

RADIO FIX AND HOLDING DATA RECORD

NAME: GARDNER VOR/DME

STATE: MA

COUNTRY: US

ICAO REGION CODE: K6

LATITUDE/LONGITUDE: 423245.32N/0720329.48W

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	GARDNER	GDM	VOR/DME	L							17500

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	NW	GDM	VOR/DME	298.00	118.00	L	1		4000	17500	4	16
2	W	GDM	VOR/DME	276.81	096.81	R	1		3000	6000	4	5
3	NW	GDM	VOR/DME	293.78	113.78	L	1		7000	29000	8	22
4	SW	WP	WP	202.91	022.91	R		4	3000	6000	5	6

CONTROLLING OBSTRUCTIONS:

PAT	AIRSPEED	OBSTRUCTION	COORDINATES	ELEVATION	ACCURACY CODE
1	200	AAO	423333.00N/0720909.00W	1595	4E
2	200	AAO	423333.00N/0720909.00W	1595	4E
2	310	AAO	422921.00N/0715312.00W	2215	4E
3	230	AAO	423333.00N/0720909.00W	1595	4E
4	200	AAO	423057.00N/0720248.00W	1569	4E

REASON FOR NONSTANDARD HOLDING:

PAT 3 ATC REQUEST
PAT 1 ATC REQUEST

HOLDING RESTRICTIONS:

HOLDING LIMITED TO ESTABLISHED PATTERNS.

PROCEDURES REQUIRING CLIMB-IN-HOLD:

PAT	PROCEDURE TITLE	AIRPORT IDENT	CITY	STATE
2	VOR-A	KGDM	GARDNER	MA (US)

REMARKS:

PRECIPITOUS TERRAIN EVALUATION COMPLETED.
CHART PAT 3 ENROUTE HIGH PER ATC REQUEST.
MAGVAR 14W/1970.

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
DP	BRADLEY			KBDL	WINDSOR LOCKS	CT (US)
DP	TAKEOFF MINIMUMS			KORE	ORANGE	MA (US)
DP	TAKEOFF MINIMUMS			KPSF	PITTSFIELD	MA (US)
DP	TAKEOFF MINIMUMS			KAFN	JAFFREY	NH (US)
DP	MANCHESTER			KMHT	MANCHESTER	NH (US)
DP	PEASE			KPSM	PORTSMOUTH	NH (US)
DP	TANKER			KPSM	PORTSMOUTH	NH (US)
DP	ALBANY			KALB	ALBANY	NY (US)
EN ROUTE	Q935					(US)
EN ROUTE	V106					(US)
EN ROUTE	V14		1			(US)
EN ROUTE	V151					(US)
EN ROUTE	V2		1			(US)
EN ROUTE	V229					(US)
EN ROUTE	V39					(US)
EN ROUTE	V431					(US)
IAP	ILS OR LOC RWY 29			KBED	BEDFORD	MA (US)
IAP	ILS OR LOC RWY 27			KBOS	BOSTON	MA (US)
IAP	ILS OR LOC/DME RWY 15R			KBOS	BOSTON	MA (US)
IAP	RNAV (GPS) RWY 15R			KBOS	BOSTON	MA (US)
IAP	NDB-A			KFIT	FITCHBURG	MA (US)
IAP	RNAV (GPS) RWY 14			KFIT	FITCHBURG	MA (US)
IAP	RNAV (GPS) RWY 20			KFIT	FITCHBURG	MA (US)
IAP	VOR-A		2	KGDM	GARDNER	MA (US)
IAP	VOR-A			K0B5	MONTAGUE	MA (US)
IAP	LOC RWY 35			KOWD	NORWOOD	MA (US)
IAP	VOR-A			KORE	ORANGE	MA (US)
IAP	VOR/DME-B			K3B0	SOUTHBRIDGE	MA (US)
IAP	RNAV (GPS) RWY 21			K6B6	STOW	MA (US)
IAP	VOR/DME RWY 21			K6B6	STOW	MA (US)
IAP	ILS OR LOC RWY 20			KBAF	WESTFIELD/SPRINGFIELD	MA (US)
IAP	ILS OR LOC RWY 11			KORH	WORCESTER	MA (US)
IAP	ILS OR LOC RWY 29			KORH	WORCESTER	MA (US)
IAP	ILS RWY 11 (CAT II & III)			KORH	WORCESTER	MA (US)

IAP	RNAV (GPS) RWY 33		KORH	WORCESTER	MA (US)
IAP	VOR/DME RWY 33		KORH	WORCESTER	MA (US)
IAP	RNAV (GPS)- B	4	KAFN	JAFFREY	NH (US)
IAP	VOR-A		KAFN	JAFFREY	NH (US)
IAP	ILS OR LOC RWY 2		KEEN	KEENE	NH (US)
IAP	RNAV (GPS) RWY 2		KEEN	KEENE	NH (US)
IAP	VOR RWY 2		KEEN	KEENE	NH (US)
IAP	ILS OR LOC RWY 6		KMHT	MANCHESTER	NH (US)
IAP	RNAV (GPS) RWY 32		KASH	NASHUA	NH (US)
STAR	GRAYM		KBED	BEDFORD	MA (US)
STAR	GRAYM		KBVY	BEVERLY	MA (US)
STAR	GARDNER	3	KBOS	BOSTON	MA (US)
STAR	GRAYM		KFIT	FITCHBURG	MA (US)
STAR	GRAYM		KLWM	LAWRENCE	MA (US)
STAR	POPPP		KMHT	MANCHESTER	NH (US)

