

INFORMATION ONLY**RADIO FIX AND HOLDING DATA RECORD**

NAME: MANTECA VOR/DME

STATE: CA

COUNTRY: US

ICAO REGION CODE: K2

LATITUDE/LONGITUDE: 375000.98N/1211016.96W

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	MANTECA	ECA	VOR/DME	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	SE		WP	124.40	304.40	L		4	3000	17500	5	17

CONTROLLING OBSTRUCTIONS:

PAT	AIRSPEED	OBSTRUCTION	COORDINATES	ELEVATION	ACCURACY CODE
1	200	TOWER (06-002381)	374345.74N/1210740.78W	559	3C

REASON FOR NONSTANDARD HOLDING:

PAT 1 HIGH TERRAIN

HOLDING RESTRICTIONS:

HOLDING LIMITED TO ESTABLISHED PATTERN.

REMARKS:

PRECIPITOUS TERRAIN EVALUATION COMPLETE.
ASSIGNED FACILITY MAG VAR 17 DEGREES EAST.
FACILITY DESIGNATED FOR DECOMMISSION.

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
DP	BUCHANAN			KCCR	CONCORD	CA (US)
DP	KANAN			KCCR	CONCORD	CA (US)
DP	BYRON			KLVK	LIVERMORE	CA (US)
DP	LIVERMORE			KLVK	LIVERMORE	CA (US)
DP	NIMITZ			KOAK	OAKLAND	CA (US)
DP	SALAD			KOAK	OAKLAND	CA (US)
DP	DUDES			KSMF	SACRAMENTO	CA (US)
DP	FROGO			KSMF	SACRAMENTO	CA (US)
IAP	VOR RWY 19R			KCCR	CONCORD	CA (US)
IAP	ILS RWY 25R			KLVK	LIVERMORE	CA (US)
IAP	RNAV (GPS) RWY 10			KO27	OAKDALE	CA (US)
IAP	RNAV (GPS) RWY 28		1	KO27	OAKDALE	CA (US)
IAP	VOR-A			KO27	OAKDALE	CA (US)
STAR	MADWIN			KHWD	HAYWARD	CA (US)
STAR	PANOCH			KHWD	HAYWARD	CA (US)
STAR	MADWIN			KOAK	OAKLAND	CA (US)
STAR	PANOCH			KOAK	OAKLAND	CA (US)
STAR	WRAPS			KSMF	SACRAMENTO	CA (US)
STAR	MODESTO			KSFO	SAN FRANCISCO	CA (US)
STAR	RISTI			KSFO	SAN FRANCISCO	CA (US)

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

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 28

DATE OF REVISION: 06/22/2017

REASON FOR REVISION:

1. REMOVED PAT1.
2. REMOVED CHARLIE DP @ KSTS FROM FIX USE SECTION.
3. REMOVED SUNOL DP @ KSJC FROM FIX USE SECTION.
4. REMOVED VOR-A IAP @ K103 FROM FIX USE SECTION.
5. REMOVED RNAV (GPS) RWY 12, RNAV (GPS) RWY 26, RNAV (GPS) RWY 30, AND VOR/DME RWY 26 IAPS @ KTCY FROM FIX USE SECTION.
6. REMOVED ALL EN ROUTE ENTRIES FROM FIX USE SECTION.
7. REMOVED TAKEOFF MINIMUMS @ KC83 FROM FIX USE SECTION.

DEVELOPED BY: DATE: 01/27/2017

OFFICE: AJV-5433

NAME: BEV L BORDY (MICHAEL GARRITY)

APPROVED BY: DATE:

OFFICE: AJV-5430

NAME: PATRICK MULQUEEN

SIGNATURE:

DISTRIBUTION:

NFDC

FPO: WST

ARTCC: ZOA

ATC FACILITY: NORCAL APP CON

OTHER:

INFORMATION ONLY

RADIO FIX AND HOLDING DATA RECORD

NAME: OAKLAND VOR/DME

STATE: CA

COUNTRY: US

ICAO REGION CODE: K2

LATITUDE/LONGITUDE: 374333.32N/1221324.91W

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	FEET	MRA	MAA
1	OAKLAND	OAK	VOR/DME	H							45000

HOLDING:

