

# RADIO FIX AND HOLDING DATA RECORD

NAME: AUTOS STATE: MN COUNTRY: US ICAO REGION CODE: K3

LATITUDE/LONGITUDE: 434047.67N/0912944.30W 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 FAC NM	FAC FEET	MRA	MAA
1	NODINE	ODI	VORTAC	H	184.02	185.02	14.00	14.00	85049	2900	6000

HOLDING: HOLDING TYPE OF ACTION: MODIFY

## 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	N	ODI	VORTAC	004.02	184.02	R	1		2900	6000	4	5

## CONTROLLING OBSTRUCTIONS:

PAT	AIRSPEED	OBSTRUCTION	COORDINATES	ELEVATION	ACCURACY CODE
1	230	TOWER (27-001321)	434124.00N/0913010.00W	1614	4E

## HOLDING RESTRICTIONS:

HOLDING LIMITED TO ESTABLISHED PATTERN.

## REMARKS:

PRECIPITOUS TERRAIN EVALUATION COMPLETED.

## FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
IAP	RNAV (GPS) -B			KCHU	CALEDONIA	MN (US)
IAP	VOR -A	1	1	KCHU	CALEDONIA	MN (US)

REQUIRED CHARTING: IAP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 4 DATE OF REVISION: 06/15/2023

## REASON FOR REVISION:

1. REMOVED "HOUSTON COUNTY - VOR/DME OR GPS-A" FROM FIX USE.
2. ADDED KCHU VOR - A TO FIX USE.
3. ADDED KCHU RNAV (GPS) -B TO FIX USE.
4. CHANGED FAC 1 MAGNETIC COURSE AND HOLDING INBOUND COURSE FROM 184.00 TO 184.02.
5. CHANGED HOLDING TEMPLATE MIN/MAX FROM 6/10 TO 4/5.
6. CHANGED HOLDING ALTITUDE MIN/MAX FROM 2800/14000 TO 2900/6000.
7. CHANGED HOLDING CONTROLLING OBSTACLE FROM 1623 MSL TOWER (24-1321) TO 1614 MSL TOWER (27-001321).
8. CHANGED FAC 1 MAA FROM 14000 TO 6000.
9. ADDED "HOLDING LIMITED TO ESTABLISHED PATTERN" IN HOLDING RESTRICTIONS - REMOVED FROM REMARKS.
10. ADDED "PRECIPITOUS TERRAIN EVALUATION COMPLETED" TO REMARKS.
11. ADDED 14.00 NM AND 85049 FEET TO DIST FROM FAC, CHANGED MRA FROM 2800 TO 2900 IN FIX MAKE-UP FACILITIES.

INITIATED BY:	DATE:	ORGANIZATION:	NAME:
OFFICE OF PRIMARY RESPONSIBILITY:		AJV-A432	NAME: LORRI DOWNEY
APPROVED BY:	DATE: 06/15/2023	OFFICE: AJV-A432	NAME: CASIMIR TABAKA

SIGNATURE:

Digitally signed by  
CASIMIR L TABAKA

Apr 10, 2023



# RADIO FIX AND HOLDING DATA RECORD

NAME: FALAR

STATE: MN

COUNTRY: US

ICAO REGION CODE: K3

LATITUDE/LONGITUDE: 433426.04N/0913018.32W

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 FAC NM	FEET	MRA	MAA
1	ROCHESTER	RST	VOR/DME	L	099.40	104.40	49.17	49.17		3000	17500

## EXPANDED SERVICE VOLUME (ESV):

FAC IDENT	FAC TYPE	RADIAL/BEARING	DISTANCE	MIN ALTITUDE	MAX ALTITUDE
RST	VOR/DME	R-099	50	3000	17500

HOLDING:

HOLDING TYPE OF ACTION: NO CHANGE

## FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
EN ROUTE	T251					(US)
IAP	RNAV (GPS) RWY 29			KFKA	PRESTON	MN (US)
IAP	RNAV (GPS) RWY 34			55Y	RUSHFORD	MN (US)
IAP	RNAV (GPS) RWY 4			KLSE	LA CROSSE	WI (US)
IAP	RNAV (GPS) RWY 11			Y51	VIROQUA	WI (US)

REQUIRED CHARTING: IAP, EN ROUTE LOW, CONTROLLER LOW

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 12

DATE OF REVISION: 06/15/2023

## REASON FOR REVISION:

1. REMOVED "HOUSTON COUNTY - VOR/DME OR GPS-A" FROM FIX USE.

INITIATED BY:

DATE:

ORGANIZATION:

NAME:

OFFICE OF PRIMARY RESPONSIBILITY:

AJV-A432

NAME: LORRI DOWNEY

APPROVED BY:

DATE: 06/15/2023

OFFICE: AJV-A432

NAME: CASIMIR TABAKA

SIGNATURE:

Digitally signed by  
**CASIMIR L TABAKA**

Mar 02, 2023

QUALITY  
35  
CHECKED

# RADIO FIX AND HOLDING DATA RECORD

NAME: MAFYE

STATE: MN

COUNTRY: US

ICAO REGION CODE: K3

LATITUDE/LONGITUDE: 433558.57N/0913019.10W

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 FAC NM	FEET	MRA	MAA
1	NODINE	ODI	VORTAC	H	184.02	185.02	18.83	18.83		1720	17500

HOLDING:

HOLDING TYPE OF ACTION: NO CHANGE

## FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
IAP	RNAV (GPS) -B			KCHU	CALEDONIA	MN (US)
IAP	VOR -A			KCHU	CALEDONIA	MN (US)

REQUIRED CHARTING: IAP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 2

DATE OF REVISION: 06/15/2023

## REASON FOR REVISION:

1. REMOVED "HOUSTON COUNTY - VOR/DME OR GPS-A" FROM FIX USE.
2. ADDED KCHU VOR -A TO FIX USE.
3. ADDED KCHU RNAV (GPS) -B TO FIX USE.
4. MOVED FIX 27.39 FEET NORTH WEST FROM 433558.31N/0913019.00W TO 433558.57N/0913019.09W.
5. CHANGED FAC 1 FIX MAKE-UP FACILITIES TRUE BRG FROM 185.01 TO 185.02 AND DME/DIST FROM FAC FROM 18.84 TO 18.83.
6. ADDED WP TO FIX TYPE.

INITIATED BY:

DATE:

ORGANIZATION:

NAME:

OFFICE OF PRIMARY RESPONSIBILITY:

AJV-A432

NAME: LORRI DOWNEY

APPROVED BY:

DATE: 06/15/2023

OFFICE: AJV-A432

NAME: CASIMIR TABAKA

SIGNATURE:

*Digitally signed by*  
**CASIMIR L TABAKA**  
Mar 02, 2023

QUALITY  
35  
CHECKED

# RADIO FIX AND HOLDING DATA RECORD

NAME: NODINE VORTAC STATE: MN COUNTRY: US ICAO REGION CODE: K3  
 LATITUDE/LONGITUDE: 435444.39N/0912803.06W 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	NODINE	ODI	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 TIME	LENGTH DME	HOLDING ALTITUDES MIN	MAX	TEMPLATES MIN	MAX
1	S	ODI	VORTAC	177.54	357.54	R	1		3400	6000	4	5

## CONTROLLING OBSTRUCTIONS:

PAT	AIRSPEED	OBSTRUCTION	COORDINATES	ELEVATION	ACCURACY CODE
1	200	TOWER (27-000375)	434823.00N/0912203.00W	2045	3C

## HOLDING RESTRICTIONS:

HOLDING LIMITED TO ESTABLISHED PATTERN.

## REMARKS:

PRECIPITOUS TERRAIN EVALUATION COMPLETED.  
 REFERENCE MAGNETIC VARIATION: 1 E.

## FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
DP	ZMBRO			KANE	MINNEAPOLIS	MN (US)
DP	ZMBRO			KFCM	MINNEAPOLIS	MN (US)
DP	ZMBRO			KMSP	MINNEAPOLIS	MN (US)
DP	ZMBRO			KSTP	ST PAUL	MN (US)
EN ROUTE	J30					(US)
EN ROUTE	J34					(US)
EN ROUTE	J36					(US)
EN ROUTE	V129					(US)
EN ROUTE	V170					(US)
EN ROUTE	V171					(US)
EN ROUTE	V2					(US)
EN ROUTE	V510					(US)
EN ROUTE	V82					(US)
EN ROUTE	V97					(US)
IAP	VOR -A			KCHU	CALEDONIA	MN (US)
IAP	COPTER ILS Y OR LOC Y RWY 31			KRST	ROCHESTER	MN (US)
IAP	ILS Z OR LOC Z RWY 31			KRST	ROCHESTER	MN (US)
IAP	VOR-A			55Y	RUSHFORD	MN (US)
IAP	ILS Y OR LOC Y RWY 30			KONA	WINONA	MN (US)
IAP	ILS OR LOC RWY 18		1	KLSE	LA CROSSE	WI (US)
IAP	RNAV (GPS) RWY 11			KCMY	SPARTA	WI (US)
STAR	EAU CLAIRE			KMSP	MINNEAPOLIS	MN (US)

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

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 11 DATE OF REVISION: 06/15/2023

## REASON FOR REVISION:

1. REMOVED "HOUSTON COUNTY - VOR/DME OR GPS-A" FROM FIX USE.
2. ADDED KCHU VOR -A TO FIX USE.

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