

## RADIO FIX AND HOLDING DATA RECORD

NAME: CARIF STATE: CA COUNTRY: US ICAO REGION CODE: K2  
 LATITUDE/LONGITUDE: 330218.95N/1171957.74W TYPE: WP, INT, DME

AIRSPACE DOCKET: FIX TYPE OF ACTION: NO CHANGE

### FIX MAKE-UP FACILITIES:

FAC	NAME	IDENT	TYPE	CLASS	MAG BRG	TRUE BRG	DME	DIST FROM FAC NM	MRA	MAA
1	OCEANSIDE	OCN	VORTAC	H	145.48	160.48	12.83	12.83	3000	17500
2	JULIAN	JLI	VORTAC	L	246.00	261.00		38.14	3000	17500
3	MISSION BAY	MZB	VORTAC	H	325.59	340.59	16.28	16.28	3000	17500

HOLDING: HOLDING TYPE OF ACTION: NO CHANGE

### PATTERNS:

PAT	DIR	IDENT	TYPE	RAD/CRS/BRG	CRS INBOUND	TURN (L OR R)	LEG LENGTH TIME	DME	HOLDING ALTITUDES MIN	MAX	TEMPLATES MIN	MAX
1	SE	OCN	VORTAC	145.48	325.48	L	1		3000	6000	6	7
2	SE	MZB	VORTAC	325.59	325.59	L	1		3000	6000	6	7
3	SE	WP	WP	146.59	326.59	L		4	3000	6000	5	6

### CONTROLLING OBSTRUCTIONS:

PAT	AIRSPEED	OBSTRUCTION	COORDINATES	ELEVATION	ACCURACY CODE
UPN	200	AAO	330633.00N/1171221.00W	1910	4E
1	200	AAO	325554.00N/1171309.00W	614	4E
2	200	AAO	325554.00N/1171309.00W	614	4E
3	200	AAO	330354.00N/1171618.00W	604	4E

### REASON FOR NONSTANDARD HOLDING:

PAT 1 ATC REQUEST  
 PAT 2 ATC REQUEST  
 PAT 3 ATC REQUEST

### HOLDING RESTRICTIONS:

UNPLANNED HOLDING AUTHORIZED AT OR ABOVE 3000.

### REMARKS:

OCEANSIDE (FAC 1) AND JULIAN (FAC 2) USED TO ESTABLISH FIX COORDINATES  
 PRECIPITOUS TERRAIN EVALUATION COMPLETED.  
 LEAST DIVERGENCE ANGLE COMPUTED BETWEEN FAC 1 AND FAC 2, INTERSECTION OF FAC 1 AND FAC 3 DOES NOT MEET MINIMUM DIVERGENCE CRITERIA.

### FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
DP	LAXX	1, 2, 3		KLAX	LOS ANGELES	CA (US)
EN ROUTE	V23-V363-V597	1, 2, 3				CA (US)
IAP	RNAV (GPS) RWY 9			KRNM	RAMONA	CA (US)
IAP	ILS OR LOC RWY 28R	1, 2, 3	1, 2	KMYF	SAN DIEGO	CA (US)
IAP	RNAV (GPS) RWY 28R		3	KMYF	SAN DIEGO	CA (US)
IAP	LOC/DME-D	1, 2	1	KSEE	SAN DIEGO/EL CAJON	CA (US)

REQUIRED CHARTING: DP, IAP, CONTROLLER, EN ROUTE LOW

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 11 DATE OF REVISION: 11/13/2014

### REASON FOR REVISION:

UPDATED FIX USE.

DEVELOPED BY: DATE: 05/27/2014 OFFICE: AJV-354 NAME: RONALD SALPINO

APPROVED BY: DATE: 11/13/2014 OFFICE: AJV-354 NAME: JILL OLSON

SIGNATURE:

DISTRIBUTION: NFDC  
 FPO: WST  
 ARTCC: ZLA  
 ATC FACILITY: SOCAL APP CON, MYF ATCT  
 OTHER:

QUALITY  
 3  
 CHECKED

## RADIO FIX AND HOLDING DATA RECORD

**NAME:** DANAH **STATE:** CA **COUNTRY:** US **ICAO REGION CODE:** K2

**LATITUDE/LONGITUDE:** 332851.62N/1174154.15W **TYPE:** WP, INT, DME

**AIRSPACE DOCKET:** **FIX TYPE OF ACTION:** NO CHANGE

### FIX MAKE-UP FACILITIES:

FAC	NAME	IDENT	TYPE	CLASS	MAG BRG	TRUE BRG	DME	DIST FROM NM	FAC FEET	MRA	MAA
1	EL TORO	ELB	VOR/DME	T	158.00	172.00	11.79	11.79		4000	17500
2	SANTA CATALINA	SXC	VORTAC	L	064.87	079.87	36.78	36.78		4000	17500
3	SEAL BEACH	SLI	VORTAC	L	120.30	135.30	25.43	25.43		4000	17500

### EXPANDED SERVICE VOLUME (ESV):

FAC IDENT	FAC TYPE	RADIAL/BEARING	DISTANCE	MIN ALTITUDE	MAX ALTITUDE
ELB	VOR/DME	R-158	12	12000	17500

**HOLDING:** **HOLDING TYPE OF ACTION:** NO CHANGE

### REMARKS:

EL TORO (FAC 1) AND SEAL BEACH (FAC 3) USED TO ESTABLISH FIX COORDINATES

### FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
DP	LAXX	1, 2, 3		KLAX	LOS ANGELES	CA (US)
DP	STREL (RNAV)			KSNA	SANTA ANA	CA (US)
EN ROUTE	V23-165-597	1, 2, 3				(US)
EN ROUTE	V363	1, 2, 3				(US)

**REQUIRED CHARTING:** DP, CONTROLLER, EN ROUTE LOW

**COMPULSORY REPORTING POINT:** NO

**RECORD REVISION NUMBER:** 4

**DATE OF REVISION:** 09/18/2014

### REASON FOR REVISION:

1. UPDATED FIX USE.

**DEVELOPED BY:** **DATE:** 02/10/2014 **OFFICE:** AJV-354 **NAME:** RONALD SALPINO

**APPROVED BY:** **DATE:** 09/18/2014 **OFFICE:** AJV-354 **NAME:** LARRY STROUT

**SIGNATURE:**

### DISTRIBUTION:

**NFDC**  
**FPO:** WST  
**ARTCC:** ZLA  
**ATC FACILITY:** SOCAL  
**OTHER:**

QUALITY  
3  
CHECKED

## RADIO FIX AND HOLDING DATA RECORD

**NAME:** FICKY

**STATE:** OP

**COUNTRY:** US

**ICAO REGION CODE:** P

**LATITUDE/LONGITUDE:** 313327.38N/1212330.47W

**TYPE:** WP

**AIRSPACE DOCKET:**

**FIX TYPE OF ACTION:** MODIFY

**HOLDING:**

**HOLDING TYPE OF ACTION:** NO CHANGE

**REMARKS:**

OCEANIC INGRESS/EGRESS.

**FIX USE:**

**USE TYPE**

**USE TITLE**

**FAC**

**PAT**

**AIRPORT IDENT**

**CITY**

**STATE**

DP	LAXX			KLAX	LOS ANGELES	CA (US)
DP	PERCH			KLAX	LOS ANGELES	CA (OP)
DP	ZILLI (RNAV)			KLAX	LOS ANGELES	CA (US)
EN ROUTE	B200					(US)
EN ROUTE	B577					(US)
EN ROUTE	B581					(US)
EN ROUTE	G575					(US)
EN ROUTE	R578					(US)
STAR	BUFIE (RNAV)			KLAX	LOS ANGELES	CA (US)
STAR	LEENA			KLAX	LOS ANGELES	CA (OP)

**REQUIRED CHARTING:** DP, STAR, CONTROLLER, EN ROUTE HIGH

**COMPULSORY REPORTING POINT:** HIGH

**RECORD REVISION NUMBER:** 3

**DATE OF REVISION:** 03/10/2011

**REASON FOR REVISION:**

ADD WP TO NAME/TYPE.

UPDATE FIX USE.

**DEVELOPED BY:**

**DATE:** 09/01/2010

**OFFICE:** AVN-130

**NAME:** ADOLFO URRUTIA (DAN POWELL)

**APPROVED BY:**

**DATE:** 12/22/2010

**OFFICE:** AVN-130

**NAME:** DEZ SILAGYI

**SIGNATURE:**

**DISTRIBUTION:**

NFDC  
FPO: WST  
ARTCC: ZLA, ZOA  
ATC FACILITY:  
OTHER:

QUALITY  
3  
CHECKED

## RADIO FIX AND HOLDING DATA RECORD

**NAME:** GOATZ

**STATE:** OP

**COUNTRY:** US

**ICAO REGION CODE:** P

**LATITUDE/LONGITUDE:** 331105.47N/1184014.88W

**TYPE:** WP, INT, DME

**AIRSPACE DOCKET:**

**FIX TYPE OF ACTION:** MODIFY

**FIX MAKE-UP FACILITIES:**

FAC	NAME	IDENT	TYPE	CLASS	MAG BRG	TRUE BRG	DME	DIST FROM NM	FAC FEET	MRA	MAA
1	SANTA CATALINA	SXC	VORTAC	L	213.00	228.00	17.00	17.00		1000	17500
2	SAN CLEMENTE	NUC	TACAN	L	322.10	334.10	10.51	10.51		1000	17500

**HOLDING:**

**HOLDING TYPE OF ACTION:** NO CHANGE

**REMARKS:**

SANTA CATALINA (FAC 1) USED TO ESTABLISH FIX COORDINATES

**FIX USE:**

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
DP	LAXX	1		KLAX	LOS ANGELES	CA (US)
EN ROUTE	CONTROL 1177L	1, 2				CA (US)
STAR	BUFIE (RNAV)			KLAX	LOS ANGELES	CA (US)
STAR	LEENA	1		KLAX	LOS ANGELES	CA (US)

**REQUIRED CHARTING:** DP, STAR, CONTROLLER, EN ROUTE LOW

**COMPULSORY REPORTING POINT:** NO

**RECORD REVISION NUMBER:** 6

**DATE OF REVISION:** 02/04/2016

**REASON FOR REVISION:**

FIX MAKE-UP FACILITIES: FAC 2 MAG BRG CHANGED FROM 319.10 TO 322.10 DUE TO NUC TACAN MAGVAR CHANGE TO 12E 2020.

**DEVELOPED BY:**

**DATE:** 09/14/2015

**OFFICE:** AJV-5433

**NAME:** RALPH DUMAR

**APPROVED BY:**

**DATE:** 12/09/2015

**OFFICE:** AJV-5430

**NAME:** JILL OLSON

**SIGNATURE:**

**DISTRIBUTION:**

NFDC  
FPO: WST  
ARTCC: ZLA  
ATC FACILITY: SOCAL APP CON  
OTHER:

QUALITY  
3  
CHECKED

## RADIO FIX AND HOLDING DATA RECORD

**NAME:** HEMET **STATE:** CA **COUNTRY:** US **ICAO REGION CODE:** K2

**LATITUDE/LONGITUDE:** 334125.78N/1165244.58W **TYPE:** WP, INT, DME

**AIRSPACE DOCKET:** **FIX TYPE OF ACTION:** NO CHANGE

### FIX MAKE-UP FACILITIES:

FAC	NAME	IDENT	TYPE	CLASS	MAG BRG	TRUE BRG	DME	DIST FROM FAC NM	FAC FEET	MRA	MAA
1	SEAL BEACH	SLI	VORTAC	L	080.07	095.07		59.09		11000	17500
2	THERMAL	TRM	VORTAC	H	263.12	276.12	36.20	36.20		11000	17500
3	JULIAN	JLI	VORTAC	L	321.00	336.00		36.08		11000	17500

### EXPANDED SERVICE VOLUME (ESV):

FAC IDENT	FAC TYPE	RADIAL/BEARING	DISTANCE	MIN ALTITUDE	MAX ALTITUDE
SLI	VORTAC	R-080	60	11000	17500

**HOLDING:** **HOLDING TYPE OF ACTION:** NO CHANGE

### REMARKS:

SEAL BEACH (FAC 1) AND JULIAN (FAC 3) USED TO ESTABLISH FIX COORDINATES  
SLI DME UNUSABLE FOR FIX MAKE-UP AT MEA, PER FLIGHT INSPECTION FINDING 1/3/01.

### FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
DP	LAXX	1, 2, 3		KLAX	LOS ANGELES	CA (US)
DP	NIKKL	1, 2, 3		KONT	ONTARIO	CA (US)
EN ROUTE	V64	1, 2, 3				(US)

**REQUIRED CHARTING:** DP, CONTROLLER, EN ROUTE LOW

**COMPULSORY REPORTING POINT:** NO

**RECORD REVISION NUMBER:** 5 **DATE OF REVISION:** 05/26/2016

### REASON FOR REVISION:

RENAMED KONT DP FROM PRADO TO NIKKL.

**DEVELOPED BY:** **DATE:** 01/22/2016 **OFFICE:** AJV-5432 **NAME:** VICTOR BOONE (DUSTIN DAVIDSON)

**APPROVED BY:** **DATE:** 03/31/2016 **OFFICE:** AJV-5430 **NAME:** LONNIE EVERHART

**SIGNATURE:**

### DISTRIBUTION:

**NFDC**  
**FPO:** WST  
**ARTCC:** ZLA  
**ATC FACILITY:** SOCAL APP CON  
**OTHER:**

QUALITY  
3  
CHECKED

# RADIO FIX AND HOLDING DATA RECORD

**NAME:** IMPERIAL VORTAC      **STATE:** CA      **COUNTRY:** US      **ICAO REGION CODE:** K2  
**LATITUDE/LONGITUDE:** 324455.92N/1153030.90W      **TYPE:**  
**AIRSPACE DOCKET:** 14-AWP-13      **FIX TYPE OF ACTION:** MODIFY

## FIX MAKE-UP FACILITIES:

FAC	NAME	IDENT	TYPE	CLASS	MAG BRG	TRUE BRG	DME	DIST FROM FAC NM	FEET	MRA	MAA
1	IMPERIAL	IPL	VORTAC	H							45000

## HOLDING:

**HOLDING TYPE OF ACTION:** MODIFY

## PATTERNS:

PAT	DIR	IDENT	TYPE	RAD/CRS/BRG	CRS INBOUND	TURN (L OR R)	LEG LENGTH TIME	DME	HOLDING ALTITUDES MIN	MAX	TEMPLATES MIN	MAX
1	E	IPL	VORTAC	074.31	254.31	R	1-1 1/2		2000	32000	4	23
2	E		WP	074.80	254.80	R		4	3600	6000	5	6
3	E		WP	076.49	256.49	R		10	18000	34000	17	25
4	E		WP	079.49	259.49	R		10	18000	34000	17	25

## CONTROLLING OBSTRUCTIONS:

PAT	AIRSPEED	OBSTRUCTION	COORDINATES	ELEVATION	ACCURACY CODE
1	200	TOWER (06-001336)	324811.11N/1152957.67W	295	3D
2	200	TOWER (06-001336)	324811.11N/1152957.67W	295	3D

## HOLDING RESTRICTIONS:

HOLDING LIMITED TO ESTABLISHED PATTERNS.  
 PRIOR COORDINATION REQUIRED WITH CONTROLLING AGENCY FOR HOLDING OVER R-2512.  
 RADAR MONITORING REQUIRED TO AVOID R-2512 AND MEXICAN AIRSPACE.

## REMARKS:

PRECIPITOUS TERRAIN EVALUATION COMPLETED.

## FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
DP	TAKE OFF MINIMUMS			KBWC	BRAWLEY	CA (US)
DP	TAKE OFF MINIMUMS			KIPL	IMPERIAL	CA (US)
DP	SENIC (RNAV)			KLGB	LONG BEACH	CA (US)
DP	KARVR (RNAV)			KLAX	LOS ANGELES	CA (US)
DP	LAXX			KLAX	LOS ANGELES	CA (US)
DP	BORDER			KSAN	SAN DIEGO	CA (US)
DP	POGGI (RNAV)			KSAN	SAN DIEGO	CA (US)
DP	ZZOOO (RNAV)			KSAN	SAN DIEGO	CA (US)
DP	EL TORO			KSNA	SANTA ANA	CA (US)
DP	STREL (RNAV)			KSNA	SANTA ANA	CA (US)
EN ROUTE	J-18		1			(US)
EN ROUTE	J-2		1			(US)
EN ROUTE	T326					(US)
EN ROUTE	V-458		1			(US)
EN ROUTE	V137		1			(US)
EN ROUTE	V317		1			(US)
EN ROUTE	V66		1			(US)
IAP	RNAV (GPS) RWY 26		2	KBWC	BRAWLEY	CA (US)
IAP	VOR/DME-B		1	KBWC	BRAWLEY	CA (US)
IAP	RNAV (GPS) RWY 30			KNJK	EL CENTRO	CA (US)
IAP	VOR/DME RWY 30			KNJK	EL CENTRO	CA (US)
IAP	VOR OR GPS-A		1	KIPL	IMPERIAL	CA (US)
STAR	CHASR (RNAV)		3	KNZY	SAN DIEGO	CA (US)
STAR	BARET			KSAN	SAN DIEGO	CA (US)
STAR	LUCKI (RNAV)		4	KSAN	SAN DIEGO	CA (US)
STAR	LYNDI (RNAV)			KSAN	SAN DIEGO	CA (US)
STAR	CHASR (RNAV)		3	KSDM	SAN DIEGO	CA (US)

**REQUIRED CHARTING:** DP, STAR, MILITARY IAP, MILITARY DP, IAP, CONTROLLER, EN ROUTE LOW, EN ROUTE HIGH

**COMPULSORY REPORTING POINT:** NO

**RECORD REVISION NUMBER:** 17

**DATE OF REVISION:** 11/10/2016

## REASON FOR REVISION:

AIRSPACE DOCKET: ADDED "14-AWP-13"  
 HOLDING: DELETED PAT 2; ADDED PAT 3 AND PAT 4.  
 FIX USE: ADDED LUCKI (RNAV) STAR, CHASR (RNAV) STAR, ZZOOO (RNAV) AND T326; DELETED KBWC - VOR/DME-A, NICKK DP AND DUUKE (RNAV) DP; REMOVED "OR TACAN" FROM KNJK - VOR/DME RWY 30.  
 REMARKS: DELETED "PAT 2 AIRSPEED 310KTS AT NAVY REQUEST" AND "KBWC MAG VAR 13E/2000 FOR PAT 3".

QUALITY  
 3  
 CHECKED

<b>DEVELOPED BY:</b>	<b>DATE:</b> 05/27/2016	<b>OFFICE:</b> AJV-5442	<b>NAME:</b> PATRICK MULQUEEN (JACOB MAXFIELD)
<b>APPROVED BY:</b>	<b>DATE:</b>	<b>OFFICE:</b> AJV-5430	<b>NAME:</b> LONNIE EVERHART
	<b>SIGNATURE:</b>		
<b>DISTRIBUTION:</b>	<b>NFDC</b> <b>FPO:</b> WST <b>ARTCC:</b> ZLA <b>ATC FACILITY:</b> SOCAL TRACON <b>OTHER:</b> NAVFIG/NGA		

QUALITY  
3  
CHECKED

# RADIO FIX AND HOLDING DATA RECORD

NAME: JULIAN VORTAC

STATE: CA

COUNTRY: US

ICAO REGION CODE: K2

LATITUDE/LONGITUDE: 330825.65N/1163509.37W

TYPE:

AIRSPACE DOCKET:

FIX TYPE OF ACTION: NO CHANGE

FIX MAKE-UP FACILITIES:

FAC	NAME	IDENT	TYPE	CLASS	MAG BRG	TRUE BRG	DME	DIST FROM FAC NM	FAC FEET	MRA	MAA
1	JULIAN	JLI	VORTAC	L							45000

HOLDING:

HOLDING TYPE OF ACTION: NO CHANGE

PATTERNS:

PAT	DIR	IDENT	TYPE	RAD/CRS/BRG	CRS INBOUND	TURN (L OR R)	LEG LENGTH TIME	DME	HOLDING ALTITUDES MIN	MAX	TEMPLATES MIN	MAX
1	NE	JLI	VORTAC	060.00	240.00	L	1		7700	14000	8	10
2	SE	JLI	VORTAC	122.38	302.38	R	1 1/2		21000	27000		21
3	E	JLI	VORTAC	108.49	288.49	L	1 1/2		18000	45000		29
4	NE		WP	065.00	245.00	L		7	7700	14000	9	11

CONTROLLING OBSTRUCTIONS:

PAT	AIRSPEED	OBSTRUCTION	COORDINATES	ELEVATION	ACCURACY CODE
1	230	AAO	330307.30N/1162840.80W	5833	4D
4	230	AAO	330307.30N/1162840.80W	5833	4D

PRECIPITOUS TERRAIN ADDITIONS:

PAT	SPEED	ADDITION
1	230	375
4	230	375

REASON FOR NONSTANDARD HOLDING:

PAT 3 ATC REQUEST  
PAT 1 TERRAIN  
PAT 4 TERRAIN

HOLDING RESTRICTIONS:

HOLDING LIMITED TO ESTABLISHED PATTERNS.  
HOLDING PAT 3 ABOVE 26,000 REQUIRES PRIOR COORDINATION WITH CONTROLLING AGENCY FOR HOLDING OVER R-2510B.

REMARKS:

PRECIPITOUS TERRAIN EVALUATION COMPLETED.

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
DP	LAXX			KLAX	LOS ANGELES	CA (US)
DP	NIKKL			KONT	ONTARIO	CA (US)
DP	ARROW			KRIV	RIVERSIDE	CA (US)
DP	SKYES			KRIV	RIVERSIDE	CA (US)
DP	LAKKE			KNKX	SAN DIEGO	CA (US)
DP	VITKO			KNKX	SAN DIEGO	CA (US)
DP	BORDER			KSAN	SAN DIEGO	CA (US)
DP	FALCC			KSAN	SAN DIEGO	CA (US)
DP	POGGI (RNAV)			KSAN	SAN DIEGO	CA (US)
DP	EL TORO			KSNA	SANTA ANA	CA (US)
EN ROUTE	J93					(US)
EN ROUTE	V208					(US)
EN ROUTE	V458					(US)
EN ROUTE	V460					(US)
EN ROUTE	V514					(US)
IAP	ILS OR LOC/DME RWY 24			KCRQ	CARLSBAD	CA (US)
IAP	RNAV (GPS) Y RWY 24			KCRQ	CARLSBAD	CA (US)
IAP	RNAV (RNP) Z RWY 24			KCRQ	CARLSBAD	CA (US)
IAP	ILS OR LOC RWY 24R			KLAX	LOS ANGELES	CA (US)
IAP	ILS RWY 24R (CAT II)			KLAX	LOS ANGELES	CA (US)
IAP	ILS RWY 24R (CAT III)			KLAX	LOS ANGELES	CA (US)
IAP	RNAV (GPS)-B		4	KRNM	RAMONA	CA (US)
IAP	VOR/DME-A		1	KRNM	RAMONA	CA (US)
IAP	HI-VOR Z RWY 32		2	KRIV	RIVERSIDE	CA (US)
IAP	SETER		3	KSBD	SAN BERNARDINO	CA (US)
IAP	ILS OR LOC RWY 28R			KMYF	SAN DIEGO	CA (US)
IAP	LOC-D			KSEE	SAN DIEGO/EL CAJON	CA (US)
STAR	SETER		3	KCNO	CHINO	CA (US)
STAR	SETER		3	KAJO	CORONA	CA (US)
STAR	SETER		3	KEMT	EL MONTE	CA (US)
STAR	SETER		3	KPOC	LA VERNE	CA (US)
STAR	OCEAN		3	KLAX	LOS ANGELES	CA (US)
STAR	OLDEE		3	KLAX	LOS ANGELES	CA (US)
STAR	SEAVU			KLAX	LOS ANGELES	CA (US)
STAR	SHIVE			KLAX	LOS ANGELES	CA (US)
STAR	VISTA		3	KLAX	LOS ANGELES	CA (US)

QUALITY  
3  
CHECKED



STAR	SETER	3	KONT	ONTARIO	CA (US)
STAR	SETER	3	KRAL	RIVERSIDE	CA (US)
STAR	ARKOE		KRIV	RIVERSIDE	CA (US)
STAR	BARET		KSAN	SAN DIEGO	CA (US)

**REQUIRED CHARTING:** DP, STAR, MILITARY IAP, IAP, CONTROLLER, EN ROUTE LOW, EN ROUTE HIGH

**COMPULSORY REPORTING POINT:** NO

**RECORD REVISION NUMBER:** 18

**DATE OF REVISION:** 11/10/2016

**REASON FOR REVISION:**

ADDED TO FIX USE 6 AIRPORTS USING THE SETER STAR: KCNO, KAJ0, KEMT, KPOC, KRAL AND KSBD.  
ADDED KRIV TO FIX USE FOR THE ARKOE STAR.

