

RADIO FIX AND HOLDING DATA RECORD

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

LATITUDE/LONGITUDE: 465136.78N/0920437.89W TYPE: WP

AIRSPACE DOCKET: FIX TYPE OF ACTION: MODIFY

FIX RESTRICTIONS:
SPECIAL COPTER RNAV (GPS) 193, KMN33, DULUTH, MN

HOLDING: HOLDING TYPE OF ACTION: NO CHANGE

REMARKS:
5/17/17 THIS IS A CORRECTED COPY OF THE FORM APPROVED ON 3/28/17.
UPDATED DATE OF REVISION FROM 10/15/15 TO 6/22/17.

FIX USE:	USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
	SPECIAL IAP	COPTER RNAV (GPS) 193			KMN33	DULUTH	MN (US)

REQUIRED CHARTING: SPECIAL IAP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 2 **DATE OF REVISION:** 06/22/2017

REASON FOR REVISION:
UPDATED FIX USE.
DELETED FAC 1.
DELETED RESTRICTED-ST MARY'S HOSPITAL FROM REMARKS, ADDED SPECIAL COPTER RNAV GPS) 193, KMN33, DULUTH, MN TO FIX RESTRICTIONS.
ADDED SPECIAL IAP TO REQUIRED CHARTING.

DEVELOPED BY: **DATE:** 04/30/2015 **OFFICE:** AJV-5413 **NAME:** JERRY MCCULLOUGH

APPROVED BY: **DATE:** *Digitally signed by* **OFFICE:** AJV-5410 **NAME:** GEORGE DAVIS
SIGNATURE: **ALLAN WILL**
May 17, 2017

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

QUALITY
4
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	AIRSPEED	OBSTRUCTION	COORDINATES	ELEVATION	ACCURACY CODE
UPN	230	TOWER (27-000141)	464708.00N/0920712.00W	2049	5D

HOLDING RESTRICTIONS:

UNPLANNED HOLDING AUTHORIZED AT OR ABOVE 3100.

REMARKS:

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

5/17/17 THIS IS A CORRECTED COPY OF THE FORM APPROVED ON 3/28/17.
 UPDATED DATE OF REVISION FROM 10/15/15 TO 6/22/17.

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
DP	MEADOW LAKE ONE			KMSP	MINNEAPOLIS	MN (US)
DP	MINNEAPOLIS FIVE			KMSP	MINNEAPOLIS	MN (US)
EN ROUTE	J140					(US)
EN ROUTE	J21					(US)
EN ROUTE	J32					(US)
EN ROUTE	J38					(US)
EN ROUTE	J533					(US)
EN ROUTE	J538					(US)
EN ROUTE	J89					(US)
EN ROUTE	V129-191-217					(US)
EN ROUTE	V13					(US)
EN ROUTE	V13-505					(US)
EN ROUTE	V177					(US)
EN ROUTE	V191-430					(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	COPTER ILS OR LOC RWY 27			KDLH	DULUTH	MN (US)
IAP	ILS OR LOC RWY 27			KDLH	DULUTH	MN (US)
IAP	ILS OR LOC RWY 9			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	COPTER RNAV (GPS) 093			KMN33	DULUTH	MN (US)
IAP	NDB RWY 25			KBFW	SILVER BAY	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)
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, CONTROLLER, EN ROUTE LOW, EN ROUTE HIGH, SPECIAL IAP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 17 DATE OF REVISION: 06/22/2017

REASON FOR REVISION:

ADDED SPECIAL IAP TO REQUIRED CHARTING
 UPDATE FIX USE.

DEVELOPED BY: DATE: 04/30/2015 OFFICE: AJV-5413 NAME: JERRY MCCULLOUGH



APPROVED BY: DATE: *Digitally signed by* OFFICE: AJV-5410 NAME: GEORGE DAVIS
SIGNATURE: **ALLAN WILL**
May 17, 2017

DISTRIBUTION: NFDC
FPO: CEN
ARTCC: ZMP
ATC FACILITY: DLH APP CON
OTHER:

QUALITY
4
CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: DUKTE

STATE: MN

COUNTRY: US

ICAO REGION CODE: K3

LATITUDE/LONGITUDE: 464828.26N/0920536.31W

TYPE: WP

AIRSPACE DOCKET:

FIX TYPE OF ACTION: MODIFY

FIX RESTRICTIONS:

SPECIAL COPTER RNAV (GPS) 193, KMN33, DULUTH, MN
SPECIAL EHOSI ONE, KMN33, DULUTH, MN

HOLDING:

HOLDING TYPE OF ACTION: NO CHANGE

REMARKS:

5/17/17 THIS IS A CORRECTED COPY OF THE FORM APPROVED ON 3/28/17.
UPDATED DATE OF REVISION FROM 10/15/15 TO 6/22/17.

