

# RADIO FIX AND HOLDING DATA RECORD

NAME: ANDOE OM

STATE: MN

COUNTRY: US

ICAO REGION CODE: K3

LATITUDE/LONGITUDE: 465016.23N/0920314.66W

TYPE: RADAR, 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	ANDOE		OM								5900
2	DULUTH	I-JUD	LOC		093.29	092.29		7.10	43110	3200	5900
3	DULUTH	DLH	VORTAC	H			6.49	6.49	39461	3200	5900

HOLDING:

HOLDING TYPE OF ACTION: NO CHANGE

## REMARKS:

COORDINATES REFLECT LOCATION ON LOC/AZ CENTERLINE ABEAM THE ANDOE OM.

ACTUAL FACILITY LOCATION IS 465015.29N/0920314.72W.

DLH DME USED TO COMPLY WITH 8260.19H FIGURE 7-5-2 DUE TO POSITIONING OF DLH VORTAC FEEDER FIX WITHIN THE SHADED AREA.

## FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
IAP	ILS OR LOC RWY 27	1, 2, 3		KDLH	DULUTH	MN (US)

REQUIRED CHARTING: IAP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 7

DATE OF REVISION: 10/10/2019

## REASON FOR REVISION:

1. FIX MOVED 3 FT NORTH, COORDINATES UPDATED - TO ALIGN ON LOCALIZER CENTERLINE
2. FIX TYPE, ADDED "DME" - FIX NOW HAS DME.
3. ADDED FAC 3 - TO COMPLY WITH 8260.19H, FIGURE 7-5-2.
4. ADDED REMARK REGARDING DLH DME - FURTHER EXPLANATION.
5. FIX USE, ADDED FAC 3 TO KDLH ILS OR LOC RWY 27.
6. FIX USE, DELETED KDLH COPTER ILS OR LOC RWY 27 - PROCEDURE CANCELED.

INITIATED BY:

DATE:

ORGANIZATION:

NAME:

OFFICE OF PRIMARY RESPONSIBILITY:

AJV-A421

NAME: RUSSELL ROSLEWSKI

APPROVED BY:

DATE:

OFFICE: AJV-A420

NAME: MARLON ROBINSON

SIGNATURE:

*Digitally signed by*

**DAVID DANNER**

DISTRIBUTION:

NFDC

FPO: CEN

ARTCC: ZMP

ATC FACILITY: DLH ATCT

OTHER:

Jul 12, 2019

QUALITY  
10  
CHECKED

# RADIO FIX AND HOLDING DATA RECORD

NAME: CHERL STATE: MN COUNTRY: US ICAO REGION CODE: K3  
 LATITUDE/LONGITUDE: 470201.58N/0920357.43W TYPE: 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	DULUTH	DLH	VORTAC	H	017.00	022.00	15.00	15.00	4000	17500
2	HIBBING	HIB	VOR/DME	L	119.37	121.37		30.67	4000	17500

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	N	DLH	VORTAC	017.00	197.00	R	1	4500 14000	15 20

## CONTROLLING OBSTRUCTIONS:

PAT	AIRSPEED	OBSTRUCTION	COORDINATES	ELEVATION	ACCURACY CODE
1	310	AAO	470924.00N/0914736.00W	2061	4E

## HOLDING RESTRICTIONS:

PAT 1 CHART 310K ICON  
 HOLDING LIMITED TO ESTABLISHED PATTERNS.

## REMARKS:

DULUTH (FAC 1) USED TO ESTABLISH FIX COORDINATES  
 PRECIPITIOUS TERRAIN EVALUATION COMPLETED.  
 EVALUATED 310KT HOLDING PATTERN FOR MILITARY OPERATIONS.

## FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
IAP	ILS OR LOC RWY 27	1, 2	1	KDLH	DULUTH	MN (US)
IAP	ILS OR LOC RWY 9	1, 2	1	KDLH	DULUTH	MN (US)
IAP	ILS RWY 9 (CAT II)	1, 2	1	KDLH	DULUTH	MN (US)
IAP	ILS RWY 9 (SA CAT I)	1, 2	1	KDLH	DULUTH	MN (US)
IAP	VOR OR TACAN RWY 3	1, 2	1	KDLH	DULUTH	MN (US)
IAP	VOR/DME OR TACAN RWY 21	1		KDLH	DULUTH	MN (US)

REQUIRED CHARTING: MILITARY IAP, IAP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 8 DATE OF REVISION: 10/10/2019

## REASON FOR REVISION:

- PAT 1 MIN AND MAX TEMPLATE CHANGED FROM 8/9 TO 15/20 - 310 KT PATTERN USED.
- PAT 1 230 AND 265 KT OBSTACLES REPLACED WITH 310 KT OBSTACLE - FOR MILITARY USE.
- PAT 1, ADDED 310K ICON - FOR MILITARY USE.
- DELETED PAT 2 - COPTER PROCEDURE CANCELED.
- FIX USE, DELETED KDLH COPTER ILS OR LOC RWY 27 - PROCEDURE CANCELED.
- FIX USE, ADDED KDLH ILS RWY 9 (CAT II) AND (SA CAT I) - FOR THE SAKE OF COMPLETENESS.

INITIATED BY: DATE: ORGANIZATION: NAME:

OFFICE OF PRIMARY RESPONSIBILITY: AJV-A421 NAME: RUSSELL ROSLEWSKI

APPROVED BY: DATE: OFFICE: AJV-A420 NAME: MARLON ROBINSON

*Digitally signed by*

SIGNATURE: DAVID DANNER

Jul 12, 2019

DISTRIBUTION: NFDC  
 FPO: CEN  
 ARTCC: ZMP  
 ATC FACILITY: DLH ATCT  
 OTHER:

QUALITY  
10  
CHECKED

# RADIO FIX AND HOLDING DATA RECORD

NAME: DULUTH VORTAC

STATE: MN

COUNTRY: US

ICAO REGION CODE: K3

LATITUDE/LONGITUDE: 464807.79N/0921210.33W

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	DULUTH	DLH	VORTAC	H							45000

HOLDING:

HOLDING TYPE OF ACTION: NO CHANGE

CONTROLLING OBSTRUCTIONS:

PAT	AIRSPED	OBSTRUCTION	COORDINATES	ELEVATION	ACCURACY CODE
UPN	230	TOWER (27-000283)	464715.00N/0920722.00W	2049	4D

HOLDING RESTRICTIONS:

UNPLANNED HOLDING AUTHORIZED AT OR ABOVE 3100.

REMARKS:

PRECIPITOUS TERRAIN EVALUATION COMPLETED.  
DLH VORTAC MAG VAR 5E (1965).