<b>DEVELOPED BY:</b>	<b>DATE:</b> 04/27/2016	<b>OFFICE:</b> AJV-5431	<b>NAME:</b> DAVID DOWLING
<b>APPROVED BY:</b>	<b>DATE:</b>	<b>OFFICE:</b> AJV-5430	<b>NAME:</b> LONNIE EVERHART
	<b>SIGNATURE:</b>		

**DISTRIBUTION:** NFDC  
FPO: WST  
ARTCC: ZLA  
ATC FACILITY: SOCAL/LAX  
OTHER:

QUALITY  
3  
CHECKED

## RADIO FIX AND HOLDING DATA RECORD

NAME: LOS ANGELES VORTAC STATE: CA COUNTRY: US ICAO REGION CODE: K2

LATITUDE/LONGITUDE: 335559.33N/1182555.24W TYPE:

AIRSPACE DOCKET: FIX TYPE OF ACTION: NO CHANGE

### FIX MAKE-UP FACILITIES:

FAC	NAME	IDENT	TYPE	CLASS	MAG BRG	TRUE BRG	DME	DIST FROM FAC NM	FAC FEET	MRA	MAA
1	LOS ANGELES	LAX	VORTAC	H							
2	PARADISE	PDZ	VORTAC	H	256.38	271.38	45.04	45.04		3000	45000

### EXPANDED SERVICE VOLUME (ESV):

FAC IDENT	FAC TYPE	RADIAL/BEARING	DISTANCE	MIN ALTITUDE	MAX ALTITUDE
PDZ	VORTAC	R-256	46	3000	16000

### FIX RESTRICTIONS:

MCA V299 3200 WESTBOUND

### HOLDING:

HOLDING TYPE OF ACTION: NO CHANGE

### PATTERNS:

PAT	DIR	IDENT	TYPE	RAD/CRS/BRG	CRS INBOUND	TURN (L OR R)	LEG LENGTH TIME DME	HOLDING ALTITUDES MIN MAX	TEMPLATES MIN MAX
1	N	LAX	VORTAC	342.00	162.00	L	1-1 1/2	4000 17500	4 16
2	E	LAX	VORTAC	075.88	255.88	L	1-1 1/2	4000 17500	4 16

### CONTROLLING OBSTRUCTIONS:

PAT	AIRSPEED	OBSTRUCTION	COORDINATES	ELEVATION	ACCURACY CODE
1	200	AAO	340514.00N/1182659.71W	1099	4E
2	200	TOWER (06-000260)	335135.00N/1182100.00W	585	5E

### REASON FOR NONSTANDARD HOLDING:

PAT 1 ATC REQUEST  
PAT 2 ATC REQUEST

### HOLDING RESTRICTIONS:

HOLDING LIMITED TO ESTABLISHED PATTERNS.

### REMARKS:

PRECIPITOUS TERRAIN EVALUATION COMPLETED.

### FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
DP	ELMOO			KBUR	BURBANK	CA (US)
DP	VAN NUYS			KBUR	BURBANK	CA (US)
DP	ANAHEIM			KFUL	FULLERTON	CA (US)
DP	TAKEOFF MINIMUMS			KHHR	HAWTHORNE	CA (US)
DP	ANAHEIM			KLGB	LONG BEACH	CA (US)
DP	TAKEOFF MINIMUMS			KLGB	LONG BEACH	CA (US)
DP	CATALINA			KLAX	LOS ANGELES	CA (US)
DP	CHATY			KLAX	LOS ANGELES	CA (US)
DP	GABRE			KLAX	LOS ANGELES	CA (US)
DP	GORMAN			KLAX	LOS ANGELES	CA (US)
DP	LAXX			KLAX	LOS ANGELES	CA (US)
DP	LOOP			KLAX	LOS ANGELES	CA (US)
DP	PERCH			KLAX	LOS ANGELES	CA (US)
DP	SEAL BEACH			KLAX	LOS ANGELES	CA (US)
DP	SEBBY			KLAX	LOS ANGELES	CA (US)
DP	VENTURA			KLAX	LOS ANGELES	CA (US)
DP	HASSA			KONT	ONTARIO	CA (US)
DP	ANAHEIM			KSNA	SANTA ANA	CA (US)
DP	CHANNEL			KSNA	SANTA ANA	CA (US)
DP	IRVINE			KSNA	SANTA ANA	CA (US)
DP	TAKEOFF MINIMUMS			KTOA	TORRANCE	CA (US)
DP	ADAMM			KVNY	VAN NUYS	CA (US)
DP	CANOGA			KVNY	VAN NUYS	CA (US)
DP	NEWHALL			KVNY	VAN NUYS	CA (US)
EN ROUTE	J1					(US)
EN ROUTE	J10					(US)
EN ROUTE	J100					(US)
EN ROUTE	J104					(US)
EN ROUTE	J107					(US)
EN ROUTE	J126					(US)
EN ROUTE	J128					(US)
EN ROUTE	J134					(US)
EN ROUTE	J169					(US)
EN ROUTE	J4					(US)
EN ROUTE	J5					(US)
EN ROUTE	J60					(US)

QUALITY  
3  
CHECKED

EN ROUTE	J64			(US)
EN ROUTE	J7			(US)
EN ROUTE	J74			(US)
EN ROUTE	J78			(US)
EN ROUTE	J88			(US)
EN ROUTE	J9			(US)
EN ROUTE	J93			(US)
EN ROUTE	J96			(US)
EN ROUTE	Q11			(US)
EN ROUTE	T306			(US)
EN ROUTE	V107			(US)
EN ROUTE	V16			(US)
EN ROUTE	V165			(US)
EN ROUTE	V201			(US)
EN ROUTE	V210			(US)
EN ROUTE	V23			(US)
EN ROUTE	V25			(US)
EN ROUTE	V264			(US)
EN ROUTE	V299			(US)
EN ROUTE	V370			(US)
EN ROUTE	V64			(US)
IAP	ILS Y OR LOC Y RWY 8	KBUR	BURBANK	CA (US)
IAP	ILS Z OR LOC Z RWY 8	KBUR	BURBANK	CA (US)
IAP	VOR RWY 8	KBUR	BURBANK	CA (US)
IAP	LOC RWY 25	KHHR	HAWTHORNE	CA (US)
IAP	VOR RWY 25	KHHR	HAWTHORNE	CA (US)
IAP	ILS OR LOC RWY 30	KLGB	LONG BEACH	CA (US)
IAP	VOR OR TACAN RWY 30	KLGB	LONG BEACH	CA (US)
IAP	HARBOR VISUAL RWY 25L/R	KLAX	LOS ANGELES	CA (US)
IAP	ILS OR LOC RWY 24L	KLAX	LOS ANGELES	CA (US)
IAP	ILS OR LOC RWY 24R	KLAX	LOS ANGELES	CA (US)
IAP	ILS OR LOC RWY 25L	KLAX	LOS ANGELES	CA (US)
IAP	ILS OR LOC RWY 25R	KLAX	LOS ANGELES	CA (US)
IAP	ILS OR LOC RWY 6L	KLAX	LOS ANGELES	CA (US)
IAP	ILS OR LOC RWY 6R	KLAX	LOS ANGELES	CA (US)
IAP	ILS OR LOC RWY 7L	KLAX	LOS ANGELES	CA (US)
IAP	ILS OR LOC RWY 7R	KLAX	LOS ANGELES	CA (US)
IAP	ILS RWY 24R (CAT II)	KLAX	LOS ANGELES	CA (US)
IAP	ILS RWY 24R (CAT III)	KLAX	LOS ANGELES	CA (US)
IAP	ILS RWY 25L (CAT II)	KLAX	LOS ANGELES	CA (US)
IAP	ILS RWY 25L (CAT III)	KLAX	LOS ANGELES	CA (US)
IAP	STADIUM VISUAL RWY 24L	KLAX	LOS ANGELES	CA (US)
IAP	VOR-A	KWHP	LOS ANGELES	CA (US)
IAP	ILS OR LOC RWY 20R	KSNA	SANTA ANA	CA (US)
IAP	LOC BC RWY 02L	KSNA	SANTA ANA	CA (US)
IAP	VOR OR GPS-A	KSMO	SANTA MONICA	CA (US)
IAP	ILS OR LOC RWY 29R	KTOA	TORRANCE	CA (US)
IAP	VOR RWY 11L	KTOA	TORRANCE	CA (US)
IAP	ILS RWY 16R	KVNY	VAN NUYS	CA (US)
IAP	LDA-C	KVNY	VAN NUYS	CA (US)
IAP	VOR-A	KVNY	VAN NUYS	CA (US)
IAP	VOR-B	KVNY	VAN NUYS	CA (US)
STAR	FODRR	KCRQ	CARLSBAD	CA (US)
STAR	TANDY	KLGB	LONG BEACH	CA (US)
STAR	BASET	KLAX	LOS ANGELES	CA (US)
STAR	DOWNE	KLAX	LOS ANGELES	CA (US)
STAR	KIMMO	KLAX	LOS ANGELES	CA (US)
STAR	LEENA	KLAX	LOS ANGELES	CA (US)
STAR	OCEAN	KLAX	LOS ANGELES	CA (US)
STAR	REDEYE	KLAX	LOS ANGELES	CA (US)
STAR	RIIVR	KLAX	LOS ANGELES	CA (US)
STAR	SADDE	KLAX	LOS ANGELES	CA (US)
STAR	SEAVU	KLAX	LOS ANGELES	CA (US)
STAR	BAYVU (RNAV)	KSAN	SAN DIEGO	CA (US)
STAR	HUBRD	KSAN	SAN DIEGO	CA (US)
STAR	SHAMU	KSAN	SAN DIEGO	CA (US)
STAR	KIMMO	KSMO	SANTA MONICA	CA (US)

**REQUIRED CHARTING:** DP, STAR, IAP, AREA, CONTROLLER, EN ROUTE LOW, EN ROUTE HIGH

**COMPULSORY REPORTING POINT:** NO

**RECORD REVISION NUMBER:** 14

**DATE OF REVISION:** 05/26/2016

**REASON FOR REVISION:**

UPDATED FIX USE: CHANGED KBUR ILS OR LOC Z RWY 8 TO ILS Z OR LOC Z RWY 8 AND LOC Y RWY 8 TO ILS Y OR LOC Y RWY 8 AND CHANGES KVNY VOR/DME OR GPS-B TO VOR-B.