HOLDING TYPE OF ACTION: NO CHANGE

PATTERNS:

PAT	DIR	IDENT	TYPE	RAD/CRS/BRG	CRS INBOUND	TURN (L OR R)	LEG TIME	LENGTH DME	HOLDING ALTITUDES MIN	MAX	TEMPLATES MIN	MAX
1	NW	OAK	VOR/DME	300.00	120.00	R	1		2000	4000	4	4
2	NW		WP	302.00	122.00	R		4	2000	4000	4	5
3	SW		WP	243.00	063.00	R		4	3000	5000	5	6
4	SW	OAK	VOR/DME	240.01	060.01	R	1		3000	5000	4	5

CONTROLLING OBSTRUCTIONS:

PAT	AIRSPEED	OBSTRUCTION	COORDINATES	ELEVATION	ACCURACY CODE
UPN	200	AAO	374857.00N/1220348.00W	2225	4E
1	200	AAO	374906.00N/1221036.00W	1821	4E
2	200	AAO	374906.00N/1221036.00W	1821	4E
3	200	AAO	374041.52N/1222520.98W	1399	2C
4	200	T-L TWR (06-000098)	374030.38N/1222427.51W	1123	1A

HOLDING RESTRICTIONS:

UNPLANNED HOLDING AUTHORIZED AT OR ABOVE 5000
PRIOR COORDINATION REQUIRED WITH ZOA WHEN HOLDING ABOVE FL370 DUE TO W513 AND W285 A & B
HOLDING LIMITED TO ESTABLISHED PATTERNS

REMARKS:

PRECIPITOUS TERRAIN EVALUATION COMPLETED.
(PAT 1 AND 2) CONTROLLING OBSTACLE LOCATED 11586.67 FT. INTO SECONDARY.
PAT 2 MAG COURSE BASED ON KHW D 15E MAGVAR.
PAT 3 MAG COURSE BASED ON KSFO 14E MAGVAR.

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
DP	BUCHANAN			KCCR	CONCORD	CA (US)
DP	KANAN			KCCR	CONCORD	CA (US)
DP	BYRON			KLVK	LIVERMORE	CA (US)
DP	LIVERMORE			KLVK	LIVERMORE	CA (US)
DP	TAKEOFF MINIMUMS			KLVK	LIVERMORE	CA (US)
DP	SOUTHLAND			KNUQ	MOUNTAIN VIEW	CA (US)
DP	LIZRD			KAPC	NAPA	CA (US)
DP	MERLOT			KAPC	NAPA	CA (US)
DP	COAST			KOAK	OAKLAND	CA (US)
DP	NUEVO			KOAK	OAKLAND	CA (US)
DP	OAKLAND			KOAK	OAKLAND	CA (US)
DP	SALAD			KOAK	OAKLAND	CA (US)
DP	SILENT			KOAK	OAKLAND	CA (US)
DP	SKYLINE			KOAK	OAKLAND	CA (US)
DP	GAP			KSFO	SAN FRANCISCO	CA (US)
DP	OFFSHORE			KSFO	SAN FRANCISCO	CA (US)
DP	SAN FRANCISCO			KSFO	SAN FRANCISCO	CA (US)
DP	SAN JOSE			KSJC	SAN JOSE	CA (US)
DP	SUNOL			KSJC	SAN JOSE	CA (US)
DP	TAKE OFF MINIMUMS			KSJC	SAN JOSE	CA (US)
DP	CHARLIE			KSTS	SANTA ROSA	CA (US)
EN ROUTE	J1					(US)
EN ROUTE	J110					(US)
EN ROUTE	J3					(US)
EN ROUTE	J32					(US)
EN ROUTE	J58					(US)
EN ROUTE	J80					(US)
EN ROUTE	J84					(US)
EN ROUTE	J94					(US)
EN ROUTE	V107					(US)
EN ROUTE	V109					(US)
EN ROUTE	V195					(US)
EN ROUTE	V244					(US)
EN ROUTE	V28					(US)
EN ROUTE	V301					(US)
EN ROUTE	V392					(US)
EN ROUTE	V6					(US)
IAP	VOR RWY 19R			KCCR	CONCORD	CA (US)
IAP	HI-LOC/DME RWY 11L			KFAT	FRESNO	CA (US)
IAP	LOC/DME RWY 28L		1	KHW D	HAYWARD	CA (US)

