

RADIO FIX AND HOLDING DATA RECORD

NAME: GOPHER VORTAC STATE: MN COUNTRY: US ICAO REGION CODE: K3
 LATITUDE/LONGITUDE: 450844.47N/0932223.45W 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	GOPHER	GEP	VORTAC	VH						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	NW	GEP	VORTAC	297.00	117.00	L	1	3000 14000	4 10
2	W	GEP	VORTAC	264.00	084.00	R	1	2700 14000	4 12
3	NW		WP	297.00	117.00	L	4	3000 14000	5 11
4	N		WP	346.00	166.00	L	4	3100 14000	5 11
5	W		WP	265.00	085.00	R	4	2700 14000	5 13

CONTROLLING OBSTRUCTIONS:

PAT	AIRSPEED	OBSTRUCTION	COORDINATES	ELEVATION	ACCURACY CODE
1	200	TOWER (27-000032)	451043.00N/0932100.00W	1530	4D
1	265	TOWER (27-000032)	451043.00N/0932100.00W	1530	4D
2	200	TOWER (27-000032)	451043.00N/0932100.00W	1530	4D
2	310	TOWER (27-000032)	451043.00N/0932100.00W	1530	4D
3	200	TOWER (27-000032)	451043.00N/0932100.00W	1530	4D
3	265	TOWER (27-000032)	451043.00N/0932100.00W	1530	4D
4	200	TOWER (27-000032)	451043.00N/0932100.00W	1530	4D
4	310	TOWER (27-000990)	452011.92N/0932331.17W	2048	1A
5	200	TOWER (27-000032)	451043.00N/0932100.00W	1530	4D
5	310	TOWER (27-000499)	450344.83N/0930822.61W	2438	1D

REASON FOR NONSTANDARD HOLDING:

PAT 1 ATC REQUEST
 PAT 3 ATC REQUEST
 PAT 4 ATC REQUEST

HOLDING RESTRICTIONS:

HOLDING LIMITED TO ESTABLISHED PATTERNS.

REMARKS:

PRECIPITOUS TERRAIN EVALUATION COMPLETED
 HOLDING PATTERN 1 AND 4 EVALUATED FOR MILITARY AIRCRAFT AT KMSP
 ASSIGNED FACILITY MAGVAR: E6 1965
 PAT 5 310KT CONTROLLING OBSTACLE 1604 FT MSL PRIMARY EQUIVALENT.

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
SPECIAL IAP	COPTER RNAV (GPS) 18		4	25MY	MINNEAPOLIS	MN (US)
SPECIAL IAP	COPTER RNAV (GPS) 18		4	MY65	MINNEAPOLIS	MN (US)
SPECIAL IAP	COPTER RNAV (GPS) 12		4	7MN1	ST PAUL	MN (US)
DP	MINNEAPOLIS			MSP	MINNEAPOLIS	MN (US)
EN ROUTE	J114					(US)
EN ROUTE	J21					(US)
EN ROUTE	J25					(US)
EN ROUTE	J36					(US)
EN ROUTE	J68					(US)
EN ROUTE	J70					(US)
EN ROUTE	T330					(US)
EN ROUTE	T383					(US)
EN ROUTE	V148					(US)
EN ROUTE	V161					(US)
EN ROUTE	V2					(US)
EN ROUTE	V218					(US)
EN ROUTE	V413					(US)
EN ROUTE	V505					(US)
EN ROUTE	V510					(US)
EN ROUTE	V78					(US)
EN ROUTE	V82					(US)
EN ROUTE	V97					(US)
IAP	VOR-A			CFE	BUFFALO	MN (US)
IAP	RNAV (GPS) RWY 34			CBG	CAMBRIDGE	MN (US)
IAP	ILS OR LOC RWY 27		2	ANE	MINNEAPOLIS	MN (US)
IAP	RNAV (GPS) RWY 27		5	ANE	MINNEAPOLIS	MN (US)
IAP	RNAV (GPS) RWY 18			ANE	MINNEAPOLIS	MN (US)
IAP	COPTER ILS OR LOC RWY 10R			FCM	MINNEAPOLIS	MN (US)
IAP	ILS OR LOC RWY 10R			FCM	MINNEAPOLIS	MN (US)
IAP	RNAV (GPS) RWY 10L			FCM	MINNEAPOLIS	MN (US)

IAP	RNAV (GPS) RWY 10R		FCM	MINNEAPOLIS	MN (US)
IAP	VOR RWY 10R		FCM	MINNEAPOLIS	MN (US)
IAP	ILS OR LOC RWY 30		LVN	MINNEAPOLIS	MN (US)
IAP	RNAV (GPS) RWY 14	4	MIC	MINNEAPOLIS	MN (US)
IAP	ILS OR LOC RWY 12L		MSP	MINNEAPOLIS	MN (US)
IAP	ILS OR LOC RWY 30R	1	MSP	MINNEAPOLIS	MN (US)
IAP	ILS RWY 12L (CAT II)		MSP	MINNEAPOLIS	MN (US)
IAP	ILS RWY 12L (CAT III)		MSP	MINNEAPOLIS	MN (US)
IAP	ILS RWY 12L (SA CAT I)		MSP	MINNEAPOLIS	MN (US)
IAP	LOC RWY 17		MSP	MINNEAPOLIS	MN (US)
IAP	LOC RWY 22		MSP	MINNEAPOLIS	MN (US)
IAP	LOC RWY 4	1	MSP	MINNEAPOLIS	MN (US)
IAP	RNAV (GPS) RWY 4	3	MSP	MINNEAPOLIS	MN (US)
IAP	RNAV (GPS) Z RWY 30R	3	MSP	MINNEAPOLIS	MN (US)
IAP	RNAV (GPS) Z RWY 35	3	MSP	MINNEAPOLIS	MN (US)
IAP	RNAV (RNP) Y RWY 30R	3	MSP	MINNEAPOLIS	MN (US)
IAP	ILS OR LOC RWY 9		RGK	RED WING	MN (US)
IAP	LOC RWY 34		SGS	SOUTH ST PAUL	MN (US)
IAP	ILS OR LOC RWY 31		STC	ST CLOUD	MN (US)
IAP	VOR RWY 31		STC	ST CLOUD	MN (US)
IAP	ILS OR LOC RWY 14		STP	ST PAUL	MN (US)
IAP	ILS OR LOC RWY 32		STP	ST PAUL	MN (US)
IAP	RNAV (GPS) RWY 14		STP	ST PAUL	MN (US)
STAR	AGUDE		CFE	BUFFALO	MN (US)
STAR	AGUDE		FBL	FARIBAULT	MN (US)
STAR	AGUDE		Gyl	GLENCOE	MN (US)
STAR	AGUDE		MGG	MAPLE LAKE	MN (US)
STAR	AGUDE		ANE	MINNEAPOLIS	MN (US)
STAR	ENCEE (RNAV)		ANE	MINNEAPOLIS	MN (US)
STAR	GOPHER		ANE	MINNEAPOLIS	MN (US)
STAR	TWOLF		ANE	MINNEAPOLIS	MN (US)
STAR	AGUDE		FCM	MINNEAPOLIS	MN (US)
STAR	ENCEE (RNAV)		FCM	MINNEAPOLIS	MN (US)
STAR	GOPHER		FCM	MINNEAPOLIS	MN (US)
STAR	TWOLF		FCM	MINNEAPOLIS	MN (US)
STAR	AGUDE		LVN	MINNEAPOLIS	MN (US)
STAR	ENCEE (RNAV)		LVN	MINNEAPOLIS	MN (US)
STAR	GOPHER		LVN	MINNEAPOLIS	MN (US)
STAR	TWOLF		LVN	MINNEAPOLIS	MN (US)
STAR	AGUDE		MIC	MINNEAPOLIS	MN (US)
STAR	ENCEE (RNAV)		MIC	MINNEAPOLIS	MN (US)
STAR	GOPHER		MIC	MINNEAPOLIS	MN (US)
STAR	TWOLF		MIC	MINNEAPOLIS	MN (US)
STAR	BAINY (RNAV)		MSP	MINNEAPOLIS	MN (US)
STAR	GOPHER		MSP	MINNEAPOLIS	MN (US)
STAR	AGUDE		SGS	SOUTH ST PAUL	MN (US)
STAR	AGUDE		21D	ST PAUL	MN (US)
STAR	AGUDE		STP	ST PAUL	MN (US)
STAR	ENCEE (RNAV)		STP	ST PAUL	MN (US)
STAR	GOPHER		STP	ST PAUL	MN (US)
STAR	TWOLF		STP	ST PAUL	MN (US)
STAR	AGUDE		RNH	NEW RICHMOND	WI (US)
STAR	TWOLF		RNH	NEW RICHMOND	WI (US)
STAR	AGUDE		OEO	OSCEOLA	WI (US)
STAR	TWOLF		OEO	OSCEOLA	WI (US)

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

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 36

DATE OF REVISION: 10/29/2026

REASON FOR REVISION:

1. FIX USE: REMOVED DP COULT, KBREW AND WLSTN AT KANE, KFCM, KMSP AND KSTP.
2. FIX USE: REMOVED DP LEINY (RNAV) AT KMSP.
3. FIX USE: ADDED DP MINNEAPOLIS AT KMSP.

INITIATED BY:

DATE:

ORGANIZATION:

NAME:

OFFICE OF PRIMARY RESPONSIBILITY:

AJV-A431

NAME: EMMANUEL GONZALES

APPROVED BY:

DATE: 09/24/2026

OFFICE: AJV-A422

NAME: RAKE MCGRAW

SIGNATURE:

RADIO FIX AND HOLDING DATA RECORD

NAME: LEINY

STATE: SD

COUNTRY: US

ICAO REGION CODE: K3

LATITUDE/LONGITUDE: 450216.00N/0973640.00W

TYPE: WP

AIRSPACE DOCKET:

FIX TYPE OF ACTION: NO CHANGE

HOLDING:

HOLDING TYPE OF ACTION: NO CHANGE

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
DP	BITEZ (RNAV)			ANE	MINNEAPOLIS	MN (US)
DP	BITEZ (RNAV)			FCM	MINNEAPOLIS	MN (US)
DP	BITEZ (RNAV)			MSP	MINNEAPOLIS	MN (US)
DP	BITEZ (RNAV)			STP	ST PAUL	MN (US)

REQUIRED CHARTING: DP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 2

DATE OF REVISION: 10/29/2026

REASON FOR REVISION:

FIX USE: REMOVED DP LEINY (RNAV) AND DP LOCKR (RNAV) FROM KMSP; ADDED DP BITEZ (RNAV) TO KANE, KFCM, KMSP AND KSTP.

INITIATED BY:

DATE:

ORGANIZATION:

NAME:

OFFICE OF PRIMARY RESPONSIBILITY:

AJV-A431

NAME: DEXTER SWEETING

APPROVED BY:

DATE: 09/24/2026

OFFICE: AJV-A422

NAME: RAKE MCGRAW

SIGNATURE:

RADIO FIX AND HOLDING DATA RECORD

NAME: REDWOOD FALLS VOR/DME

STATE: MN

COUNTRY: US

ICAO REGION CODE: K3

LATITUDE/LONGITUDE: 442802.19N/0950741.63W

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	REDWOOD FALLS	RWF	VOR/DME	VH						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	S	RWF	VOR/DME	196.00	016.00	R	1	2600 6000	4 5

CONTROLLING OBSTRUCTIONS:

PAT	AIRSPEED	OBSTRUCTION	COORDINATES	ELEVATION	ACCURACY CODE
1	200	WINDMILL (27-002448)	443005.90N/0951032.20W	1433	5D

HOLDING RESTRICTIONS:

HOLDING LIMITED TO ESTABLISHED PATTERN(S)

REMARKS:

PRECIPITOUS TERRAIN EVALUATION COMPLETED.
ASSIGNED FACILITY MAG VAR: 7E/1965.

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
EN ROUTE	J34					(US)
EN ROUTE	J90					(US)
EN ROUTE	T322					(US)
EN ROUTE	V148					(US)
EN ROUTE	V175					(US)
EN ROUTE	V24					(US)
EN ROUTE	V26					(US)
EN ROUTE	V398					(US)
EN ROUTE	V412					(US)
IAP	ILS OR LOC RWY 12			MML	MARSHALL	MN (US)
IAP	RNAV (GPS) RWY 12			MML	MARSHALL	MN (US)
IAP	RNAV (GPS) RWY 32			MVE	MONTEVIDEO	MN (US)
IAP	VOR-A	1	1	OVL	OLIVIA	MN (US)
IAP	RNAV (GPS) RWY 30			RWF	REDWOOD FALLS	MN (US)
IAP	RNAV (GPS) RWY 13			D42	SPRINGFIELD	MN (US)
IAP	RNAV (GPS) RWY 31			D42	SPRINGFIELD	MN (US)
IAP	RNAV (GPS) RWY 11			TKC	TRACY	MN (US)
IAP	RNAV (GPS) RWY 29			TKC	TRACY	MN (US)
IAP	ILS OR LOC RWY 13			BDH	WILLMAR	MN (US)
IAP	RNAV (GPS) RWY 31			BDH	WILLMAR	MN (US)
IAP	RNAV (GPS) RWY 17			MWM	WINDOM	MN (US)

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

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 25

DATE OF REVISION: 05/14/2026

REASON FOR REVISION:

1. FIX USE: REMOVED VOR RWY 13 IAP AT KD42, REMOVED VOR RWY 12 AT MML, REMOVED VOR/DME RWY 33 AT KGDB.

INITIATED BY:

DATE:

ORGANIZATION:

NAME:

OFFICE OF PRIMARY RESPONSIBILITY:

AJV-A421

NAME: TODD DAMRON

APPROVED BY:

DATE: 04/09/2026

OFFICE: AJV-A432

NAME: CASIMIR TABAKA

SIGNATURE:

RADIO FIX AND HOLDING DATA RECORD

NAME: SIOUX FALLS VORTAC

STATE: SD

COUNTRY: US

ICAO REGION CODE: K3

LATITUDE/LONGITUDE: 433858.17N/0964652.05W

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	SIOUX FALLS	FSD	VORTAC	VH							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	FSD	VORTAC	327.00	147.00	L	1		3400	17500	4	16

CONTROLLING OBSTRUCTIONS:

PAT	AIRSPEED	OBSTRUCTION	COORDINATES	ELEVATION	ACCURACY CODE
1	200	TOWER (46-000442)	434449.00N/0965320.00W	2270	3D
1	310	TOWER (46-000442)	434449.00N/0965320.00W	2270	3D

REASON FOR NONSTANDARD HOLDING:

PAT 1 AT REQUEST

HOLDING RESTRICTIONS:

HOLDING LIMITED TO ESTABLISHED PATTERN.

PROCEDURES REQUIRING CLIMB-IN-HOLD:

PAT	PROCEDURE TITLE	AIRPORT IDENT	CITY	STATE
1	TAKEOFF MINIMUMS	FSD	SIOUX FALLS	SD (US)

REMARKS:

CHART PAT 1 EN ROUTE LOW.
PRECIPITOUS TERRAIN EVALUATION COMPLETED.
ASSIGNED FACILITY MAG VAR: 9E 1965

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
DP	OMAHA			OMA	OMAHA	NE (US)
DP	TAKEOFF MINIMUMS		1	FSD	SIOUX FALLS	SD (US)
EN ROUTE	J114					(US)
EN ROUTE	J16					(US)
EN ROUTE	J45					(US)
EN ROUTE	J82					(US)
EN ROUTE	Q19					(US)
EN ROUTE	T348					(US)
EN ROUTE	T407					(US)
EN ROUTE	V120					(US)
EN ROUTE	V148					(US)
EN ROUTE	V170					(US)
EN ROUTE	V80					(US)
IAP	ILS OR LOC RWY 12			MML	MARSHALL	MN (US)
IAP	RNAV (GPS) RWY 18			PQN	PIPESTONE	MN (US)
IAP	ILS OR LOC RWY 12			BKX	BROOKINGS	SD (US)
IAP	RNAV (GPS) RWY 30			BKX	BROOKINGS	SD (US)
IAP	RNAV (GPS) RWY 33			MDS	MADISON	SD (US)
IAP	HI-ILS OR LOC RWY 21			FSD	SIOUX FALLS	SD (US)
IAP	HI-ILS Z OR LOC Z RWY 3			FSD	SIOUX FALLS	SD (US)
IAP	HI-TACAN RWY 15			FSD	SIOUX FALLS	SD (US)
IAP	ILS OR LOC RWY 21		1	FSD	SIOUX FALLS	SD (US)
IAP	ILS OR LOC RWY 3		1	FSD	SIOUX FALLS	SD (US)
IAP	RADAR-1		1	FSD	SIOUX FALLS	SD (US)
IAP	RNAV (GPS) RWY 27			FSD	SIOUX FALLS	SD (US)
IAP	RNAV (GPS) RWY 9			FSD	SIOUX FALLS	SD (US)
IAP	VOR OR TACAN RWY 15		1	FSD	SIOUX FALLS	SD (US)
IAP	VOR/DME OR TACAN RWY 33		1	FSD	SIOUX FALLS	SD (US)
STAR	ENCEE (RNAV)			ANE	MINNEAPOLIS	MN (US)
STAR	ENCEE (RNAV)			FCM	MINNEAPOLIS	MN (US)
STAR	ENCEE (RNAV)			LVN	MINNEAPOLIS	MN (US)
STAR	ENCEE (RNAV)			MIC	MINNEAPOLIS	MN (US)
STAR	ENCEE (RNAV)			STP	ST PAUL	MN (US)

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

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 33

DATE OF REVISION: 05/14/2026

REASON FOR REVISION:

REMOVED MML VOR RWY 12 FROM FIX USE

INITIATED BY:**DATE:****ORGANIZATION:****NAME:****OFFICE OF PRIMARY RESPONSIBILITY:**

AJV-A433

NAME: NICHOLAS HEIDERSTADT**APPROVED BY:****DATE:** 04/09/2026**OFFICE:** AJV-A433**NAME:** ROBERT HAMILTON**SIGNATURE:**