**DEVELOPED BY:**      **DATE:** 11/17/2015

**OFFICE:** AJV-5411

**NAME:** KELLY DEAN

**APPROVED BY:**      **DATE:** 04/21/2016

**OFFICE:** AJV-5430

**NAME:** LONNIE EVERHART

**SIGNATURE:**



**DISTRIBUTION:**    **NFDC**  
                         **FPO: WST**  
                         **ARTCC: ZLA**  
                         **ATC FACILITY: SOCAL TRACON**  
                         **OTHER: LAX ATCT**

QUALITY  
3  
CHECKED

## RADIO FIX AND HOLDING DATA RECORD

**NAME:** MALIT **STATE:** OP **COUNTRY:** US **ICAO REGION CODE:** P

**LATITUDE/LONGITUDE:** 322832.13N/1193528.25W **TYPE:** WP, DME

**AIRSPACE DOCKET:** **FIX TYPE OF ACTION:** MODIFY

### FIX MAKE-UP FACILITIES:

FAC	NAME	IDENT	TYPE	CLASS	MAG BRG	TRUE BRG	DME	DIST FROM NM	FAC FEET	MRA	MAA
1	SANTA CATALINA	SXC	VORTAC	L	213.00	228.00	80.00	80.00		6000	45000
2	MISSION BAY	MZB	VORTAC	H	246.93	261.93	121.27	121.27		18000	45000

### EXPANDED SERVICE VOLUME (ESV):

FAC IDENT	FAC TYPE	RADIAL/BEARING	DISTANCE	MIN ALTITUDE	MAX ALTITUDE
SXC	VORTAC	R-213	80	6000	45000

**HOLDING:** **HOLDING TYPE OF ACTION:** NO CHANGE

### REMARKS:

SANTA CATALINA (FAC 1) USED TO ESTABLISH FIX COORDINATES

### FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
DP	LAXX	1, 2		KLAX	LOS ANGELES	CA (US)
DP	ZILLI (RNAV)			KLAX	LOS ANGELES	CA (US)
EN ROUTE	CONTROL 1177L	1, 2				(US)
STAR	BUFIE (RNAV)			KLAX	LOS ANGELES	CA (US)
STAR	LEENA	1, 2		KLAX	LOS ANGELES	CA (US)

**REQUIRED CHARTING:** DP, STAR, CONTROLLER, EN ROUTE LOW, EN ROUTE HIGH

**COMPULSORY REPORTING POINT:** NO

**RECORD REVISION NUMBER:** 4

**DATE OF REVISION:** 05/31/2012

### REASON FOR REVISION:

ADDED NOTE "SANTA CATALINA FAC 1 USED TO ESTABLISH COORDINATES".  
CHANGED SXC VORTAC MRA FROM 5000 TO 6000 IAW SUPER FMO ESV RESTRICTION.  
CHANGED ESV MIN ALT FROM 5000 TO 6000 IAW SUPER FMO RESTRICTION.

**DEVELOPED BY:** **DATE:** 12/22/2011 **OFFICE:** AJV-354 **NAME:** ADOLFO URRUTIA (RALPH DUMAR)

**APPROVED BY:** **DATE:** 03/19/2012 **OFFICE:** AJV-354 **NAME:** DEZ SILAGYI

**SIGNATURE:**

**DISTRIBUTION:** NFDC  
FPO: WST  
ARTCC: ZLA  
ATC FACILITY: SOCAL APP CON, LAX ATCT  
OTHER:

QUALITY  
3  
CHECKED

# RADIO FIX AND HOLDING DATA RECORD

NAME: MISSION BAY VORTAC STATE: CA COUNTRY: US ICAO REGION CODE: K2  
 LATITUDE/LONGITUDE: 324655.93N/1171331.49W TYPE:  
 AIRSPACE DOCKET: 14-AWP-13 FIX TYPE OF ACTION: NO CHANGE

## FIX MAKE-UP FACILITIES:

FAC	NAME	IDENT	TYPE	CLASS	MAG BRG	TRUE BRG	DME	DIST FROM FAC NM	MRA FEET	MAA
1	MISSION BAY	MZB	VORTAC	H						45000

## HOLDING:

HOLDING TYPE OF ACTION: NO CHANGE

## PATTERNS:

PAT	DIR	IDENT	TYPE	RAD/CRS/BRG	CRS INBOUND	TURN (L OR R)	LEG LENGTH TIME DME	HOLDING ALTITUDES MIN MAX	TEMPLATES MIN MAX
1	W	MZB	VORTAC	255.00	075.00	R	1-1 1/2	2300 17500	4 16
2	E	MZB	VORTAC	075.97	255.97	L	1	4000 6000	4 5

## CONTROLLING OBSTRUCTIONS:

PAT	AIRSPEED	OBSTRUCTION	COORDINATES	ELEVATION	ACCURACY CODE
1	200	TOWER (06-000273)	325018.00N/1171459.00W	1049	1C
1	310	TOWER (06-000273)	325018.00N/1171459.00W	1049	1C
2	200	AAO	325012.00N/1171500.00W	988	4E

## REASON FOR NONSTANDARD HOLDING:

PAT 2 ATC REQUEST

## HOLDING RESTRICTIONS:

HOLDING LIMITED TO ESTABLISHED PATTERNS.

## PROCEDURES REQUIRING CLIMB-IN-HOLD:

PAT	PROCEDURE TITLE	AIRPORT IDENT	CITY	STATE
1	TAKE-OFF MINIMUMS	KMYF	SAN DIEGO	CA (US)
1	TAKE-OFF MINIMUMS	KSAN	SAN DIEGO	CA (US)

## REMARKS:

PRECIPITOUS TERRAIN EVALUATION COMPLETED.

## FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
DP	KARVR (RNAV)			KLAX	LOS ANGELES	CA (US)
DP	LAXX			KLAX	LOS ANGELES	CA (US)
DP	NIKKL			KONT	ONTARIO	CA (US)
DP	TAKE-OFF MINIMUMS		1	KMYF	SAN DIEGO	CA (US)
DP	BORDER			KSAN	SAN DIEGO	CA (US)
DP	FALCC			KSAN	SAN DIEGO	CA (US)
DP	PEBLE			KSAN	SAN DIEGO	CA (US)
DP	POGGI (RNAV)			KSAN	SAN DIEGO	CA (US)
DP	TAKE-OFF MINIMUMS		1	KSAN	SAN DIEGO	CA (US)
DP	TAKE-OFF MINIMUMS			KSDM	SAN DIEGO	CA (US)
DP	TAKE-OFF MINIMUMS			KSEE	SAN DIEGO/EL CAJON	CA (US)
DP	EL TORO			KSNA	SANTA ANA	CA (US)
EN ROUTE	J1					(US)
EN ROUTE	J18					(US)
EN ROUTE	J2					(US)
EN ROUTE	T326					(US)
EN ROUTE	V-23					(US)
EN ROUTE	V-25					(US)
EN ROUTE	V-27					(US)
EN ROUTE	V-363					(US)
EN ROUTE	V-460					(US)
EN ROUTE	V-514					(US)
EN ROUTE	V-597					(US)
EN ROUTE	V165					(US)
EN ROUTE	V317					(US)
EN ROUTE	V66					(US)
IAP	ILS OR LOC/DME RWY 24			KCRQ	CARLSBAD	CA (US)
IAP	VOR-A			KCRQ	CARLSBAD	CA (US)
IAP	VOR-A			KOKB	OCEANSIDE	CA (US)
IAP	ILS OR LOC RWY 28R			KMYF	SAN DIEGO	CA (US)
IAP	ILS OR LOC RWY 9			KSAN	SAN DIEGO	CA (US)
IAP	LOC RWY 27			KSAN	SAN DIEGO	CA (US)
IAP	SWEETWATER VISUAL RWY 27			KSAN	SAN DIEGO	CA (US)
IAP	RNAV (GPS) RWY 8L			KSDM	SAN DIEGO	CA (US)
IAP	VOR OR GPS-A		2	KSDM	SAN DIEGO	CA (US)
IAP	LOC/DME-D	1	1	KSEE	SAN DIEGO/EL CAJON	CA (US)
STAR	FODRR			KCRQ	CARLSBAD	CA (US)
STAR	LEENA			KLAX	LOS ANGELES	CA (US)
STAR	OCEAN			KLAX	LOS ANGELES	CA (US)
STAR	SHIVE			KLAX	LOS ANGELES	CA (US)

QUALITY  
3  
CHECKED

STAR	VISTA		KLAX	LOS ANGELES	CA (US)
STAR	FODRR	1	KNFG	OCEANSIDE	CA (US)
STAR	FODRR	1	KOKB	OCEANSIDE	CA (US)
STAR	BARET		KNZY	SAN DIEGO	CA (US)
STAR	BARET		KSAN	SAN DIEGO	CA (US)
STAR	HUBRD		KSAN	SAN DIEGO	CA (US)
STAR	SHAMU		KSAN	SAN DIEGO	CA (US)

**REQUIRED CHARTING:** DP, STAR, IAP, CONTROLLER, EN ROUTE LOW, EN ROUTE HIGH

**COMPULSORY REPORTING POINT:** NO

**RECORD REVISION NUMBER:** 17

**DATE OF REVISION:** 11/10/2016

**REASON FOR REVISION:**

1. ADDED T326 TO FIX USE.
2. ADDED AIRSPACE DOCKET 14-AWP-13.

**DEVELOPED BY:**      **DATE:** 05/24/2016

**OFFICE:** AJV-5432

**NAME:** JIMMY HUGHES

**APPROVED BY:**      **DATE:**

**OFFICE:** AJV-5430

**NAME:** LONNIE EVERHART

**SIGNATURE:**

**DISTRIBUTION:**

**NFDC**  
**FPO:** WST  
**ARTCC:** ZLA  
**ATC FACILITY:** SOCAL APPCON  
**OTHER:**

QUALITY  
3  
CHECKED

## RADIO FIX AND HOLDING DATA RECORD

**NAME:** OCEANSIDE VORTAC **STATE:** CA **COUNTRY:** US **ICAO REGION CODE:** K2

**LATITUDE/LONGITUDE:** 331426.28N/1172503.79W **TYPE:**

**AIRSPACE DOCKET:** **FIX TYPE OF ACTION:** NO CHANGE

### FIX MAKE-UP FACILITIES:

FAC	NAME	IDENT	TYPE	CLASS	MAG BRG	TRUE BRG	DME	DIST FROM FAC NM	MRA	MAA
1	OCEANSIDE	OCN	VORTAC	H						45000

**HOLDING:** **HOLDING TYPE OF ACTION:** NO CHANGE

### PATTERNS:

PAT	DIR	IDENT	TYPE	RAD/CRS/BRG	CRS INBOUND	TURN (L OR R)	LEG LENGTH TIME DME	HOLDING ALTITUDES MIN MAX	TEMPLATES MIN MAX
1	W	OCN	VORTAC	270.00	090.00	R	1	2000 14000	4 10

### CONTROLLING OBSTRUCTIONS:

PAT	AIRSPEED	OBSTRUCTION	COORDINATES	ELEVATION	ACCURACY CODE
1	200	AAO	331742.00N/1172348.00W	945	4E

### HOLDING RESTRICTIONS:

HOLDING LIMITED TO ESTABLISHED PATTERN.  
PRIOR COORDINATION REQUIRED WITH CONTROLLING AGENCY FOR HOLDING OVER R-2503 A, B, AND D.

### REMARKS:

PRECIPITOUS TERRAIN EVALUATION COMPLETED.

### FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
DP	TAKEOFF MINIMUMS	1		KL18	FALLBROOK	CA (US)
DP	LAXX	1		KLAX	LOS ANGELES	CA (US)
DP	TAKEOFF MINIMUMS	1		KOKB	OCEANSIDE	CA (US)
DP	CATHEDRAL	1		KPSP	PALM SPRINGS	CA (US)
DP	FALCC	1		KSAN	SAN DIEGO	CA (US)
DP	PEBLE	1		KSAN	SAN DIEGO	CA (US)
DP	EL TORO	1		KSNA	SANTA ANA	CA (US)
DP	MUSEL	1		KSNA	SANTA ANA	CA (US)
DP	PEVEE (RNAV)	1		KSMO	SANTA MONICA	CA (US)
EN ROUTE	J1	1				(US)
EN ROUTE	V208-458	1				(US)
EN ROUTE	V23-165-597	1				(US)
IAP	ILS OR LOC/DME RWY 24	1	1	KCRQ	CARLSBAD	CA (US)
IAP	RNAV (GPS) X RWY 24	1		KCRQ	CARLSBAD	CA (US)
IAP	RNAV (RNP) Z RWY 24	1		KCRQ	CARLSBAD	CA (US)
IAP	VOR-A	1	1	KCRQ	CARLSBAD	CA (US)
IAP	VOR-A	1	1	KOKB	OCEANSIDE	CA (US)
IAP	VOR/DME-A	1		KRNM	RAMONA	CA (US)
IAP	ILS OR LOC RWY 28R	1		KMYF	SAN DIEGO	CA (US)
IAP	ILS OR LOC RWY 9	1		KSAN	SAN DIEGO	CA (US)
IAP	LOC RWY 27	1		KSAN	SAN DIEGO	CA (US)
STAR	FODRR	1		KCRQ	CARLSBAD	CA (US)
STAR	KAYOH	1		KLGB	LONG BEACH	CA (US)
STAR	LEENA	1		KLAX	LOS ANGELES	CA (US)
STAR	OCEAN	1		KLAX	LOS ANGELES	CA (US)
STAR	SHIVE	1		KLAX	LOS ANGELES	CA (US)
STAR	VISTA	1		KLAX	LOS ANGELES	CA (US)
STAR	SETER	1		KONT	ONTARIO	CA (US)
STAR	ARKOE	1		KRIV	RIVERSIDE	CA (US)
STAR	BARET	1		KSAN	SAN DIEGO	CA (US)
STAR	SHAMU	1		KSAN	SAN DIEGO	CA (US)

**REQUIRED CHARTING:** DP, STAR, IAP, CONTROLLER, EN ROUTE LOW, EN ROUTE HIGH

**COMPULSORY REPORTING POINT:** NO

**RECORD REVISION NUMBER:** 17 **DATE OF REVISION:** 09/15/2016

### REASON FOR REVISION:

UPDATED FIX USE, REMOVED LNSAY DP, ADDED FALCC DP (KSAN).

**DEVELOPED BY:** **DATE:** 03/09/2016 **OFFICE:** AJV-5432 **NAME:** PHILLIP BRANDENBURG

**APPROVED BY:** **DATE:** **OFFICE:** AJV-5430 **NAME:** LONNIE EVERHART

QUALITY  
3  
CHECKED



**SIGNATURE:****DISTRIBUTION:****NFDC****FPO: WST****ARTCC: ZLA****ATC FACILITY: SOCAL TRACON****OTHER:**

QUALITY  
3  
CHECKED

## RADIO FIX AND HOLDING DATA RECORD

NAME: PILLO STATE: CA COUNTRY: US ICAO REGION CODE: K2

LATITUDE/LONGITUDE: 324613.39N/1162806.86W TYPE: WP, INT, DME

AIRSPACE DOCKET: FIX TYPE OF ACTION: MODIFY

### FIX MAKE-UP FACILITIES:

FAC	NAME	IDENT	TYPE	CLASS	MAG BRG	TRUE BRG	DME	DIST FROM NM	FAC FEET	MRA	MAA
1	MISSION BAY	MZB	VORTAC	H	075.85	090.85	38.29	38.29		7700	17500
2	JULIAN	JLI	VORTAC	L	150.00	165.00		22.94		7700	17500
3	IMPERIAL	IPL	VORTAC	H	257.78	271.78		48.59		8400	17500
4	OCEANSIDE	OCN	VORTAC	H	105.20	120.20	55.56	55.56		7700	17500

### EXPANDED SERVICE VOLUME (ESV):

FAC IDENT	FAC TYPE	RADIAL/BEARING	DISTANCE	MIN ALTITUDE	MAX ALTITUDE
IPL	VORTAC	R-258	49	8400	17500
OCN	VORTAC	R-105	56	7000	17500

HOLDING: HOLDING TYPE OF ACTION: NO CHANGE

### PATTERNS:

PAT	DIR	IDENT	TYPE	RAD/CRS/BRG	CRS INBOUND	TURN (L OR R)	LEG LENGTH TIME	DME	HOLDING ALTITUDES MIN	MAX	TEMPLATES MIN	MAX
1	E	MZB	VORTAC	075.85	255.85	L	1-1 1/2		8100	17500	11	18
2	E	MZB	VORTAC	075.85	255.85	R	1 1/2		15000	17500	17	18

### CONTROLLING OBSTRUCTIONS:

PAT	AIRSPEED	OBSTRUCTION	COORDINATES	ELEVATION	ACCURACY CODE
1	230	AAO	325021.60N/1162406.90W	6578	6A
2	265	AAO	325649.30N/1163610.60W	6712	6A

### PRECIPITOUS TERRAIN ADDITIONS:

PAT	SPEED	ADDITION
1	230	371
2	265	375

### REASON FOR NONSTANDARD HOLDING:

PAT 1 AVOID ADJACENT HOLDING AND APPROACH AREA

### HOLDING RESTRICTIONS:

HOLDING LIMITED TO ESTABLISHED PATTERNS.

### REMARKS:

MISSION BAY (FAC 1) AND JULIAN (FAC 2) USED TO ESTABLISH FIX COORDINATES  
PRECIPITOUS TERRAIN EVALUATION COMPLETED.  
HOLDING PATTERNS USED BY ATC.

### FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
DP	SENIC (RNAV)			KLGB	LONG BEACH	CA (US)
DP	KARVR (RNAV)			KLAX	LOS ANGELES	CA (US)
DP	LAXX	1, 2, 4		KLAX	LOS ANGELES	CA (US)
DP	STREL (RNAV)			KSNA	SANTA ANA	CA (US)
STAR	BARET	1, 2, 3		KSAN	SAN DIEGO	CA (US)

REQUIRED CHARTING: DP, STAR, CONTROLLER, EN ROUTE LOW

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 9

DATE OF REVISION: 02/04/2016

### REASON FOR REVISION:

RAISED FAC 3 MRA FROM 7700 TO 8400 TO MATCH ESV DATA.

DEVELOPED BY: DATE: 09/01/2015 OFFICE: AJV-5422 NAME: STEPHEN PETERSON

APPROVED BY: DATE: 12/09/2015 OFFICE: AJV-5430 NAME: JILL OLSON

SIGNATURE:

### DISTRIBUTION:

NFDC  
FPO: WST  
ARTCC: ZLA  
ATC FACILITY: SOCAL TRACON  
OTHER:

QUALITY  
3  
CHECKED

## RADIO FIX AND HOLDING DATA RECORD

NAME: POMONA VORTAC STATE: CA COUNTRY: US ICAO REGION CODE: K2

LATITUDE/LONGITUDE: 340442.20N/1174713.47W TYPE:

AIRSPACE DOCKET: FIX TYPE OF ACTION: MODIFY

### FIX MAKE-UP FACILITIES:

FAC	NAME	IDENT	TYPE	CLASS	MAG BRG	TRUE BRG	DME	DIST FROM FAC NM	FEET	MRA	MAA
1	POMONA	POM	VORTAC	L							17500

### FIX RESTRICTIONS:

MCA V210 10300 NORTHEAST BOUND  
MCA V264 5600 EASTBOUND  
MCA V394 10300 NORTHEAST BOUND  
MCA V197 5800 NORTHWEST BOUND

### HOLDING:

HOLDING TYPE OF ACTION: NO CHANGE

### PATTERNS:

PAT	DIR	IDENT	TYPE	RAD/CRS/BRG	CRS INBOUND	TURN (L OR R)	LEG LENGTH TIME DME	HOLDING ALTITUDES MIN MAX	TEMPLATES MIN MAX
1	E	POM	VORTAC	112.00	292.00	L	1-1 1/2	4000 17500	4 16
2	SW	POM	VORTAC	240.00	060.00	R	1	4000 10000	4 9
3	SW	POM	VORTAC	233.00	053.00	R	1	3700 10000	4 9

### CONTROLLING OBSTRUCTIONS:

PAT	AIRSPEED	OBSTRUCTION	COORDINATES	ELEVATION	ACCURACY CODE
1	200	AAO	340939.00N/1174754.00W	3449	4E
2	200	AAO	340957.00N/1174500.00W	3639	4E
3	200	AAO	340957.00N/1174439.00W	3665	4E

### REASON FOR NONSTANDARD HOLDING:

PAT 1 TERRAIN

### HOLDING RESTRICTIONS:

HOLDING LIMITED TO ESTABLISHED PATTERNS.

### REMARKS:

PRECIPITOUS TERRAIN EVALUATION COMPLETED.  
PAT 1 CONTROLLING OBSTACLE 1.32NM INTO SECONDARY AREA, PRIMARY EQUIVALENT HEIGHT 2618 MSL.  
PAT 2 CONTROLLING OBSTACLE 1.98NM INTO SECONDARY AREA, PRIMARY EQUIVALENT HEIGHT 2645 MSL.  
PAT 3 CONTROLLING OBSTACLE 1.97NM INTO SECONDARY AREA, PRIMARY EQUIVALENT HEIGHT 2668 MSL.  
MINIMUM TURNING ALTITUDE: AIRCRAFT PROCEEDING AMTRA V264 POM V197 PMD MUST MAINTAIN 11800 OR HIGHER UNTIL ESTABLISHED ON CENTERLINE OF V197 NORTHWEST BOUND.

### FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
DP	ANAHEIM			KFUL	FULLERTON	CA (US)
DP	TAKE-OFF MINIMUMS			KPOC	LA VERNE	CA (US)
DP	ANAHEIM			KLGB	LONG BEACH	CA (US)
DP	LAXX			KLAX	LOS ANGELES	CA (US)
DP	HASSA			KONT	ONTARIO	CA (US)
DP	ONTARIO			KONT	ONTARIO	CA (US)
DP	POMONA			KONT	ONTARIO	CA (US)
DP	ANAHEIM			KSNA	SANTA ANA	CA (US)
DP	IRVINE			KSNA	SANTA ANA	CA (US)
DP	MUSEL			KSNA	SANTA ANA	CA (US)
DP	ADAMM			KVNY	VAN NUYS	CA (US)
EN ROUTE	V197					(US)
EN ROUTE	V210					(US)
EN ROUTE	V264					(US)
EN ROUTE	V363					(US)
EN ROUTE	V394					(US)
IAP	NDB OR GPS-C		1	KEMT	EL MONTE	CA (US)
IAP	VOR OR GPS-A		1	KEMT	EL MONTE	CA (US)
IAP	VOR/DME OR GPS-B			KEMT	EL MONTE	CA (US)
IAP	RNAV (GPS) RWY 24			KFUL	FULLERTON	CA (US)
IAP	ILS RWY 26L			KPOC	LA VERNE	CA (US)
IAP	LOC RWY 26L			KPOC	LA VERNE	CA (US)
IAP	RNAV (GPS) - B			KPOC	LA VERNE	CA (US)
IAP	VOR - A			KPOC	LA VERNE	CA (US)
IAP	RNAV (GPS) RWY 22L			KSNI	LOS ALAMITOS	CA (US)
IAP	ILS OR LOC RWY 24L			KLAX	LOS ANGELES	CA (US)
IAP	ILS OR LOC RWY 24R			KLAX	LOS ANGELES	CA (US)
IAP	ILS OR LOC RWY 25L			KLAX	LOS ANGELES	CA (US)
IAP	ILS OR LOC RWY 25R			KLAX	LOS ANGELES	CA (US)
IAP	ILS RWY 24R(CAT II)			KLAX	LOS ANGELES	CA (US)
IAP	ILS RWY 24R(CAT III)			KLAX	LOS ANGELES	CA (US)
IAP	ILS RWY 25L(CAT II)			KLAX	LOS ANGELES	CA (US)
IAP	ILS RWY 25L(CAT III)			KLAX	LOS ANGELES	CA (US)

QUALITY  
3  
CHECKED

IAP	ILS OR LOC RWY 8L		KONT	ONTARIO	CA (US)
IAP	ILS OR LOC RWY 9		KRAL	RIVERSIDE	CA (US)
IAP	RNAV (GPS) RWY 9		KRAL	RIVERSIDE	CA (US)
IAP	RNAV(GPS) RWY 6		KCCB	UPLAND	CA (US)
IAP	VOR-A	3	KCCB	UPLAND	CA (US)
IAP	ILS Y RWY 16R (ALT MISS)	1	KVNY	VAN NUYS	CA (US)
IAP	ILS Z RWY 16R (ALT MISS)	1	KVNY	VAN NUYS	CA (US)
STAR	KAYOH		KLGB	LONG BEACH	CA (US)
STAR	OLDEE		KLAX	LOS ANGELES	CA (US)
STAR	SEAVU		KLAX	LOS ANGELES	CA (US)
STAR	ZIGGY		KONT	ONTARIO	CA (US)
STAR	MARCH		KRIV	RIVERSIDE	CA (US)

**REQUIRED CHARTING:** DP, STAR, MILITARY IAP, IAP, AREA, CONTROLLER, EN ROUTE LOW

**COMPULSORY REPORTING POINT:** NO

**RECORD REVISION NUMBER:** 22

**DATE OF REVISION:** 07/21/2016

**REASON FOR REVISION:**

UPDATE VAN NUYS FIX USE  
UPDATE FIX RESTRICTION FORMAT  
ADD V197 MCA 5800NW

**DEVELOPED BY:**      **DATE:** 02/18/2016

**OFFICE:** AJV-5430

**NAME:** ROBERT ABBOTT

**APPROVED BY:**      **DATE:** 05/02/2016

**OFFICE:** AJV-5430

**NAME:** LONNIE EVERHART

**SIGNATURE:**

**DISTRIBUTION:**

NFDC  
FPO: WST  
ARTCC: ZLA  
ATC FACILITY: SOCAL TRACON  
OTHER:

QUALITY  
3  
CHECKED

## RADIO FIX AND HOLDING DATA RECORD

**NAME:** ROSIN **STATE:** OP **COUNTRY:** US **ICAO REGION CODE:** P

**LATITUDE/LONGITUDE:** 315631.52N/1201606.32W **TYPE:** WP, DME

**AIRSPACE DOCKET:** **FIX TYPE OF ACTION:** NO CHANGE

### FIX MAKE-UP FACILITIES:

FAC	NAME	IDENT	TYPE	CLASS	MAG BRG	TRUE BRG	DME	DIST FROM NM	FAC FEET	MRA	MAA
1	SANTA CATALINA	SXC	VORTAC	L	213.00	228.00	127.00	127.00		5500	45000

### EXPANDED SERVICE VOLUME (ESV):

FAC IDENT	FAC TYPE	RADIAL/BEARING	DISTANCE	MIN ALTITUDE	MAX ALTITUDE
SXC	VORTAC	R-213	130	5000	45000

**HOLDING:** **HOLDING TYPE OF ACTION:** NO CHANGE

### REMARKS:

SANTA CATALINA (FAC 1) USED TO ESTABLISH FIX COORDINATES

### FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
DP	LAXX	1		KLAX	LOS ANGELES	CA (US)
EN ROUTE	CONTROL 1177L	1				(US)
STAR	BUFIE (RNAV)			KLAX	LOS ANGELES	CA (US)
STAR	LEENA	1		KLAX	LOS ANGELES	CA (US)

**REQUIRED CHARTING:** DP, STAR, CONTROLLER, EN ROUTE LOW, EN ROUTE HIGH

**COMPULSORY REPORTING POINT:** NO

**RECORD REVISION NUMBER:** 4 **DATE OF REVISION:** 03/05/2015

### REASON FOR REVISION:

1. LOWERED MRA FROM 16000 TO 5500.
2. ADDED FIX MAKE-UP.
3. ADDED DP TO REQUIRED CHARTING.

**DEVELOPED BY:** **DATE:** 09/17/2014 **OFFICE:** AJV-354 **NAME:** JIMMY HUGHES

**APPROVED BY:** **DATE:** 02/27/2015 **OFFICE:** AJV-354 **NAME:** JILL OLSON

**SIGNATURE:**

**DISTRIBUTION:** NFDC  
FPO: WST  
ARTCC: ZLA  
ATC FACILITY: SOCAL APP CON, LAX ATCT  
OTHER:

QUALITY  
3  
CHECKED

## RADIO FIX AND HOLDING DATA RECORD

NAME: SANTA CATALINA VORTAC STATE: CA COUNTRY: US ICAO REGION CODE: K2

LATITUDE/LONGITUDE: 332230.20N/1182511.68W TYPE:

AIRSPACE DOCKET: FIX TYPE OF ACTION: NO CHANGE

### FIX MAKE-UP FACILITIES:

FAC	NAME	IDENT	TYPE	CLASS	MAG BRG	TRUE BRG	DME	DIST FROM FAC NM	MRA FEET	MAA
1	SANTA CATALINA	SXC	VORTAC	L						17500

HOLDING: HOLDING TYPE OF ACTION: NO CHANGE

### PATTERNS:

PAT	DIR	IDENT	TYPE	RAD/CRS/BRG	CRS INBOUND	TURN (L OR R)	LEG LENGTH TIME DME	HOLDING ALTITUDES MIN MAX	TEMPLATES MIN MAX
1	N	SXC	VORTAC	340.00	160.00	R	1-1 1/2	4000 17000	4 16
2	E	SXC	VORTAC	084.35	264.35	R	1-1 1/2	4000 17000	4 16
3	S	SXC	VORTAC	195.00	015.00	L	1	3400 6000	4 5
4	W	SXC	VORTAC	287.00	107.00	L	1	4000 14000	4 10

### CONTROLLING OBSTRUCTIONS:

PAT	AIRSPEED	OBSTRUCTION	COORDINATES	ELEVATION	ACCURACY CODE
1	200	AAO	332226.50N/1182502.90W	2350	6A
2	200	AAO	332226.50N/1182502.90W	2350	6A
3	200	AAO	332226.50N/1182502.90W	2350	6A
4	200	AAO	332226.50N/1182502.90W	2350	6A

### REASON FOR NONSTANDARD HOLDING:

PAT 3 GREATEST AVOIDANCE OF W-291  
PAT 4 GREATEST AVOIDANCE OF W-291

### HOLDING RESTRICTIONS:

HOLDING LIMITED TO ESTABLISHED PATTERNS.  
PRIOR COORDINATION REQUIRED WITH CONTROLLING AGENCY FOR HOLDING OVER W-291 FOR AIRCRAFT ABOVE 6000 (PAT 1), AIRCRAFT ABOVE 14000 (PAT 2), ALL ALTITUDES (PAT 3), AND AIRCRAFT ABOVE 12000 (PAT 4).

### REMARKS:

PATS 1 AND 2 FOR ATC USE ONLY.  
PRECIPITOUS TERRAIN EVALUATION COMPLETED.

### FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
DP	CATALINA			KLAX	LOS ANGELES	CA (US)
DP	LAXX			KLAX	LOS ANGELES	CA (US)
DP	COAST			KOAK	OAKLAND	CA (US)
DP	DOYLE			KNTD	OXNARD	CA (US)
DP	VITKO			KNKX	SAN DIEGO	CA (US)
DP	FALCC			KSAN	SAN DIEGO	CA (US)
DP	PEBLE			KSAN	SAN DIEGO	CA (US)
DP	OFFSHORE			KSFO	SAN FRANCISCO	CA (US)
DP	CHANNEL			KSNA	SANTA ANA	CA (US)
DP	EL TORO			KSNA	SANTA ANA	CA (US)
DP	IRVINE			KSNA	SANTA ANA	CA (US)
DP	MUSEL			KSNA	SANTA ANA	CA (US)
DP	SANTA BARBARA			KSBA	SANTA BARBARA	CA (US)
EN ROUTE	V208					(US)
EN ROUTE	V21					(US)
EN ROUTE	V27					(US)
EN ROUTE	V458					(US)
IAP	VOR OR GPS-A		3	KAVX	AVALON	CA (US)
IAP	VOR/DME OR GPS-B		3	KAVX	AVALON	CA (US)
IAP	TACAN Y OR VOR/DME RWY 3			KNTD	OXNARD	CA (US)
STAR	FODRR			KCRQ	CARLSBAD	CA (US)
STAR	TANDY			KLGB	LONG BEACH	CA (US)
STAR	BUFIE (RNAV)			KLAX	LOS ANGELES	CA (US)
STAR	LEENA		4	KLAX	LOS ANGELES	CA (US)
STAR	OCEAN			KLAX	LOS ANGELES	CA (US)
STAR	SHIVE			KLAX	LOS ANGELES	CA (US)
STAR	BAYVU (RNAV)			KSAN	SAN DIEGO	CA (US)
STAR	HUBRD			KSAN	SAN DIEGO	CA (US)

REQUIRED CHARTING: DP, STAR, MILITARY IAP, MILITARY DP, IAP, CONTROLLER, EN ROUTE LOW, EN ROUTE HIGH

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 9

DATE OF REVISION: 09/15/2016

QUALITY  
3  
CHECKED

**REASON FOR REVISION:**

UPDATED FIX USE, REMOVED LNSAY DP, ADDED FALCC DP (KSAN).

**DEVELOPED BY:**      **DATE:** 03/09/2016      **OFFICE:** AJV-5432      **NAME:** PHILLIP BRANDENBURG**APPROVED BY:**      **DATE:**      **OFFICE:** AJV-5430      **NAME:** LONNIE EVERHART**SIGNATURE:****DISTRIBUTION:**    **NFDC**  
                         **FPO:** WST  
                         **ARTCC:** ZLA  
                         **ATC FACILITY:**  
                         **OTHER:** SOCAL TRACONQUALITY  
3  
CHECKED

# RADIO FIX AND HOLDING DATA RECORD

**NAME:** SANTA MONICA VOR/DME      **STATE:** CA      **COUNTRY:** US      **ICAO REGION CODE:** K2  
**LATITUDE/LONGITUDE:** 340036.88N/1182724.18W      **TYPE:**

**AIRSPACE DOCKET:**      **FIX TYPE OF ACTION:** NO CHANGE

**FIX MAKE-UP FACILITIES:**

FAC	NAME	IDENT	TYPE	CLASS	MAG BRG	TRUE BRG	DME	DIST FROM NM	FAC FEET	MRA	MAA
1	SANTA MONICA	SMO	VOR/DME	L							17500

**FIX RESTRICTIONS:**

MCA V107 3700 WESTBOUND

**HOLDING:**

**HOLDING TYPE OF ACTION:** NO CHANGE

**FIX USE:**

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
DP	GORMAN			KLAX	LOS ANGELES	CA (US)
DP	LAXX			KLAX	LOS ANGELES	CA (US)
DP	LOOP			KLAX	LOS ANGELES	CA (US)
DP	PERCH			KLAX	LOS ANGELES	CA (US)
DP	SEAL BEACH			KLAX	LOS ANGELES	CA (US)
DP	SEBBY			KLAX	LOS ANGELES	CA (US)
DP	TAKE-OFF MINIMUMS			KLAX	LOS ANGELES	CA (US)
DP	VENTURA			KLAX	LOS ANGELES	CA (US)
DP	TAKE-OFF MINIMUMS			KSMO	SANTA MONICA	CA (US)
EN ROUTE	T245					(US)
EN ROUTE	T247					(US)
EN ROUTE	T249					(US)
EN ROUTE	V107					(US)
IAP	ILS Y OR LOC Y RWY 8			KBUR	BURBANK	CA (US)
IAP	ILS Z OR LOC Z RWY 8			KBUR	BURBANK	CA (US)
IAP	VOR RWY 08			KBUR	BURBANK	CA (US)
IAP	VOR/DME OR GPS-B			KEMT	EL MONTE	CA (US)
IAP	LOC RWY 25			KHHR	HAWTHORNE	CA (US)
IAP	ILS OR LOC RWY 24L			KLAX	LOS ANGELES	CA (US)
IAP	ILS OR LOC RWY 24L (CAT II)			KLAX	LOS ANGELES	CA (US)
IAP	ILS OR LOC RWY 24R			KLAX	LOS ANGELES	CA (US)
IAP	ILS OR LOC RWY 24R (CAT II)			KLAX	LOS ANGELES	CA (US)
IAP	ILS OR LOC RWY 24R (CAT III)			KLAX	LOS ANGELES	CA (US)
IAP	ILS OR LOC RWY 25 R			KLAX	LOS ANGELES	CA (US)
IAP	ILS OR LOC RWY 25L			KLAX	LOS ANGELES	CA (US)
IAP	ILS RWY 25L (CAT II)			KLAX	LOS ANGELES	CA (US)
IAP	ILS RWY 25L (CAT III)			KLAX	LOS ANGELES	CA (US)
IAP	VOR-A			KWHP	LOS ANGELES	CA (US)
IAP	VOR OR GPS-A			KSMO	SANTA MONICA	CA (US)
IAP	VOR RWY 11L			KTOA	TORRANCE	CA (US)
IAP	ILS Z RWY 16R			KVNY	VAN NUYS	CA (US)
IAP	VOR-A			KVNY	VAN NUYS	CA (US)
OTHER	HARBOR VISUAL RWY 25/L/R			KLAX	LOS ANGELES	CA (US)
OTHER	STADIUM VISUAL RWY 24 L/R			KLAX	LOS ANGELES	CA (US)
STAR	FERNANDO			KBUR	BURBANK	CA (US)
STAR	BASET			KLAX	LOS ANGELES	CA (US)
STAR	DOWNE			KLAX	LOS ANGELES	CA (US)
STAR	KIMMO			KLAX	LOS ANGELES	CA (US)
STAR	MOORPARK			KLAX	LOS ANGELES	CA (US)
STAR	OCEAN			KLAX	LOS ANGELES	CA (US)
STAR	REDEYE			KLAX	LOS ANGELES	CA (US)
STAR	SADDE			KLAX	LOS ANGELES	CA (US)
STAR	KIMMO			KSMO	SANTA MONICA	CA (US)

**REQUIRED CHARTING:** DP, STAR, IAP, AREA, CONTROLLER, EN ROUTE LOW

**COMPULSORY REPORTING POINT:** NO

**RECORD REVISION NUMBER:** 14

**DATE OF REVISION:** 11/10/2016

**REASON FOR REVISION:**

UPDATED FIX USE: KLAX REMOVED 8 PROCEDURES FROM RWY 6L/R AND 7L/R; ADDED KVNY ILS Z RWY 16R.

**DEVELOPED BY:**      **DATE:** 06/07/2016      **OFFICE:** AJV-5433      **NAME:** COLTON CROWDER

**APPROVED BY:**      **DATE:**      **OFFICE:** AJV-5430      **NAME:** LONNIE EVERHART

**SIGNATURE:**





**DISTRIBUTION:**    **NFDC**  
                         **FPO:** WST  
                         **ARTCC:** ZLA  
                         **ATC FACILITY:** SOCAL APP CON  
                         **OTHER:**

QUALITY  
3  
CHECKED

# RADIO FIX AND HOLDING DATA RECORD

NAME: SEAL BEACH VORTAC      STATE: CA      COUNTRY: US      ICAO REGION CODE: K2  
 LATITUDE/LONGITUDE: 334659.87N/1180317.12W      TYPE:

AIRSPACE DOCKET:      FIX TYPE OF ACTION: MODIFY

## FIX MAKE-UP FACILITIES:

FAC	NAME	IDENT	TYPE	CLASS	MAG BRG	TRUE BRG	DME	DIST FROM FAC NM	FEET	MRA	MAA
1	SEAL BEACH	SLI	VORTAC	L							17500

HOLDING:      HOLDING TYPE OF ACTION: NO CHANGE

## PATTERNS:

PAT	DIR	IDENT	TYPE	RAD/CRS/BRG	CRS INBOUND	TURN (L OR R)	LEG LENGTH TIME DME	HOLDING ALTITUDES MIN MAX	TEMPLATES MIN MAX
1	NE	SLI	VORTAC	058.00	238.00	L	1-1 1/2	2600 17500	4 16
2	SE	SLI	VORTAC	120.00	300.00	L	1-1 1/2	1500 17500	4 16
3	S	SLI	VORTAC	171.00	351.00	L	1-1 1/2	1800 17500	4 16
4	NE	WP	WP	058.00	238.00	L		2600 12000	5 10
5	SE	WP	WP	122.00	302.00	L		2600 14000	5 11

## CONTROLLING OBSTRUCTIONS:

PAT	AIRSPEED	OBSTRUCTION	COORDINATES	ELEVATION	ACCURACY CODE
UPN	200	AAO	335421.00N/1175742.00W	804	4E
1	200	BLDG (06-000442)	334652.00N/1175336.00W	475	1D
2	200	TOWER (06-002478)	334725.60N/1180855.10W	337	2C
3	200	TOWER (06-002478)	334725.60N/1180855.10W	337	2C
3	310	TOWER (06-020156)	335246.80N/1180049.66W	750	4D
4	200	BLDG (06-000442)	334652.00N/1175336.00W	475	1D
5	200	TOWER (06-002478)	334725.60N/1180855.10W	337	2C

## REASON FOR NONSTANDARD HOLDING:

PAT 1 ATC REQUEST  
 PAT 2 ATC REQUEST  
 PAT 3 ATC REQUEST  
 PAT 4 ATC REQUEST  
 PAT 5 ATC REQUEST

## HOLDING RESTRICTIONS:

UNPLANNED HOLDING AUTHORIZED AT OR ABOVE 1900.

## PROCEDURES REQUIRING CLIMB-IN-HOLD:

PAT	PROCEDURE TITLE	AIRPORT IDENT	CITY	STATE
1	RADAR 2	KSLI	LOS ALAMITOS	CA (US)
1	RADAR 3	KSLI	LOS ALAMITOS	CA (US)
3	TAKEOFF MINIMUMS	KFUL	FULLERTON	CA (US)
3	TAKEOFF MINIMUMS	KSNA	SANTA ANA	CA (US)

## REMARKS:

PRECIPITOUS TERRAIN EVALUATION COMPLETED.

## FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
DP	ELMOO			KBUR	BURBANK	CA (US)
DP	ANAHEIM			KFUL	FULLERTON	CA (US)
DP	TAKEOFF MINIMUMS		3	KFUL	FULLERTON	CA (US)
DP	ANAHEIM			KLGB	LONG BEACH	CA (US)
DP	TAKEOFF MINIMUMS			KLGB	LONG BEACH	CA (US)
DP	ALBACOR			KSLI	LOS ALAMITOS	CA (US)
DP	TAKEOFF MINIMUMS			KSLI	LOS ALAMITOS	CA (US)
DP	CATALINA			KLAX	LOS ANGELES	CA (US)
DP	GABRE			KLAX	LOS ANGELES	CA (US)
DP	LAXX			KLAX	LOS ANGELES	CA (US)
DP	OSHNN (RNAV)			KLAX	LOS ANGELES	CA (US)
DP	SEAL BEACH			KLAX	LOS ANGELES	CA (US)
DP	SEBBY			KLAX	LOS ANGELES	CA (US)
DP	TAKEOFF MINIMUMS			KLAX	LOS ANGELES	CA (US)
DP	NIKKL			KONT	ONTARIO	CA (US)
DP	DOYLE			KNTD	POINT MUGU	CA (US)
DP	FALCC			KSAN	SAN DIEGO	CA (US)
DP	PEBLE			KSAN	SAN DIEGO	CA (US)
DP	ANAHEIM			KSNA	SANTA ANA	CA (US)
DP	CHANNEL			KSNA	SANTA ANA	CA (US)
DP	IRVINE			KSNA	SANTA ANA	CA (US)
DP	MUSEL			KSNA	SANTA ANA	CA (US)
DP	TAKEOFF MINIMUMS		3	KSNA	SANTA ANA	CA (US)
DP	PEVEE (RNAV)			KSMO	SANTA MONICA	CA (US)
DP	ADAMM			KVNY	VAN NUYS	CA (US)
EN ROUTE	J134					(US)
EN ROUTE	J169					(US)

QUALITY  
3  
CHECKED

EN ROUTE	J78			(US)	
EN ROUTE	T245			(US)	
EN ROUTE	T247			(US)	
EN ROUTE	T249			(US)	
EN ROUTE	V165			(US)	
EN ROUTE	V21			(US)	
EN ROUTE	V23			(US)	
EN ROUTE	V283			(US)	
EN ROUTE	V372			(US)	
EN ROUTE	V394			(US)	
EN ROUTE	V459			(US)	
EN ROUTE	V597			(US)	
EN ROUTE	V64			(US)	
EN ROUTE	V8			(US)	
IAP	NDB OR GPS-C		KEMT	EL MONTE	CA (US)
IAP	VOR OR GPS-A		KEMT	EL MONTE	CA (US)
IAP	VOR/DME OR GPS-B		KEMT	EL MONTE	CA (US)
IAP	LOC/DME RWY 24	2	KFUL	FULLERTON	CA (US)
IAP	RNAV (GPS) RWY 24	4	KFUL	FULLERTON	CA (US)
IAP	VOR-A	1	KFUL	FULLERTON	CA (US)
IAP	LOC RWY 25		KHHR	HAWTHORNE	CA (US)
IAP	RNAV (GPS) RWY 25		KHHR	HAWTHORNE	CA (US)
IAP	VOR RWY 25		KHHR	HAWTHORNE	CA (US)
IAP	ILS RWY 26L		KPOC	LA VERNE	CA (US)
IAP	LOC RWY 26L		KPOC	LA VERNE	CA (US)
IAP	VOR OR GPS-A		KPOC	LA VERNE	CA (US)
IAP	ILS OR LOC RWY 30		KLGB	LONG BEACH	CA (US)
IAP	RNAV (GPS) Z RWY 30		KLGB	LONG BEACH	CA (US)
IAP	VOR OR TACAN RWY 30	2	KLGB	LONG BEACH	CA (US)
IAP	NDB RWY 22L		KSLI	LOS ALAMITOS	CA (US)
IAP	RADAR 2	1	KSLI	LOS ALAMITOS	CA (US)
IAP	RADAR 3	1	KSLI	LOS ALAMITOS	CA (US)
IAP	VOR OR TACAN RWY 22L		KSLI	LOS ALAMITOS	CA (US)
IAP	ILS OR LOC RWY 06L		KLAX	LOS ANGELES	CA (US)
IAP	ILS OR LOC RWY 06R		KLAX	LOS ANGELES	CA (US)
IAP	ILS OR LOC RWY 07L		KLAX	LOS ANGELES	CA (US)
IAP	ILS OR LOC RWY 07R		KLAX	LOS ANGELES	CA (US)
IAP	ILS OR LOC RWY 24L		KLAX	LOS ANGELES	CA (US)
IAP	ILS OR LOC RWY 24R		KLAX	LOS ANGELES	CA (US)
IAP	ILS OR LOC RWY 25L		KLAX	LOS ANGELES	CA (US)
IAP	ILS OR LOC RWY 25R		KLAX	LOS ANGELES	CA (US)
IAP	ILS RWY 24R (CAT II)		KLAX	LOS ANGELES	CA (US)
IAP	ILS RWY 24R (CAT III)		KLAX	LOS ANGELES	CA (US)
IAP	ILS RWY 25L (CAT II)		KLAX	LOS ANGELES	CA (US)
IAP	ILS RWY 25L (CAT III)		KLAX	LOS ANGELES	CA (US)
IAP	RNAV (GPS) RWY 25R		KLAX	LOS ANGELES	CA (US)
IAP	RNAV (GPS) Y RWY 24L		KLAX	LOS ANGELES	CA (US)
IAP	RNAV (GPS) Y RWY 24R		KLAX	LOS ANGELES	CA (US)
IAP	RNAV (GPS) Y RWY 25L		KLAX	LOS ANGELES	CA (US)
IAP	ILS OR LOC RWY 9		KRAL	RIVERSIDE	CA (US)
IAP	ILS OR LOC RWY 20R	2	KSNA	SANTA ANA	CA (US)
IAP	LDA/DME RWY 20R	2	KSNA	SANTA ANA	CA (US)
IAP	LOC BC RWY 2L	2	KSNA	SANTA ANA	CA (US)
IAP	RNAV (GPS) Y RWY 2L	5	KSNA	SANTA ANA	CA (US)
IAP	RNAV (RNP) Z RWY 2L	5	KSNA	SANTA ANA	CA (US)
IAP	VOR OR GPS-A		KSMO	SANTA MONICA	CA (US)
IAP	ILS OR LOC RWY 29R		KTOA	TORRANCE	CA (US)
IAP	RNAV (GPS) RWY 29R		KTOA	TORRANCE	CA (US)
IAP	VOR RWY 11L		KTOA	TORRANCE	CA (US)
OTHER	ARSENAL VISUAL RWY 30		KLAX	LOS ANGELES	CA (US)
STAR	FERNANDO		KBUR	BURBANK	CA (US)
STAR	FODRR		KCRQ	CARLSBAD	CA (US)
STAR	KAYOH		KFUL	FULLERTON	CA (US)
STAR	KAYOH		KLGB	LONG BEACH	CA (US)
STAR	TANDY		KLGB	LONG BEACH	CA (US)
STAR	KAYOH		KSLI	LOS ALAMITOS	CA (US)
STAR	BASET		KLAX	LOS ANGELES	CA (US)
STAR	BUFIE (RNAV)		KLAX	LOS ANGELES	CA (US)
STAR	DOWNE		KLAX	LOS ANGELES	CA (US)
STAR	KIMMO		KLAX	LOS ANGELES	CA (US)
STAR	LEENA		KLAX	LOS ANGELES	CA (US)
STAR	OCEAN		KLAX	LOS ANGELES	CA (US)
STAR	REDEYE		KLAX	LOS ANGELES	CA (US)
STAR	SHIVE		KLAX	LOS ANGELES	CA (US)
STAR	VISTA		KLAX	LOS ANGELES	CA (US)
STAR	KAYOH		KSNA	SANTA ANA	CA (US)
STAR	KIMMO		KSMO	SANTA MONICA	CA (US)
STAR	KAYOH		KTOA	TORRANCE	CA (US)

**REQUIRED CHARTING:** DP, STAR, MILITARY IAP, IAP, CONTROLLER, EN ROUTE LOW, EN ROUTE HIGH

**COMPULSORY REPORTING POINT:** NO

**RECORD REVISION NUMBER:** 23

**DATE OF REVISION:** 11/10/2016



**REASON FOR REVISION:**

ADDED RNAV (RNP) Z RWY 2L AT KSNA USING HOLDING PAT 5 TO FIX USE.  
CHANGED RNAV (GPS) RWY 2L AT KSNA TO RNAV (GPS) Y RWY 2L.  
ADDED KAYOH STAR AT KFUL, KSNA, KTOA, AND KSLI IN FIX USE.

**DEVELOPED BY:**            **DATE:** 04/12/2016            **OFFICE:** AJV-5413            **NAME:** DAVID DANNER  
**APPROVED BY:**            **DATE:**            **OFFICE:** AJV-5430            **NAME:** LONNIE EVERHART  
**SIGNATURE:**

**DISTRIBUTION:**    **NFDC**  
                         **FPO:** WST  
                         **ARTCC:** ZLA  
                         **ATC FACILITY:** SOCAL TRACON  
                         **OTHER:** SNA ATCT, SLI ATCT, HHR ATCT, FUL ATCT, USAASA

QUALITY  
3  
CHECKED

# RADIO FIX AND HOLDING DATA RECORD

NAME: THERMAL VORTAC STATE: CA COUNTRY: US ICAO REGION CODE: K2  
 LATITUDE/LONGITUDE: 333741.14N/1160936.71W TYPE:

AIRSPACE DOCKET: FIX TYPE OF ACTION: MODIFY

## FIX MAKE-UP FACILITIES:

FAC	NAME	IDENT	TYPE	CLASS	MAG BRG	TRUE BRG	DME	DIST FROM FAC NM	MRA	MAA
1	THERMAL	TRM	VORTAC	H						45000

## FIX RESTRICTIONS:

MCA V432 4500 NORTHEAST BOUND  
 MCA V514 5600 NORTHBOUND  
 MCA V208 5600 NORTHBOUND  
 MCA V64 7700 WESTBOUND  
 MCA V208 7000 SOUTHBOUND  
 MCA V514 7000 SOUTHBOUND

## HOLDING:

HOLDING TYPE OF ACTION: NO CHANGE

## PATTERNS:

PAT	DIR	IDENT	TYPE	RAD/CRS/BRG	CRS INBOUND	TURN (L OR R)	LEG LENGTH TIME	DME	HOLDING ALTITUDES MIN MAX	TEMPLATES MIN MAX
1	E	TRM	VORTAC	109.00	289.00	R	1-1 1/2		3000 17500	4 16
2	SE	TRM	VORTAC	129.51	309.51	R	1		2900 14000	4 10
3	SE	WP	WP	129.51	309.51	R		4	4000 14000	5 11

## CONTROLLING OBSTRUCTIONS:

PAT	AIRSPEED	OBSTRUCTION	COORDINATES	ELEVATION	ACCURACY CODE
1	200	AAO	333754.40N/1160142.00W	1842	6C
1	310	AAO	333412.00N/1161903.00W	5046	4E
2	200	AAO	333757.00N/1160203.00W	1510	4E
3	200	AAO	333754.40N/1160142.00W	1842	6C

## PRECIPITOUS TERRAIN ADDITIONS:

PAT	SPEED	ADDITION
3	200	260

## HOLDING RESTRICTIONS:

UNPLANNED HOLDING AUTHORIZED AT OR ABOVE 18000.  
 HOLDING BELOW 18000 LIMITED TO ESTABLISHED PATTERNS.

## PROCEDURES REQUIRING CLIMB-IN-HOLD:

PAT	PROCEDURE TITLE	AIRPORT IDENT	CITY	STATE
1	TAKEOFF MINIMUMS	KTRM	PALM SPRINGS	CA (US)
1	BERMUDA DUNES ONE	KUDD	PALM SPRINGS	CA (US)

## REMARKS:

PRECIPITOUS TERRAIN EVALUATION COMPLETED.

## FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
DP	SENIC (RNAV)			KLGB	LONG BEACH	CA (US)
DP	HOLTZ (RNAV)			KLAX	LOS ANGELES	CA (US)
DP	LAXX			KLAX	LOS ANGELES	CA (US)
DP	NIKKL			KONT	ONTARIO	CA (US)
DP	CATHEDRAL			KPSP	PALM SPRINGS	CA (US)
DP	TAKEOFF MINIMUMS		1	KPSP	PALM SPRINGS	CA (US)
DP	THERMAL		1	KPSP	PALM SPRINGS	CA (US)
DP	MECCA			KTRM	PALM SPRINGS	CA (US)
DP	TAKEOFF MINIMUMS		1	KTRM	PALM SPRINGS	CA (US)
DP	BERMUDA DUNES ONE		1	KUDD	PALM SPRINGS	CA (US)
DP	TAKEOFF MINIMUMS			KUDD	PALM SPRINGS	CA (US)
DP	SKYES			KRIV	RIVERSIDE	CA (US)
DP	VITKO			KNKX	SAN DIEGO	CA (US)
DP	EL TORO			KSNA	SANTA ANA	CA (US)
DP	MUSEL			KSNA	SANTA ANA	CA (US)
DP	STREL (RNAV)			KSNA	SANTA ANA	CA (US)
DP	PEVEE (RNAV)			KSMO	SANTA MONICA	CA (US)
EN ROUTE	J169					(US)
EN ROUTE	J236					(US)
EN ROUTE	J78-134					(US)
EN ROUTE	J78-134-169					(US)
EN ROUTE	V137					(US)
EN ROUTE	V208-514					(US)
EN ROUTE	V432					(US)
EN ROUTE	V64					(US)
IAP	VOR/DME-B			KBWC	BRAWLEY	CA (US)
IAP	RNAV (GPS) Y RWY 24			KCRQ	CARLSBAD	CA (US)

QUALITY  
3  
CHECKED

IAP	RNAV (RNP) Z RWY 24		KCRQ	CARLSBAD	CA (US)
IAP	RNAV (RNP) Z RWY 6		KCRQ	CARLSBAD	CA (US)
IAP	RNAV (RNP) Y RWY 31L	3	KPSP	PALM SPRINGS	CA (US)
IAP	RNAV (RNP) Z RWY 13R	3	KPSP	PALM SPRINGS	CA (US)
IAP	VOR OR GPS-B	1	KPSP	PALM SPRINGS	CA (US)
IAP	VOR-A	1	KTRM	PALM SPRINGS	CA (US)
IAP	VOR/DME RWY 30	1	KTRM	PALM SPRINGS	CA (US)
IAP	VOR-C	2	KUDD	PALM SPRINGS	CA (US)
IAP	HI-TACAN RWY 24R		KNKX	SAN DIEGO	CA (US)
SPECIAL IAP	RNAV (RNP) M RWY 13R		KPSP	PALM SPRINGS	CA (US)
SPECIAL IAP	RNAV (RNP) M RWY 31L		KPSP	PALM SPRINGS	CA (US)
STAR	CLOWD		KPSP	PALM SPRINGS	CA (US)
STAR	SBONO		KPSP	PALM SPRINGS	CA (US)
STAR	ARKOE		KRIV	RIVERSIDE	CA (US)
STAR	BARET		KSAN	SAN DIEGO	CA (US)

**REQUIRED CHARTING:** DP, STAR, MILITARY IAP, MILITARY DP, IAP, CONTROLLER, EN ROUTE LOW, EN ROUTE HIGH, SPECIAL IAP

**COMPULSORY REPORTING POINT:** NO

**RECORD REVISION NUMBER:** 23

**DATE OF REVISION:** 11/10/2016

**REASON FOR REVISION:**

1. CHANGED MINIMUM HOLDING ALTITUDE FOR PAT 3 FROM 2900 TO 4000.
2. ADDED PRECIPITOUS TERRAIN ADJUSTMENT OF 260' TO PATTERN 3.
3. DELETED FAC 1 FROM FIX USE ON KUDD BERMUDA DUNES ONE DEPARTURE.
4. ADDED RNAV (RNP) Z RWY 6 AT KCRQ TO FIX USE.
5. DELETED RNAV (RNP) Y RWY 13R AT KPSP.
6. CHANGED FIX USE TYPE OF "M" RNP SIAPS AT KPSP FROM IAP TO SPECIAL IAP.

**DEVELOPED BY:**                      **DATE:** 06/21/2016                      **OFFICE:** AJV-5432                      **NAME:** TRACEY STILES

**APPROVED BY:**                      **DATE:**                      **OFFICE:** AJV-5430                      **NAME:** LONNIE EVERHART

**SIGNATURE:**

**DISTRIBUTION:**      **NFDC**  
                              **FPO:** WST  
                              **ARTCC:** ZLA  
                              **ATC FACILITY:** SOCAL APP CON  
                              **OTHER:**

QUALITY  
3  
CHECKED

## RADIO FIX AND HOLDING DATA RECORD

**NAME:** TUSTI **STATE:** CA **COUNTRY:** US **ICAO REGION CODE:** K2  
**LATITUDE/LONGITUDE:** 334600.91N/1175010.35W **TYPE:** INT, DME

**AIRSPACE DOCKET:** **FIX TYPE OF ACTION:** MODIFY

### FIX MAKE-UP FACILITIES:

FAC	NAME	IDENT	TYPE	CLASS	MAG BRG	TRUE BRG	DME	DIST FROM FAC NM	FAC FEET	MRA	MAA
1	SANTA ANA	I-OJW	LOC/DME		002.94	014.94	5.25	5.24	31583	1900	4500
2	SEAL BEACH	SLI	VORTAC	L	080.07	095.07	10.97	10.97		1900	17500
3	POMONA	POM	VORTAC	L	172.51	187.51		18.82		3000	17500
4	BECCA	LG	LOM-NDB		073.02	087.02		12.08		3000	17500
5	PARADISE	PDZ	VORTAC	H	224.43	239.43	17.79	17.79		4000	17500

**HOLDING:** **HOLDING TYPE OF ACTION:** NO CHANGE

### REMARKS:

SEAL BEACH (FAC 2) AND POMONA (FAC 3) USED TO ESTABLISH FIX COORDINATES  
 I-OJW DME COORDINATES: 334055.38N/1175144.91W.

### FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
DP	LAXX	2, 3		KLAX	LOS ANGELES	CA (US)
EN ROUTE	V64	2, 3				(US)
IAP	LDA/DME RWY 20R	1, 2		KSNA	SANTA ANA	CA (US)

**REQUIRED CHARTING:** DP, IAP, AREA, CONTROLLER, EN ROUTE LOW

**COMPULSORY REPORTING POINT:** NO

**RECORD REVISION NUMBER:** 14 **DATE OF REVISION:** 09/18/2014

### REASON FOR REVISION:

UPDATED I-OJW MAG BRG FROM 000.94 TO 002.94 DUE TO MAGVAR CHANGE FROM 14E/1990 TO 12E/2015.  
 ADDED DIST FROM FAC TO OJW OF 31853 FT.  
 CHANGED OJW MRA FROM 1600 TO 1900.  
 CHANGED SLI MRA FROM 1600 TO 1900.  
 CHANGED DIST FROM I-OJW FAC FROM 5.26 TO 5.24.  
 UPDATED FIX USE FROM LDA RWY 19R TO LDA/DME RWY 20R.

**DEVELOPED BY:** **DATE:** 02/28/2014 **OFFICE:** AJV-354 **NAME:** SCOTT STEVENSON

**APPROVED BY:** **DATE:** 09/18/2014 **OFFICE:** AJV-354 **NAME:** LARRY STROUT

**SIGNATURE:**

**DISTRIBUTION:** NFDC  
 FPO: WST  
 ARTCC: ZLA  
 ATC FACILITY: SOCAL APP CON, SNA ATCT  
 OTHER:

QUALITY  
3  
CHECKED