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
DP	MEADOW LAKE			KMSP	MINNEAPOLIS	MN (US)
DP	MINNEAPOLIS			KMSP	MINNEAPOLIS	MN (US)
EN ROUTE	J140					(US)
EN ROUTE	J21					(US)
EN ROUTE	J32					(US)
EN ROUTE	J533					(US)
EN ROUTE	J538					(US)
EN ROUTE	J89					(US)
EN ROUTE	V129					(US)
EN ROUTE	V13					(US)
EN ROUTE	V177					(US)
EN ROUTE	V191					(US)
EN ROUTE	V217					(US)
EN ROUTE	V430					(US)
EN ROUTE	V505					(US)
IAP	RNAV (GPS) RWY 17			KCOQ	CLOQUET	MN (US)
IAP	RNAV (GPS) RWY 35			KCOQ	CLOQUET	MN (US)
IAP	ILS OR LOC RWY 27			KDLH	DULUTH	MN (US)
IAP	ILS OR LOC RWY 9			KDLH	DULUTH	MN (US)
IAP	ILS RWY 9 (CAT II)			KDLH	DULUTH	MN (US)
IAP	ILS RWY 9 (SA CAT I)			KDLH	DULUTH	MN (US)
IAP	VOR OR TACAN RWY 3			KDLH	DULUTH	MN (US)
IAP	VOR/DME OR TACAN RWY 21			KDLH	DULUTH	MN (US)
IAP	RNAV (GPS) RWY 13			KASX	ASHLAND	WI (US)
IAP	RNAV (GPS) RWY 22			KSUW	SUPERIOR	WI (US)
IAP	RNAV (GPS) RWY 32			KSUW	SUPERIOR	WI (US)
IAP	RNAV (GPS) RWY 4			KSUW	SUPERIOR	WI (US)
SPECIAL IAP	COPTER RNAV (GPS) 193			KMN33	DULUTH	MN (US)
STAR	GOPHER			KANE	MINNEAPOLIS	MN (US)
STAR	GOPHER			KFCM	MINNEAPOLIS	MN (US)
STAR	GOPHER			KLVN	MINNEAPOLIS	MN (US)
STAR	GOPHER			KMIC	MINNEAPOLIS	MN (US)
STAR	GOPHER			KMSP	MINNEAPOLIS	MN (US)
STAR	GOPHER			KSTP	ST PAUL	MN (US)

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

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 19

DATE OF REVISION: 10/10/2019

REASON FOR REVISION:

1. ADDED CONTROLLER LOW AND CONTROLLER HIGH TO REQUIRED CHARTING - 8260.19H REQUIREMENT.  
2. FIX USE, DELETED KDLH COPTER ILS OR LOC RWY 27 - PROCEDURE CANCELED.

INITIATED BY:

DATE:

ORGANIZATION:

NAME:

OFFICE OF PRIMARY RESPONSIBILITY:

AJV-A421

NAME: RUSSELL ROSLEWSKI

APPROVED BY:

DATE:

OFFICE: AJV-A420

NAME: MARLON ROBINSON

QUALITY  
10  
CHECKED

**SIGNATURE:** *Digitally signed by*  
**DAVID DANNER**

Jul 12, 2019

**DISTRIBUTION:**

**NFDC**  
**FPO: CEN**  
**ARTCC: ZMP**  
**ATC FACILITY: DLH ATCT**  
**OTHER:**

QUALITY  
10  
CHECKED

# RADIO FIX AND HOLDING DATA RECORD

NAME: PYKLA LOM STATE: MN COUNTRY: US ICAO REGION CODE: K3  
 LATITUDE/LONGITUDE: 465045.68N/0922117.71W TYPE: RADAR

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	PYKLA	DL	LOM	MH							5900
2	DULUTH	I-DLH	LOC		273.26	272.26		7.76	47139	3300	5900

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	W	DL	LOM	273.26	093.26	R	1		3300	5900	12	13

## CONTROLLING OBSTRUCTIONS:

PAT	AIRSPEED	OBSTRUCTION	COORDINATES	ELEVATION	ACCURACY CODE
1	310	TOWER (27-002098)	465010.47N/0924208.83W	1828	4D

## HOLDING RESTRICTIONS:

PAT 1 CHART 310K ICON  
 HOLDING LIMITED TO ESTABLISHED PATTERN.

## PROCEDURES REQUIRING CLIMB-IN-HOLD:

PAT	PROCEDURE TITLE	AIRPORT IDENT	CITY	STATE
1	ILS OR LOC RWY 27	KDLH	DULUTH	MN (US)

## REMARKS:

COORDINATES REFLECT LOCATION ON LOC/AZ CENTERLINE ABEAM THE PYKLA LOM.  
 ACTUAL FACILITY LOCATION IS 465044.59N/0922117.77W.  
 PRECIPITOUS TERRAIN EVALUATION COMPLETED.  
 EVALUATED 310KT HOLDING PATTERN FOR MILITARY OPERATIONS.  
 ACTUAL FACILITY LOCATION FOR OM PORTION IS 465044.84N/0922118.32W.

## FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
IAP	NDB RWY 17	1		KCOQ	CLOQUET	MN (US)
IAP	NDB RWY 35	1		KCOQ	CLOQUET	MN (US)
IAP	ILS OR LOC RWY 27	1, 2	1	KDLH	DULUTH	MN (US)
IAP	ILS OR LOC RWY 9	1, 2	1	KDLH	DULUTH	MN (US)
IAP	ILS RWY 9 (CAT II)	1, 2	1	KDLH	DULUTH	MN (US)
IAP	ILS RWY 9 (SA CAT I)	1, 2	1	KDLH	DULUTH	MN (US)

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

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 12

DATE OF REVISION: 10/10/2019

## REASON FOR REVISION:

- PAT 1 MIN AND MAX TEMPLATE CHANGED FROM 8/9 TO 12/13 - 310 KT PATTERN USED.
- CHANGED PAT 1 CONTROLLING OBSTACLE SPEED FROM 265 KT TO 310 KT - FOR MILITARY USE.
- PAT 1, ADDED 310K ICON - FOR MILITARY USE.
- PROCEDURES REQUIRING CLIMB-IN-HOLD, ADDED KDLH ILS OR LOC RWY 27 - PROCEDURE REQUIRES CLIMB-IN-HOLD.
- FIX USE, DELETED KDLH COPTER ILS OR LOC RWY 27 - PROCEDURE CANCELED.
- FIX USE, ADDED KDLH ILS RWY 9 (CAT II) AND (SA CAT I) - FOR THE SAKE OF COMPLETENESS.

INITIATED BY: DATE: ORGANIZATION: NAME:  
 OFFICE OF PRIMARY RESPONSIBILITY: AJV-A421 NAME: RUSSELL ROSLEWSKI  
 APPROVED BY: DATE: OFFICE: AJV-A420 NAME: MARLON ROBINSON

SIGNATURE: Digitally signed by

DAVID DANNER

DISTRIBUTION: NFDC  
 FPO: CEN  
 ARTCC: ZMP  
 ATC FACILITY: DLH ATCT  
 OTHER:

Jul 12, 2019

QUALITY  
 10  
 CHECKED

# RADIO FIX AND HOLDING DATA RECORD

NAME: WIRSA

STATE: MN

COUNTRY: US

ICAO REGION CODE: K3

LATITUDE/LONGITUDE: 464953.62N/0915028.76W

TYPE: 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	DULUTH	I-JUD	LOC		093.29	092.29				3200	5900
2	DULUTH	DLH	VORTAC	H			15.00	15.00		3200	5900

HOLDING:

HOLDING TYPE OF ACTION: NO CHANGE

## FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
IAP	ILS OR LOC RWY 27	1, 2		KDLH	DULUTH	MN (US)

REQUIRED CHARTING: IAP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 5

DATE OF REVISION: 10/10/2019

## REASON FOR REVISION:

FAC 2, REMOVED MAG AND TRUE BRG - ONLY DME IS BEING USED FROM THIS FACILITY.  
REMARKS, REMOVED "DULUTH (FAC 2) USED TO ESTABLISH FIX COORDINATES" - WITH REMOVAL OF FAC 2 BEARING INFORMATION  
THERE IS ONLY WAY TO ESTABLISH THIS FIX.

INITIATED BY:

DATE:

ORGANIZATION:

NAME:

OFFICE OF PRIMARY RESPONSIBILITY:

AJV-A421

NAME: RUSSELL ROSLEWSKI

APPROVED BY:

DATE:

OFFICE: AJV-A420

NAME: MARLON ROBINSON

SIGNATURE:

*Digitally signed by*

**DAVID DANNER**

DISTRIBUTION:

NFDC  
FPO: CEN  
ARTCC: ZMP  
ATC FACILITY: DLH ATCT  
OTHER:

Jul 12, 2019

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