



**Sacramento International ATCT
Standard Operating Procedure
Version 1.7**

List of Changes

VERSION	DATE	DESCRIPTION
1.0	24MAY2019	Rewrite – Initial Release
1.1	20OCT2019	Removed VOX Channel due to AFV release
1.2	21MAY2020	Renumbering of runways 16/34 to 17/35
1.3	14SEP2020	Add FROGO DP; Removed DUDES DP
1.4	31DEC2020	Added TMC position for events, other minor typo and procedure corrections/clarifications
1.5	07FEB2022	Removed TMC position
1.6	14JUL2022	Update formatting, remove unnecessary verbiage, add ATCT equipment section and radar procedures, add VFR procedures section, update heading/altitude assignments table, update calm wind configuration information, add additional authorized headings, remove SVFR procedures
1.7	23FEB2023	Add detailed tower equipment info, add non-movement area procedures and diagram, update heading assignment phraseology

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Section 1. General Information

1-1 Purpose

This Standard Operating Procedure (SOP) outlines the procedures to be used by controllers working Sacramento International ATCT positions on the VATSIM network, to ensure that traffic flows are handled in as efficient and timely a manner as possible. This SOP is for simulation purposes only and shall not be used for real world use or reference.

1-2 Distribution

This SOP is distributed to all members of the Oakland ARTCC on VATSIM.

1-3 Cancellation

All previous procedures are canceled.

1-4 Equipment

Sacramento International ATCT is equipped with a Certified Tower Radar Display (CTRD), and Tower Data Link Services (TDLS) including its three parts, Flight Data Input/Output (FDIO), Digital Airport Terminal Information Services (D-ATIS), and Pre-Departure Clearance (PDC).

1-5 Positions Table

The following position table details authorized positions for Sacramento International ATCT.

SECTOR	CALLSIGN	RADIO CALLSIGN	FREQUENCY
Clearance Delivery	SMF_DEL	Capitol Clearance	121.100
Ground Control	SMF_GND	Capitol Ground	121.700
Local Control	SMF_TWR	Capitol Tower	125.700
D-ATIS	KSMF_ATIS		126.750

1-6 Runway Configurations

CONFIGURATION	DESCRIPTION
SMFN	Landing and Departing Runways 35L, 35R
SMFS	Landing and Departing Runways 17L, 17R

Section 2. Flight Data/ Clearance Delivery

2-1 General Procedures

- a. Issue departure clearance in accordance with current directives, Letters of Agreement, and this section. Ensure accuracy of pilot readback.
- b. Issue TEC routes for aircraft with destinations within NCT (except RNO and satellites). If a pilot is unable to accept a TEC route, issue vectors direct destination and coordinate with NCT.
- c. Initial headings specified in this SOP shall only be issued when a DP cannot be used or an applicable one does not exist (e.g. pilot is unable to accept DP, TEC route does not include DP)
 - i. Initial headings shall be issued with the clearance

PHRASEOLOGY-

CLEARED TO (airport) AIRPORT,

VIA TURN LEFT/RIGHT (heading) / FLY RUNWAY HEADING,

RADAR VECTORS (first fix/airway)...

- d. Pre-Departure Clearances (PDC) are authorized for use with PDC capable aircraft in accordance with [CPS-001](#).
- e. When an aircraft requesting clearance requires route or traffic management coordination, advise the TMU/CIC so that they can complete the coordination prior to issuing the clearance.

2-2 IFR Departures

- a. Inform aircraft expect clearance to filed altitude within 5 minutes after departure.
- b. Standard DP/Route/Heading and Altitude Assignment
 - i. SMFS

DEST/ROUTE	AIRCRAFT	HDG	DEP SECTOR	ALTITUDE
V23 (south) / V6 / V392 / FROGO# / SCTWN# / FTHIL# / All other NE through S destinations (except other listed in table)	P, T, J (filed 8,000 or below)	RWY	Expo	4,000
	P, T, J (filed 9,000 or higher)	120° or DP		9,000
V23 (north) / V200 / ENI / KSMF / Mather CX (except MCC, MHR, PVF) / All other north destinations (except other listed in table)	P, T (except DH8D)	300°	Elkhorn	2,000
	J & DH8D	010°		9,000
V494 / Oceanic / KSUU / KCCR / KVCB / KDWA / Napa CX	P, T, J	RWY	Expo	4,000
KEDU / O41				3,000
KSAC				2,000
KMCC / KMHR / KPVF		120° or DP		3,000

ii. SMFN

DEST/ROUTE	AIRCRAFT	HDG	DEP SECTOR	ALTITUDE
V23 (south) / V6 / V392 / FROGO# / All other NE through S destinations (except other listed in table)	P, T, J	120° or DP	Expo	4,000
V23 (north) / V200 / ENI / KSMF / Mather CX (except MCC, MHR, PVF) / All other north destinations (except other listed in this table)	P, T	300°	Elkhorn	2,000
	J & DH8D	RWY		4,000
RVRCT# / FTHIL#	P, T, J	DP	Expo	9,000
Oceanic / Napa CX / Travis CX	P, T	260°	Expo	2,000
	J	RWY	Elkhorn	4,000
KMCC, KMHR, KPVF	P, T, J	120° or DP	Expo	3,000
KSFO	P, T	140°		4,000
KSAC	P, T, J	260°		2,000

2-3 VFR Procedures

- Ensure VFR departures have their aircraft type, origin, and destination filled out in their flight plan.
- Issue all VFR aircraft, including pattern work, a transponder code.
- Instruct prop and turboprop VFR departures to maintain VFR at or below 2,500.
- For VFR aircraft requesting flight following, issue interim altitude, and departure frequency based on direction of flight.

EXAMPLE-

"N172SP, maintain VFR at or below 2,500, departure frequency 125.400, squawk 3201"

Section 3. Ground Control

3-1 Position Jurisdiction and Responsibilities

- a. Coordinate and exchange all applicable information with Local Control (LC) in accordance with FAA JO 7110.65, Chapter 3, and this SOP.
- b. Jurisdiction of Taxiways
 - i. Ground control has jurisdiction over all movement areas except for runways.
 - ii. Movement/non-movement area boundaries are shown in [Attachment 2](#).
- c. Maintain positive control of all taxiways and runways, which are designated as movement areas; provide advisories, and issue clearances and control instructions to aircraft.
- d. Maintain awareness of arriving traffic and anticipate Local Control needs to allow for arriving aircraft to fully clear the runway(s):
 - i. GC will yield or hold traffic for aircraft exiting the runway(s).
 - ii. Avoid blocking runway exits and advise LC when ground traffic will hold short of runway exits.

3-2 Coordination

- a. Intra-facility direct voice coordination may include, but not limited to; active runway crossings, helicopter operations, and/or any other operations on or near runways and taxiways used by LC and GC.
- b. Ground Control must ensure all aircraft taxi "full length" to the assigned runway, unless otherwise coordinated.

3-3 Non-Movement Area Operating Procedures

- a. Upon push back requests, all aircraft should be instructed "push back your discretion"
- b. Workload permitting, issue traffic advisories in the non-movement area. Do not issue control instructions in the non-movement area. Advisories must be provided, when feasible, in those areas to ensure a safe operation.

Section 4. Local Control

4-1 General Duties and Responsibilities

- a. LC is responsible for runway separation and control, sequence, and separation of IFR, SVFR, and Class C VFR aircraft in the Sacramento International ATCT delegated airspace shown in [Attachment 1](#).
 - i. LC may provide Class C radar service within their delegated airspace. This may involve radar identifying VFR aircraft (and advising them of radar contact) and making radar handoffs to NCT.
 - ii. NCT shall make radar handoffs of IFR arrivals and VFR arrivals/overflights to LC. LC need not accept the handoff before NCT transfers communications.
- b. Sacramento International ATCT delegated airspace is the inner ring of the Class Charlie airspace from surface to 2,500.
- c. Sequence VFR aircraft from the downwind and may sequence other VFR aircraft provided it does not disrupt NCT's arrival sequence.

4-2 Runway Selection

- a. The calm wind runways are 17L/17R.
 - i. During noise abatement hours between 2145 and 0745 local time, runway 35L/35R are calm wind runways. Controllers simulating noise abatement procedures is optional.
NOTE- *Calm wind runways are defined as being clear/dry and wind velocity of 7 knots or less or; 4 knots or less if runways are not clear/dry and braking action is reported as "good."*
- b. When wind is greater than calm, use the runway most nearly aligned with the wind.

4-3 Coordination

- a. Coordinate with GC for arriving/departing helicopter operations.
- b. LC must coordinate when using any runway other than the designated active runway.