IAP	RNAV (GPS) RWY 28L	2	KHWD	HAYWARD	CA (US)
IAP	VOR/DME-A	1	KHWD	HAYWARD	CA (US)
IAP	ILS OR LOC RWY 12		KOAK	OAKLAND	CA (US)
IAP	ILS OR LOC RWY 30(ALT MA)	1	KOAK	OAKLAND	CA (US)
IAP	ILS OR LOC/DME RWY 28R		KOAK	OAKLAND	CA (US)
IAP	ILS RWY 12 (SA CAT I)		KOAK	OAKLAND	CA (US)
IAP	ILS RWY 30 (CAT II - III)(ALT MA)	1	KOAK	OAKLAND	CA (US)
IAP	ILS RWY 30 (SA CAT I)(ALT MA)	1	KOAK	OAKLAND	CA (US)
IAP	VOR RWY 10R		KOAK	OAKLAND	CA (US)
IAP	ILS OR LOC RWY 19L		KSFO	SAN FRANCISCO	CA (US)
IAP	ILS OR LOC RWY 28L		KSFO	SAN FRANCISCO	CA (US)
IAP	ILS OR LOC RWY 28R		KSFO	SAN FRANCISCO	CA (US)
IAP	ILS OR LOC RWY 28R (CAT II/III)		KSFO	SAN FRANCISCO	CA (US)
IAP	ILS OR LOC RWY 28R (SA CAT I)		KSFO	SAN FRANCISCO	CA (US)
IAP	ILS PRM RWY 28L		KSFO	SAN FRANCISCO	CA (US)
IAP	ILS RWY 28L (SA CAT II)		KSFO	SAN FRANCISCO	CA (US)
IAP	LDA PRM RWY 28R (SIM CLOSE PAR)	4	KSFO	SAN FRANCISCO	CA (US)
IAP	LDA/DME RWY 28R	4	KSFO	SAN FRANCISCO	CA (US)
IAP	QUIET BRIDGE VISUAL RWYS 28L/R		KSFO	SAN FRANCISCO	CA (US)
IAP	RNAV (GPS) PRM X RWY 28R	3	KSFO	SAN FRANCISCO	CA (US)
IAP	RNAV (GPS) X RWY 28R	3	KSFO	SAN FRANCISCO	CA (US)
IAP	TIPP TOE VISUAL RWY 28L		KSFO	SAN FRANCISCO	CA (US)
IAP	ILS OR LOC/DME RWY 30L (ALT MA)		KSJC	SAN JOSE	CA (US)
IAP	ILS RWY 30L (SA CAT I) (ALT MA)		KSJC	SAN JOSE	CA (US)
STAR	PANOCH		KHWD	HAYWARD	CA (US)
STAR	MANTECA		KOAK	OAKLAND	CA (US)
STAR	PANOCH		KOAK	OAKLAND	CA (US)
STAR	BIG SUR		KSFO	SAN FRANCISCO	CA (US)
STAR	MODESTO		KSFO	SAN FRANCISCO	CA (US)
STAR	POINT REYES		KSFO	SAN FRANCISCO	CA (US)
STAR	RISTI		KSFO	SAN FRANCISCO	CA (US)
STAR	JAWWS		KSJC	SAN JOSE	CA (US)

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

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 25

DATE OF REVISION: 06/22/2017

REASON FOR REVISION:

DELETED MADWIN STAR AT KHWD/KOAK FROM FIX USE.

DEVELOPED BY: **DATE:** 01/19/2017 **OFFICE:** AJV-5431 **NAME:** LIAM DONAHUE

APPROVED BY: **DATE:** **OFFICE:** AJV-5430 **NAME:** PATRICK MULQUEEN

SIGNATURE:

DISTRIBUTION: **NFDC**
FPO: WST
ARTCC: ZOA
ATC FACILITY: NORCAL/SFO
OTHER: OAK ATCT

INFORMATION ONLY**RADIO FIX AND HOLDING DATA RECORD****NAME:** SHARR**STATE:** CA**COUNTRY:** US**ICAO REGION CODE:** K2**LATITUDE/LONGITUDE:** 374748.64N/1211631.06W**TYPE:** WP**AIRSPACE DOCKET:****FIX TYPE OF ACTION:** MODIFY**HOLDING:****HOLDING TYPE OF ACTION:** NO CHANGE**FIX USE:****USE TYPE**
IAP
STAR
STAR**USE TITLE**RNAV (GPS) RWY 30
SHARR (RNAV)
SHARR (RNAV)**FAC****PAT****AIRPORT IDENT**KC83
KHWD
KOAK**CITY**BYRON
HAYWARD
OAKLAND**STATE**CA (US)
CA (US)
CA (US)**REQUIRED CHARTING:** STAR, IAP, CONTROLLER**COMPULSORY REPORTING POINT:** NO**RECORD REVISION NUMBER:** 6**DATE OF REVISION:** 06/22/2017**REASON FOR REVISION:**

1. REPLACED MADWIN STAR AT KOAK/KHWD WITH SHARR (RNAV) STAR IN FIX USE.
2. DELETED ECA AND MOD FROM FACILITIES.
3. REMOVED V195 FROM FIX USE.
4. REMOVED EN ROUTE LOW CHARTING.
5. REMOVED INT AND DME FROM FIX TYPE.
6. REMOVED FACILITIES COORDINATES REMARK.

DEVELOPED BY:**DATE:** 01/23/2017**OFFICE:** AJV-5431**NAME:** LIAM DONAHUE**APPROVED BY:****DATE:****OFFICE:** AJV-5430**NAME:** PATRICK MULQUEEN**SIGNATURE:****DISTRIBUTION:**NFDC
FPO: WST
ARTCC: ZOA
ATC FACILITY: NORCAL APP CON
OTHER:

INFORMATION ONLY

RADIO FIX AND HOLDING DATA RECORD

NAME: SUNOL STATE: CA COUNTRY: US ICAO REGION CODE: K2
 LATITUDE/LONGITUDE: 373619.91N/1214837.01W 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 FAC NM	FEET	MRA	MAA
1	OAKLAND	OAK	VOR/DME	H	093.00	110.00	20.97	20.97		4000	17500
2	SAN JOSE	SJC	VOR/DME	L	008.85	024.85	15.25	15.25		4000	17500
3	PANOCH	PXN	VORTAC	L	301.46	317.46	72.75	72.75		6500	17500
4	SACRAMENTO	SAC	VORTAC	H	176.80	193.80	51.71	51.71		5000	17500
5	LINDEN	LIN	VOR/DME	H	216.99	233.99		47.53		5000	17500

EXPANDED SERVICE VOLUME (ESV):

FAC IDENT	FAC TYPE	RADIAL/BEARING	DISTANCE	MIN ALTITUDE	MAX ALTITUDE
PXN	VORTAC	R-301	73	6500	17500
SAC	VORTAC	R-177	52	5000	17500
LIN	VOR/DME	R-217	48	5000	14800

FIX RESTRICTIONS:

MCA V301 6500 SOUTHEAST BOUND

HOLDING:

HOLDING TYPE OF ACTION: NO CHANGE

REMARKS:

OAKLAND (FAC 1) AND SAN JOSE (FAC 2) USED TO ESTABLISH FIX COORDINATES
 LIN DME UNUSABLE 191 DEGREES TO 235 DEGREES.

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
DP	SUNOL	1, 2, 4, 5		KSJC	SAN JOSE	CA (US)
EN ROUTE	T263					(US)
EN ROUTE	V301	1, 2, 3, 4				(US)
EN ROUTE	V334	1, 2, 3, 4				(US)
IAP	RNAV (GPS) RWY 28L			KHWD	HAYWARD	CA (US)
IAP	RNAV (GPS) RWY 12			KTCY	TRACY	CA (US)
STAR	PANOCH	1, 2, 3		KOAK	OAKLAND	CA (US)

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

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 28

DATE OF REVISION: 06/22/2017

REASON FOR REVISION:

1. DELETED FAC 2 (ECA VOR/DME). VOR BEING DECOMMISSIONED.
2. RENUMBERED CURRENT FAC 3 (SJC VOR/DME) TO FAC 2, FAC 4 (PXN VORTAC) TO FAC 3, AND FAC 5 (SAC VORTAC) TO FAC 4.
3. ADDED NEW FAC 5 (LIN VOR/DME) TO SUPPORT LINDEN TRANSITION ON SUNOL DP AT KSJC.
4. AMENDED FAC 2 (SJC VOR/DME) MRA FROM 5000 TO 4000 TO SUPPORT INTERSECTION MAKE-UP ON V301.
5. DELETED V195 FROM FIX USE AND DELETED MCA FOR V195 IN FIX RESTRICTIONS. AIRWAY BEING AMENDED TO START AT OAK VOR/DME.
6. AMENDED REMARK FROM "OAKLAND (FAC 1) AND MANTECA (FAC 2) USED TO ESTABLISH FIX COORDINATES" TO "OAKLAND (FAC 1) AND SAN JOSE (FAC 2) USED TO ESTABLISH FIX COORDINATES".
7. DELETED BYRON DP AT KLVK FROM FIX USE.
8. DELETED MADWIN STAR, ILS OR LOC/DME RWY 28R, RNAV (GPS) Y RWY 28L, RNAV (GPS) Y RWY 28R, RNAV (RNP) Z RWY 28L, RNAV (RNP) Z RWY 28R, AND VOR/DME RWY 28L AT KOAK FROM FIX USE.
9. ADDED ESV LIN VOR/DME R-217/48NM/5000-14800.
10. ADDED REMARK "LIN DME UNUSABLE 191 DEGREES TO 235 DEGREES".

DEVELOPED BY: DATE: 02/01/2017 OFFICE: AJV-5433 NAME: BEV L BORDY (CHRISTINE BAYSE)

APPROVED BY: DATE: OFFICE: AJV-5430 NAME: PATRICK MULQUEEN

SIGNATURE:

DISTRIBUTION: NFDC
 FPO: WST
 ARTCC: ZOA
 ATC FACILITY: NORCAL APP CON
 OTHER:

INFORMATION ONLY**RADIO FIX AND HOLDING DATA RECORD****NAME:** TRACY**STATE:** CA**COUNTRY:** US**ICAO REGION CODE:** K2**LATITUDE/LONGITUDE:** 374353.18N/1212733.49W**TYPE:** WP**AIRSPACE DOCKET:****FIX TYPE OF ACTION:** MODIFY**HOLDING:****HOLDING TYPE OF ACTION:** CANCEL**FIX USE:****USE TYPE**
STAR**USE TITLE**
RISTI (RNAV)**FAC****PAT****AIRPORT IDENT**
KSFO**CITY**
SAN FRANCISCO**STATE**
CA (US)**REQUIRED CHARTING:** STAR, CONTROLLER, EN ROUTE LOW**COMPULSORY REPORTING POINT:** NO**RECORD REVISION NUMBER:** 7**DATE OF REVISION:** 06/22/2017**REASON FOR REVISION:**

1. REMOVED INT AND DME FROM FIX TYPE.
2. DELETED FAC 1 (ECA VOR/DME), FAC 2 (SAC VORTAC), AND FAC 3 (REIGA LOM).
3. DELETED HOLDING PAT 1.
4. DELETED DP AND IAP FROM REQUIRED CHARTING.
5. ADDED STAR TO REQUIRED CHARTING.
6. DELETED STOCKTON DP AND RNAV (GPS) RWY 26 AT KSCK FROM FIX USE.
7. DELETED V195 FROM FIX USE. (AIRWAY BEING MODIFIED TO BEGIN AT OAK VOR/DME).
8. DELETED T259 FROM FIX USE (NOT ON LEGAL DESCRIPTION OF ROUTE).
9. DELETED ILS RWY 25R AND RNAV (GPS) RWY 25R AT KLVK FROM FIX USE.
10. ADDED RISTI STAR AT KSFO TO FIX USE.

DEVELOPED BY:**DATE:** 01/10/2017**OFFICE:** AJV-5422**NAME:** PETER GUIMOND**APPROVED BY:****DATE:****OFFICE:** AJV-5420**NAME:** JULIE MORGAN**SIGNATURE:****DISTRIBUTION:****NFDC**
FPO: WST
ARTCC: ZOA
ATC FACILITY: NORCAL APP CON
OTHER: