ASRC v1.1 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 **SJU_(initials)_OBS**. For example, John Doe would log in as **SJU_JD_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.

4.2 Selecting an ATC Position

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

| | | |
|---------------------|-------------|---------|
| San Juan Center | TJZS_CTR | 118.150 |
| | TJZS_N_CTR* | 135.700 |
| | TJZS_S_CTR* | 125.200 |
| | TJZS_E_CTR* | 118.150 |
| | TJZS_W_CTR* | 118.750 |
| San Juan Approach | SJU_APP | 119.400 |
| | SJU_E_APP* | 128.650 |
| | SJU_W_APP* | 119.400 |
| San Juan Departure* | SJU_DEP* | 120.900 |
| San Juan Tower | SJU_TWR | 132.050 |
| San Juan Ground | SJU_GND | 121.900 |
| San Juan Delivery* | SJU_DEL* | 126.400 |
| St. Thomas Tower | TIST_TWR | 118.800 |
| St. Croix Tower | TISX_TWR | 118.600 |
| Juliana Approach | TNCM_APP | 128.950 |
| Juliana Tower | TNCM_TWR | 118.700 |
| Isla Grande Tower | TJIG_TWR | 135.875 |

* - Open only under SJU/VATCAR Staff supervision.

4.3 Logging in as ATC

Before taking **any** facility position in the San Juan CERAP, you should log in as an Observer, check if the CERAP 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.

Advise SJU Staff (and other controllers) 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 CERAP staff 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.

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, the San Juan Chief 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 5,000ft.

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 (FMS) or GPS. When this happens, they usually type “DIRECT” or “GPS” or similar phrases without any waypoints in their Flight Plan (FP). 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*”. Example: “*Cleared to Miami International Airport as filed, c/m 5000...*”

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

Squawk codes for IFR aircraft should be assigned by the ATC controlling departures at the Primary airports.

| | |
|------|-----------|
| TJSJ | 4101-4177 |
| TIST | 4301-4377 |
| TNCM | 4501-4577 |
| TISX | 4601-4677 |
| TJIG | 4701-4777 |

Squawk codes for IFR aircraft departure from other than Primary airports should be assigned based on the nearest ATC area.

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/utls/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 Amphibian and Seaplane Clearances

5.3.1 Definitions

For the purpose of this SOP:

Seaplanes – Those aircraft types that are not equipped with conventional wheel landing gears and are capable of water operations only.

Amphibians – Those aircraft types that are equipped with conventional wheel landing gear **and** floats and are capable of both water and land-based operations.

5.3.2 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.

5.3.2.1 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.

ATC communication example:

Seaborne 121: San Juan Center, Seaborne 121 VFR at 3000, to St Croix Harbor, will be unable to maintain VFR, requesting IFR to St Croix Harbor

After verifying St Croix is in VFR conditions:

Center: Seaborne 121, Squawk 4501, climb and maintain 6000, continue direct **COY VOR**.

5.3.2.2 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.

ATC communication example:

Center: Seaborne 121, turn left heading 090, descend and maintain 2000, report if unable to maintain VFR at this altitude.

Seaborne 121: Left to 090 and down to 2000 and report if unable to maintain VFR.

Seaborne 121: Center, Seaborne 121 is level at 2000 and VFR.

Center: Seaborne 121, airport is 12 miles at your 12 o’clock, radar service terminated, squawk 1200, maintain VFR, report on the water.

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 landing at his own risk.

5.4 San Juan Center

Center is the main ATC facility within the San Juan CERAP. 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 SJU Staff, do not log onto Center; take San Juan Approach, Tower or Ground, or another Control Area position instead.

5.5 San Juan Approach/Departure

5.5.1 Departure Position Caution

San Juan Departure (120.900) shall only be opened with the written authorization of the SJU Chief, Assistant Chief, 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 Shared Approach Sector

When traffic conditions are extremely heavy, such as during Fly-ins and VA Group flights, the Approach position may be separated into East and West Approach.

Both controllers should have experience on the Approach position, and must be familiar with “pointout” procedures when coordinating traffic flow.

When the Approach sector is split, West Approach has primary control of landings and runways in use at TJSJ. East Approach will handle aircraft operating East of Puerto Rico, namely in the U.S. Virgin Islands, Vieques and Culebra.

5.5.4 Where-When-How Phrase

Approach/Departure ATC is the most challenging position to work. We suggest using the phrase “Where-When-How” to help make it easier for you.

WHERE (...the pilot is planning to fly outbound/ ...the pilot is flying inbound)

WHEN (...he start his departure climb and turn/ ...he should start his descent for final approach)

HOW (...he will get to his initial waypoint after departure/ ...he will fly the approach to land).

5.5.5 Plan in Advance

With the “Where-When-How” phrase in mind and your San Juan 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 controller to avoid aircraft conflicts, or “deals”.

5.5.6 Know your Approaches and Departures

Review all available Approach and Departure Procedures on the “Controller Information” pages on the CERAP website. Don’t forget the two visual instrument approaches, the Lagoon Visual runway 8 and the Bridge Visual runway 10, and their different restrictions. Also, be familiar with the two VFR transition routes, Tango and River, through the San Juan Class C airspace.

There are no ILS Approaches for runways 26 or 28. Runway 26 does have a VOR approach.

Back Course Instrument Approaches are authorized for runways 26 and 28 when necessary.

5.5.7 Simultaneous Approaches and Departures

Simultaneous approaches and departures are allowed at TJSJ, Luis Muñoz Marín airport. Here is an example of a simultaneous departure clearance:

AAL720, runway 8 cleared for takeoff, wind 110/10, fly heading 060 after departure.

TCA9083, runway 10 cleared for takeoff, wind 110/10, and fly runway heading after departure (assuming an eastbound flight).

Note that the assigned headings mean that the aircraft will depart with 40 degrees of separation; this avoids a near-miss incident.

5.5.8 Procedures for Vectoring Arrivals

Important Notes:

Do not let aircraft use JAAWS intersection as an arrival fix, it is used as a departure fix only.

Be careful to avoid separation conflicts when issuing simultaneous landing clearances on runway 8 and 10.

The following procedures are suggested only and can be modified by a controller based on traffic situations, weather, etc.

5.5.8.1 From the South

Arrivals from the South should be cleared to cross PSE preferably at 10,000ft, but no lower than 7,000ft. Within 20nm of TJSJ, they may be cleared to not lower than 6,000ft. before issuing final approach descent.

5.5.8.2 From the Southeast

Arrivals from the Southeast should be cleared to cross VEDAS intersection between 14,000ft and 12,000ft. From VEDAS, the traffic should be vectored on a heading of 330 and cleared for further descent to 6,000ft. Once the traffic is South of San Juan, it should be vectored to join the Westbound traffic flow (see procedures From the East below).

5.5.8.3 From the East

ILS Arrivals:

ILS Traffic coming from the East should be cleared to cross CHAKA intersection between 10,000ft. and 8,000ft. depending on aircraft performance (an ATR, for example, should get 8,000ft, since it cannot descend as steeply as an airliner). After CHAKA, the traffic should be vectored on heading 265, and further descent to 6,000ft. approved. Once the traffic is South of San Juan, it can be allowed to descend to 4,000ft. When it is around GANBO intersection, it can be vectored to a heading of 360, and then to join the localizer.

VFR Arrivals:

VFR traffic should normally be cleared to cross CHAKA at or below 4,000ft, and then cleared direct to SJU VOR. Aircraft can then be cleared either for the Bridge 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, base, crosswind, etc).

5.5.8.4 From the North

Traffic inbound from the North should be vectored to SAALR intersection, to cross SAALR at 15,000ft. After SAALR, the traffic can either be cleared to cross DDP at 5,000 for runway 8, for vectored in for runway 10 via CORAF intersection.

5.5.8.5 From the Northwest

Traffic from the Northwest should be instructed to cross BEANO intersection at 11,000ft. From BEANO, they can be

cleared to cross DDP at 5,000ft. for runway 8, or heading 140 and down to 3,000ft. for runway 10.

5.5.8.6 From the West

Traffic from the West may be vectored in one of two ways:

The first way is via BQN, the traffic may be cleared to cross BQN at 15,000ft. Then on to DDP at 5,000ft.

The second is via MAZ at 15,000ft, then JOSHE at 7,000ft. Finally, direct VARNA and 5,000ft.

5.5.8.7 Procedures for Departures From San Juan to St. Thomas

IFR aircraft enroute from or through San Juan Approach airspace for landing at TIST will be cleared either direct to MALIE intersection to cross at 5,000ft. or to STT VOR to cross the SJU Approach boundary at or below 5,000ft. before being handed off.

5.5.8.8 Special Visual Approaches at TJSJ

There are two Special Visual Instrument Approaches in use at San Juan. They are the Lagoon Runway 8 and the Bridge Rwy 10 Approaches.

As a controller, you must know in advance if an aircraft can fly either of the approaches before granting clearance. They are prohibited at night. The weather minimum for the Lagoon approach is a 2,000ft. ceiling and 5nm visibility.

The Bridge Approach can be flown by GA (General Aviation) aircraft and some turbo-props and small jets. It is

never authorized for jet airliners. The same weather minima apply. Keep in mind that the default scenery does not include the Teodoro Moscoso Bridge, should the pilot not have it, inform him to turn base leg abeam the west side of the San Juan Lagoon.

5.6 San Juan 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 VFR Transition Routes Through San Juan Class C Airspace

The two VFR Transition Routes that should be used are the Tango and River transition. These transitions are normally handled by Tower when he is online. If the traffic is with Center or Approach and tower is present, they should hand the traffic off to Tower.

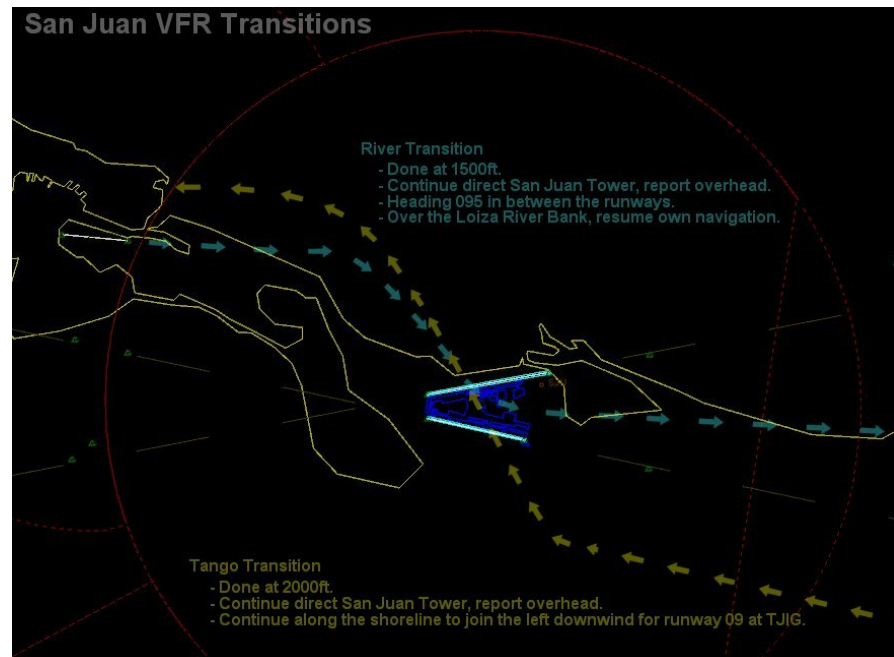


Figure 2 – San Juan VFR Transitions through San Juan Class C Airspace

When either of these transitions is authorized, instruct the pilot to squawk 1201 thru 1207.

When the aircraft has departed the class C, Tower should advise the aircraft to “Maintain VFR” and hand them back to higher facility if available.

If a higher facility is unavailable, the aircraft should be told to “Squawk and maintain VFR, frequency change approved, radar services terminated”.

5.6.2 Touch and Go Operations

Aircraft requesting “touch and go” operations should be instructed to maintain “closed traffic” pattern, either left for runway 8 or right for runway 10. This means that they will fly proper crosswind, downwind and base legs on their own, unless Tower gives other instructions.