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
SPECIAL DP	EHOSI ONE			KMN33	DULUTH	MN (US)
SPECIAL IAP	COPTER RNAV (GPS) 193			KMN33	DULUTH	MN (US)

REQUIRED CHARTING: SPECIAL IAP, SPECIAL DP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 2

DATE OF REVISION: 06/22/2017

REASON FOR REVISION:

DELETED FAC 1.
UPDATED FIX USE.
DELETED RESTRICTED-ST MARY'S HOSPITAL FROM REMARKS, ADDED SPECIAL COPTER RNAV (GPS) 193, KMN33, DULUTH, MN TO FIX RESTRICTIONS.
ADDED SPECIAL IAP TO REQUIRED CHARTING.

DEVELOPED BY:

DATE: 04/30/2015

OFFICE: AJV-5413

NAME: JERRY MCCULLOUGH

APPROVED BY:

DATE:

Digitally signed by

OFFICE: AJV-5410

NAME: GEORGE DAVIS

SIGNATURE: **ALLAN WILL**

May 17, 2017

DISTRIBUTION:

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

QUALITY
4
CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: EHOSI STATE: MN COUNTRY: US ICAO REGION CODE: K3
 LATITUDE/LONGITUDE: 465432.76N/0920343.25W TYPE: WP
 AIRSPACE DOCKET: FIX TYPE OF ACTION: MODIFY

FIX RESTRICTIONS:
 SPECIAL COPTER RNAV (GPS) 193 (SPECIAL), KMN33, DULUTH, MN
 SPECIAL EHOSI ONE, KMN33, DULUTH, MN

HOLDING: HOLDING TYPE OF ACTION: NO CHANGE

PATTERNS:		IDENT	TYPE	RAD/CRS/BRG	CRS INBOUND	TURN (L OR R)	LEG LENGTH TIME DME	HOLDING ALTITUDES		TEMPLATES	
PAT	DIR							MIN	MAX	MIN	MAX
1	N		WP	013.02	193.02	R	4	3100	6000	4	4

CONTROLLING OBSTRUCTIONS:			COORDINATES	ELEVATION	ACCURACY CODE
PAT	AIRSPEED	OBSTRUCTION			
1	100	200' AAO	470333.00N/0920324.00W	1788	4E

HOLDING RESTRICTIONS:
 HOLDING LIMITED TO ESTABLISHED PATTERN.

REMARKS:
 5/17/17 THIS IS A CORRECTED COPY OF THE FORM APPROVED ON 3/28/17.
 UPDATED DATE OF REVISION FROM 10/15/15 TO 6/22/17.

FIX USE:	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
USE TYPE	EHOSI ONE			KMN33	DULUTH	MN (US)
SPECIAL DP	COPTER RNAV (GPS) 193			KMN33	DULUTH	MN (US)
SPECIAL IAP	(SPECIAL)					

REQUIRED CHARTING: SPECIAL IAP, SPECIAL DP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 2 **DATE OF REVISION:** 06/22/2017

REASON FOR REVISION:
 DELETED FAC 1.
 UPDATED FIX USE.
 DELETED RESTRICTED-ST MARY'S HOSPITAL FROM REMARKS, ADDED SPECIAL COPTER RNAV (GPS) 193 (SPECIAL), KMN33, DULUTH, MN TO FIX RESTRICTIONS.
 MOVED HOLDING LIMITED TO ESTABLISHED PATTERN FROM REMARKS TO FIX RESTRICTIONS.
 ADDED SPECIAL IAP TO REQUIRED CHARTING.
 UPDATED HOLDING RAD/CRS/BRG FROM 010.02 TO 013.02 AND CRS INBOUND FROM 190.02 TO 193.02 DUE TO MAG VAR UPDATE FROM 2E TO 1W

DEVELOPED BY: DATE: 04/30/2015 OFFICE: AJV-5413 NAME: JERRY MCCULLOUGH

APPROVED BY: DATE: Digitally signed by OFFICE: AJV-5410 NAME: GEORGE DAVIS

SIGNATURE: **ALLAN WILL**

May 17, 2017

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

QUALITY
4
CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: FEMUG

STATE: MN

COUNTRY: US

ICAO REGION CODE: K3

LATITUDE/LONGITUDE: 464926.92N/09205 18.14W

TYPE: WP

AIRSPACE DOCKET:

FIX TYPE OF ACTION: MODIFY

FIX RESTRICTIONS:

SPECIAL COPTER RNAV (GPS) 193, KMN33, DULUTH, MN

HOLDING:

HOLDING TYPE OF ACTION: NO CHANGE

REMARKS:

5/17/17 THIS IS A CORRECTED COPY OF THE FORM APPROVED ON 3/28/17.
UPDATED DATE OF REVISION FROM 10/15/15 TO 6/22/17.