4-4 Go-Around / Missed Approach

- a. Local Control is responsible for separation of arriving and departing IFR/VFR aircraft.
- a. When there is a go-around or missed approach, the controller must issue instructions to establish separation.
- b. Coordinate missed approaches with Elkhorn in SMFS and Expo in SMFN.
- c. Verbally coordinate all visual approach go-arounds to remain in the traffic pattern or utilize the climb-out instructions in this section.
- d. Issue the following missed approach/climb-out instructions to all unplanned missed approaches and practice instrument approaches:

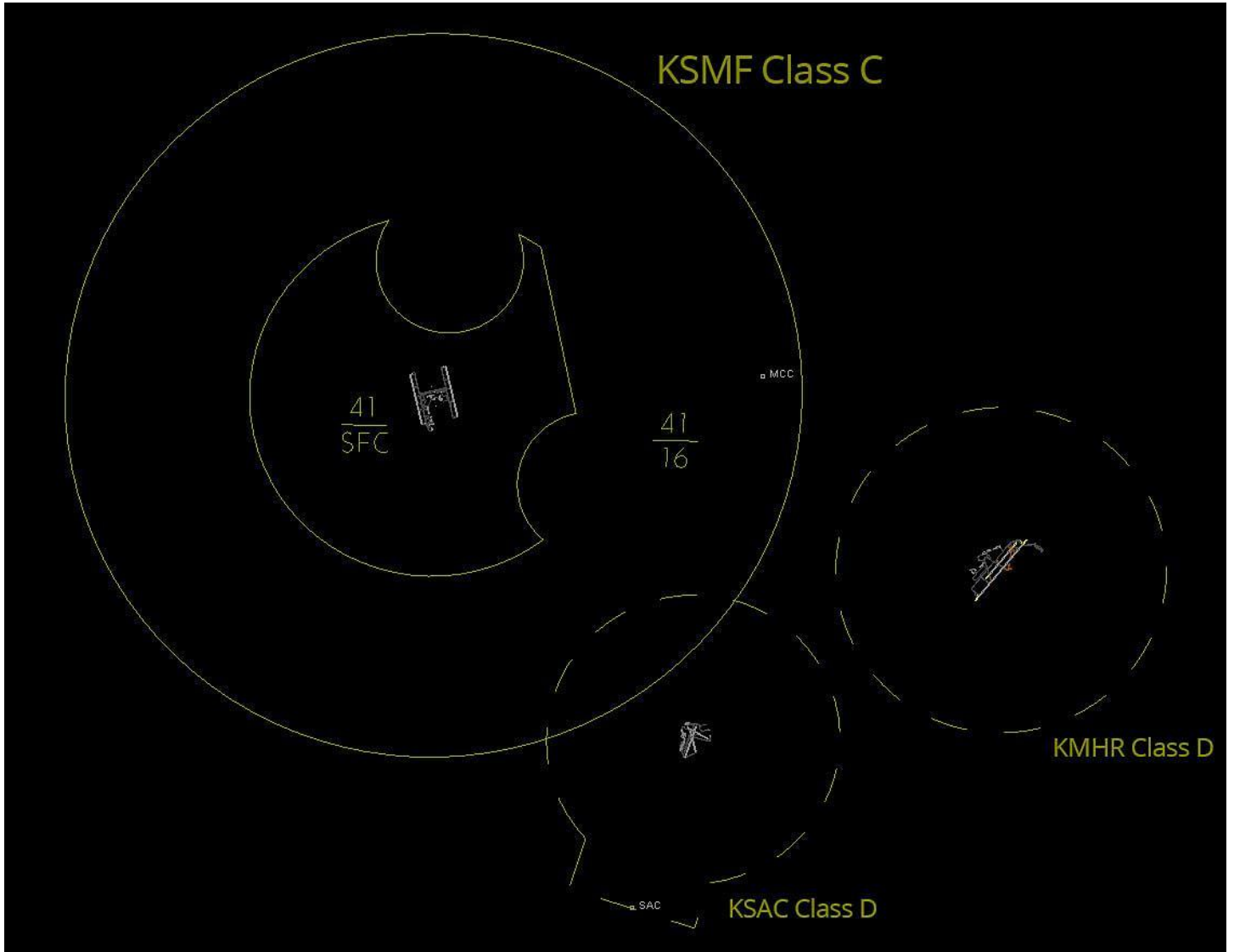
RUNWAY	HEADING	ALTITUDE
17L	Turn left 010°	2,000
17R	Turn right 300°	
35L	Turn left 210°	
35R	Turn right 140°	

4-5 Additional Authorized Headings

- a. Upon verbal approval from NCT, any heading may be assigned as alternate initial departure or missed approach headings.

NOTE- When using the Runway 17L DVA for departures, note that it has a climb gradient of 220 ft/nm to 700 ft

Attachment 1. SMF Class C Airspace



Attachment 2. Non-Movement Area Diagram