5.6.3 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 San Juan 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 the San Juan CERAP or adjacent FIRs. Ignoring any form of communication with fellow controllers is prohibited.

When a senior staff controller gives instructions to a lower staff position in order to correct or improve operations, the instructions should be followed.

5.8.3 Within the San Juan CERAP

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

From Center to Approach is 13,000ft, or the aircraft cruise altitude if lower and/or 10-15nm before entering Approach airspace.

From Approach to Tower after giving Final Approach Clearance, usually 10-15nm from the airport.

From Approach/Departure to Center at 8,000ft or aircraft cruise altitude if lower and/or prior to leaving Approach/Departure airspace.

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 the San Juan CERAP 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 the offending pilot about the possible danger that they can cause 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.

6 Primary Airport Information

6.1 TJSJ – Luis Muñoz Marín Int’l.

6.1.1 Airspace, Class, Runways and Patterns

TJSJ is located in the center of a Class C(harlie) airspace. The central core extends from the surface to 4,000ft. and has a 5nm radius. The outer core extends from 1,200ft. to 4,000ft. with a radius of 10nm. Note: This is not the way it is in the real world chart.

Runways are:

08-26 Length 10,002ft.

10-28 Length 8,016ft.

Traffic Patterns are:

08 – Left 26 – Right

10 – Right 28 – Left

SJU Approach Control sector area for TJSJ has a 40nm radius and extends to 10,000ft.

6.1.2 Ground Classification: Ramps, Terminal Piers and Gates

The airport is accessed by two “major” ramps, the North and the south Ramps. These ramps serve the four main passenger terminal aprons located between them.

Apron 1 serves the North Pier

Apron 2 serves the North and Center Piers

Apron 3 serves the Center and South Piers

Apron 4 serves the South Pier

American Airlines, the largest airline that flies into TJSJ, usually parks at the North Pier, while Delta, United and others use the Center and South Piers.

The Parking Aprons include the Cargo (Apron 6,7 and 9), East (Apron 5A), General Aviation (Apron 5C), and Air National Guard ramps. Unless otherwise requested, UPS, DHL, FedEx and any other recognized cargo airlines should use one of the Cargo ramps.

The Center controller, or Approach if Center is not available, can ask the pilot if he has a specific parking request. This will allow Approach to select a runway that is closest to the pilot's requested parking area.

6.1.3 Runway Assignments

6.1.3.1 Departures

San Juan normally uses runway 8 for departures of all airliners, charters, corporate and heavy jets. Runway 10 is not normally used for heavy jets unless runway 8 is closed.

Departures of "light to medium" private and charter aircraft may use runway 10 only if they are planning to depart Eastbound or Southbound, never if they are planning to depart Northbound or Westbound.

6.1.3.2 Arrivals

Arriving aircraft normally use runway 8. However, runway 10 can be used if requested (Cargo airlines or airlines using the South and Central Piers sometimes do this) or if you are using simultaneous arrivals on runways 8 and 10. Runway 10 is 8,016 feet long and is capable of handling a B747; so don't hesitate to use it for landing of heavy jets.

6.1.4 VFR Traffic

VFR traffic is allowed in and out of the San Juan Class C airspace with certain restrictions:

Two-way radio communication

Transponder with Mode C

VFR weather conditions (3SM visibility, 500ft. below, 1,000ft. above and 2,000ft. horizontally clear of clouds).

The pilot must establish radio communications with the controller and remain outside of Class Charlie until the above criteria have been met.

If necessary, the controller may deny clearance by using the phrase: "Cessna N6AIM, remain clear of Class Charlie" and also issue a holding clearance if he desires.

The controller may choose to only give aircraft advisories, and it is up to him to give "flight following" and weather advisories to interested pilots on a workload-permitting basis.

VFR flights into and out of Isla Grande (TJIG) do not require clearance from the San Juan Approach controller as long as they remain outside (under) the Class C airspace. This normally will happen only if aircraft are departing from runway 27, but might also happen with aircraft doing

special missions (carrying banners, aerial photography, etc) who remain below the Charlie airspace and below the localizers for the runways at TJSJ. These aircraft must, however, comply with VFR minimums.