FIX USE:

USE TYPE
SPECIAL IAP

USE TITLE
COPTER RNAV (GPS) 193

FAC

PAT

AIRPORT IDENT
KMN33

CITY
DULUTH

STATE
MN (US)

REQUIRED CHARTING: SPECIAL IAP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 1

DATE OF REVISION: 06/22/2017

REASON FOR REVISION:

DELETED FAC 1.

UPDATED FIX USE.

DELETED RESTRICTED-ST MARY'S HOSPITAL FROM REMARKS, ADDED SPECIAL COPTER RNAV (GPS) 193, KMN33, DULUTH, MN TO FIX RESTRICTIONS.

ADDED SPECIAL IAP TO REQUIRED CHARTING.

DEVELOPED BY:

DATE: 04/30/2015

OFFICE: AJV-5413

NAME: JERRY MCCULLOUGH

APPROVED BY:

DATE:

Digitally signed by OFFICE: AJV-5410

NAME: GEORGE DAVIS

SIGNATURE: **ALLAN WILL**

May 17, 2017

DISTRIBUTION:

NFDC

FPO: CEN

ARTCC: ZMP

ATC FACILITY: DLH

OTHER:

QUALITY
4
CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: LAZNU STATE: MN COUNTRY: US ICAO REGION CODE: K3
 LATITUDE/LONGITUDE: 464644.45N/0920042.34W 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	DULUTH	DLH	VORTAC	H	094.93	099.93	8.00	8.00		3000	6000

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		WP	097.93	277.93	R	4	3100 6000	4 4

CONTROLLING OBSTRUCTIONS:

PAT	AIRSPEED	OBSTRUCTION	COORDINATES	ELEVATION	ACCURACY CODE
1	100	TOWER (27-000624)	464721.08N/0920651.38W	2049	5D

HOLDING RESTRICTIONS:

HOLDING LIMITED TO ESTABLISHED PATTERN.

REMARKS:

5/17/17 THIS IS A CORRECTED COPY OF THE FORM APPROVED ON 3/28/17.
 UPDATED DATE OF REVISION FROM 10/15/15 TO 6/22/17.

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
EN ROUTE	V191-430					(US)
SPECIAL IAP	COPTER RNAV (GPS) 193			KMN33	DULUTH	MN (US)
SPECIAL IAP	COPTER RNAV (GPS) 333			KMN33	DULUTH	MN (US)

REQUIRED CHARTING: CONTROLLER, EN ROUTE LOW, SPECIAL IAP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 2 DATE OF REVISION: 06/22/2017

REASON FOR REVISION:

FAC 1, ADDED DISTANCE FROM FAC 8.00 NM
 DELETED FAC 2 NAME.
 UPDATED HOLING PATTERN HEADING FROM 274.93/094.93 TO 277.93/097.93.
 INCREASED MINIMUM HOLDING ALTITUDE FROM 3000 TO 3100.
 UPDATED HOLDING OBSTACLE ID FROM 24-0624 TO 27-000624.
 MOVED HOLDING LIMITED TO ESTABLISHED PATTERN FROM REMARKS TO HOLDING RESTRICTIONS.
 ADDED SPECIAL IAP TO REQUIRED CHARTING.
 UPDATED FIX USE.

DEVELOPED BY: DATE: 05/04/2015 OFFICE: AJV-5413 NAME: JERRY MCCULLOUGH

APPROVED BY: DATE: Digitally signed by OFFICE: AJV-5410 NAME: GEORGE DAVIS

SIGNATURE: ALLAN WILL

May 17, 2017

DISTRIBUTION:

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

QUALITY
4
CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: VURLY

STATE: MN

COUNTRY: US

ICAO REGION CODE: K3

LATITUDE/LONGITUDE: 465521.98N/0915900.47W

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	DULUTH	DLH	VORTAC	H	046.21	051.21	11.58	11.58		4000	17500

HOLDING:

HOLDING TYPE OF ACTION: NO CHANGE

REMARKS:

ZMP REQUESTS SPECIAL IAP AND ENROUTE HIGH CHARTING.

5/17/17 THIS IS A CORRECTED COPY OF THE FORM APPROVED ON 3/28/17.
UPDATED DATE OF REVISION FROM 10/15/15 TO 6/22/17.

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
EN ROUTE	V13	1		KMN33	DULUTH	(US)
SPECIAL IAP	COPTER RNAV (GPS) 193					MN (US)

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

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 3

DATE OF REVISION: 06/22/2017

REASON FOR REVISION:

ADDED SPECIAL IAP COPTER RNAV (GPS) 193 KMN33 DULUTH MN (US) TO FIX USE.

DEVELOPED BY:

DATE: 05/04/2015

OFFICE: AJV-5413

NAME: JERRY MCCULLOUGH

APPROVED BY:

DATE:

OFFICE: AJV-5410

NAME: GEORGE DAVIS

Digitally signed by

SIGNATURE: **ALLAN WILL**

May 17, 2017

DISTRIBUTION:

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

QUALITY
4
CHECKED