6.1.5 Instrument Approaches

ILS 08 frequency is **110.3** ID: ISJU OBS: **078**

ILS 10 frequency is **109.7** ID: ICLA OBS: **101**

VOR 08/10 SJU VOR: **114.0** OBS: **081**

VOR/GPS 26 SJU VOR: **114.0** OBS: **249**

Lagoon Visual runway 08

Bridge Visual runway 10

6.2 TIST – St. Thomas (Cyril E. King Int'l)

6.2.1 Airspace Class, Runways and Patterns

The airport is under a Class C airspace with an upper limit of 4,000ft.

All Class C requirements apply.

Runways are 10-28 with 7,000ft. in length. Runway 28 is rarely used.

Right traffic pattern applies for runway 10, left pattern for runway 28 if it is used.

6.2.2 Positions

St. Thomas Tower on 118.800 is the only position directly linked to the airport at this time.

St. Thomas Approach is no longer operational as such, and traffic from St. Thomas goes to San Juan Approach.

6.2.3 Approach/Departure Control

Departing traffic shall be handed off to San Juan Approach (119.400), or if the Approach sector is split, so San Juan East Approach (128.650).

Approach will hand off the aircraft to Center before 10,000ft.

Center shall clear IFR traffic headed to St. Thomas to cross CHAKA intersection at or above 11,000ft. Over CHAKA, Center should hand off control to San Juan Approach, if available at the time.

For IFR flights from San Juan to St. Thomas, the traffic should be cleared through MALIE intersection or the Approach airspace boundary at or below 11,000ft.

IFR traffic headed from St. Thomas to San Juan should be cleared to cross CHAKA intersection at or below 10,000ft.

VFR traffic to San Juan should be cleared to cross CHAKA at or below 4,000ft. and then proceed direct to SJU VOR.

San Juan Approach will always keep traffic to the South of the island due to high terrain to the North, unless the pilot wants to perform the VOR-A Approach.

6.2.4 Instrument Approaches

Runway 10 ILS frequency is **110.1** ID: ITMN OBS: **100**

Runway 10 VOR. STT VOR: **108.6**

6.2.5 Departures

Palco Five (See Chart)

6.3 TNCM – St. Maarten (Princess Juliana Int'l)

6.3.1 Airspace Class, Runways and Patterns

The airport is under a Class C airspace up to 4,000ft.

All requirements of the Class C apply.

Runways are 09-27, with a length of 7,152ft. (runway 27 is rarely used).

Right pattern applies for runway 9.

6.3.2 Positions

Tower frequency is **118.700** | Approach frequency **128.950**

6.3.3 Arrivals

San Juan Center shall clear aircraft inbound to St. Maarten through the following gates:

SLUGO at 13,000ft.

JUICE at 9,000ft.

GOUDA at 9,000ft.

DANDE at 13,000ft.

BOPAR at 12,000ft.

Piarco FIR will usually clear aircraft through the following gates:

TIKAL at 6,000ft.

ELOPO at 12,000ft.

6.3.4 Juliana Approach

Juliana Approach handles aircraft in a 40nm radius with a ceiling of 15,000ft. and hands off traffic to San Juan Center in most cases.

Handoffs of outbound traffic to Piarco FIR should be handled exclusively by Juliana Approach, usually via TIKAL and ELOPO intersections. The handoff altitudes should be coordinated with either Piarco Center or V.C. Bird Approach, depending on the situation. Whatever altitudes are agreed upon must take into consideration proper separation from inbound traffic.

Visual approaches are prohibited at night for IFR. However, Approach may assign the VOR straight-in or VOR/DME approaches day and night. The PJM VOR may be used for holding at or above 3,500ft. in cases of extreme traffic. See the Chart for the VOR/DME approach for a published hold to ease the traffic into the approach.

6.3.5 Instrument Approaches

Runway 9 VOR straight-in approach, R-096 PJM VOR: **113.0**

Runway 9 VOR/DME approach (See chart).

6.3.6 Departures

No Instrument Departures are available at St. Maarten. Most of the arrival gates are also used for departures. Therefore, proper care must be taken when vectoring departing aircraft initially to avoid conflict with arriving traffic. Flights to Europe may use TOTEM or ODKAM, and should always be instructed to turn right heading 140.

Other departures from Runway 9 should be issued initial vectors as follows:

To the East/Northeast: Right heading 140.

To the West/Northwest: Right heading 250.

To the South: Right heading 180.

Left turnouts in St. Maarten are rare, and may be approved only for small, agile propeller aircraft or business jets. However, the preferred turnout is the right turnout, and it should be used unless the traffic levels justify doing otherwise.

Aircraft should never be allowed to depart on runway heading, due to the high terrain a couple of nautical miles East of the end of runway 9. Departures from runway 27 are allowed, winds permitting. However, extreme caution must be taken to avoid conflict with inbound traffic, since arrivals are only permitted on runway 9.

6.4 TISX – St. Croix (Henry E. Rohlsen Int'l)

6.4.1 Airspace Class, Runways and Patterns

The airport is under a Class (D)elta to 2500ft.

Runways are 10 and 28, with a length of 7,609ft.

Important Note: The runways at St. Croix were changed from 09-27 to 10-28. Many pilots still have the old runway configuration, so be ready to identify these pilots and adapt accordingly.

St. Croix uses a Left Pattern for runway 10.

6.4.2 Positions:

Tower frequency is **118.600**

Usual Departure is from runway 10.

6.4.3 Handoff

San Juan Center normally hands off traffic to St. Croix Tower (if open) when the traffic is established on his preferred approach.

6.4.4 Arrivals

San Juan Center should usually give vectors for the ILS runway 10 approach. The VOR approach can also be used both day and night.

Visual approaches are prohibited at night for IFR.

6.4.5 Instrument Approaches

ILS runway 10 frequency is 109.5 ID: ISTX OBS: 097

VOR runway 28, COY VOR 108.2, heading 259.

NDB runway 10, NDB 241, heading 093.

6.4.6 Departures

St. Croix has two departure procedures, depending on runway in use.

For runway 10, the Hamilton Seven Departure (See Chart).

For runway 27, the Snooz Two Departure (See Chart).

7 Tables

7.1 Frequently Used Airports in San Juan CERAP

| Airport Name | ICAO Code | Initial Departure Altitude | Runways | Field Elevation | Approach ILS/VOR Rwy-Freq-OBS |
|--|-----------|----------------------------|----------------|-----------------|---|
| San Juan Luis Muñoz Marín APP 119.400 East APP 128.650 West APP 119.600 DEP 120.900 TWR 132.050 GND 121.900 DEL 126.400 | TJSJ | 5,000 | 08/26 10/27 | 10 | SJU VOR 114.1 SJ NDB 330 ILS 8 110.3 078 ILS 10 109.7 101 VOR 8/10 081 NDB 8 078 NDB 10 082 |
| Isla Grande, P.R. Luis Ribas Dominicci TWR 135.875 | TJIG | 2,000 | 09/27 | 10 | None |
| St. Thomas, USVI Cyril E. King TWR 118.800 | TIST | 3,000 | 10/28 | 10 | STT VOR 108.6 ILS 10 110.1 100 VOR-A 10 187 |
| St. Croix, USVI Henry E. Rohlsen TWR 118.600 GND 121.700 | TISX | 2,000 | 10/28 | 61 | COY VOR 108.2 SX NDB 231 ILS 10 109.5 097 NDB 10 093 VOR 27 259 |
| St. Maarten, N.A. Princesa Juliana APP 128.950 TWR 118.700 | TNCM | 3,000 | 09/27 | 11 | PJM VOR 113.0 VOR/DME 9 096 VOR 9 096 |
| Aguadilla, P.R. Rafael Hernandez Unicom 122.800 | TJBQ | 3,000 | 08/26 | 238 | BQN VOR 113.5 VOR/DME 9 096 VOR 9 096 |
| Mayagüez, P.R. Eugenio María de Hostos Unicom 122.800 | TJMZ | 5,000 | 09/27 | 28 | MAZ VOR 110.6 VOR/GPS 9 081 |
| Ponce, P.R. Mercedita Unicom 122.800 | TJPS | 3,000 | 12/30 | 28 | PSE VOR 109.0 VOR 30 310 |