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

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 27

DATE OF REVISION: 12/07/2017

REASON FOR REVISION:

HOLDING: UPDATED PAT 1 AND PAT 2 LEG LENGTH TIME FROM 1-1 1/2 TO 1.

REMARKS: UPDATED "CHART PAT 4 ENROUTE HIGH PER ATC REQUEST" TO "CHART PAT 3 ENROUTE HIGH PER ATC REQUEST."

FIX USE: ADDED KORH - ILS RWY 11 (CAT II & III).

DEVELOPED BY: **DATE:** 08/03/2017 **OFFICE:** AJV-5433 **NAME:** BEV L BORDY (JACOB MAXFIELD)

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

SIGNATURE: *Digitally signed by*
BEV L BORDY

DISTRIBUTION: NFDC Sep 13, 2017
FPO: EST
ARTCC: ZBW
ATC FACILITY: BOS APP CON
OTHER:

QUALITY
4
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RADIO FIX AND HOLDING DATA RECORD

NAME: LAWNRN **STATE:** MA **COUNTRY:** US **ICAO REGION CODE:** K6

LATITUDE/LONGITUDE: 421211.70N/0714934.07W **TYPE:** 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	GARDNER	GDM	VOR/DME	L	167.26	153.26	23.00	23.00		2500	17500

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	GDM	VORTAC	167.26	347.26	L	1		2700	4000	5	5

CONTROLLING OBSTRUCTIONS:

PAT	AIRSPEED	OBSTRUCTION	COORDINATES	ELEVATION	ACCURACY CODE
1	200	TOWER (25-000622)	420313.00N/0714904.00W	1548	5D
1	310	ANTENNA (25-030076)	421833.99N/0715411.29W	1681	1A

REASON FOR NONSTANDARD HOLDING:

PAT 1 ATC REQUEST

HOLDING RESTRICTIONS:

HOLDING LIMITED TO ESTABLISHED PATTERN

PROCEDURES REQUIRING CLIMB-IN-HOLD:

PAT	PROCEDURE TITLE	AIRPORT IDENT	CITY	STATE
1	ILS OR LOC RWY 11	KORH	WORCESTER	MA (US)
1	ILS RWY 11 (CAT II & III)	KORH	WORCESTER	MA (US)

REMARKS:

GARDNER (FAC 1) USED TO ESTABLISH FIX COORDINATES
PRECIPITOUS TERRAIN EVALUATION COMPLETED

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
IAP	ILS OR LOC RWY 11	1	1	KORH	WORCESTER	MA (US)
IAP	ILS RWY 11 (CAT II & III)	1	1	KORH	WORCESTER	MA (US)
IAP	VOR/DME RWY 33	1	1	KORH	WORCESTER	MA (US)

REQUIRED CHARTING: IAP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 6 **DATE OF REVISION:** 12/07/2017

REASON FOR REVISION:

CONT OBST: UPDATED PAT 1 310KIAS OBST NAME AND ID FROM COMMUNICATION TWR (KORHT1745) TO ANTENNA (25-030076).
FIX USE: ADDED KORH - ILS RWY 11 (CAT II & III).

DEVELOPED BY: **DATE:** 07/24/2017 **OFFICE:** AJV-5433 **NAME:** BEV L BORDY (JACOB MAXFIELD)

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

SIGNATURE: *Digitally signed by*

BEV L BORDY

DISTRIBUTION: **NFDC** Sep 13, 2017

FPO: EST
ARTCC: ZBW
ATC FACILITY: BDL
OTHER: ORH TOWER

QUALITY
4
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RADIO FIX AND HOLDING DATA RECORD

NAME: RILOC STATE: MA COUNTRY: US ICAO REGION CODE: K6
 LATITUDE/LONGITUDE: 421624.42N/0720053.75W TYPE: WP, 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	FAC FEET	MRA	MAA
1	WORCESTER	I-RSR	LOC/DME		288.84	273.84	5.44	6.76	41096	2800	5400
2	GARDNER	GDM	VOR/DME	L	187.28	173.28		16.46		2800	5400

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		WP	288.76	108.76	L		4	3000	6000	5	6
2	W	I-RSR	LOC/DME	288.84	108.84	L	1		2800	6000	5	6

CONTROLLING OBSTRUCTIONS:

PAT	AIRSPED	OBSTRUCTION	COORDINATES	ELEVATION	ACCURACY CODE
1	200	AAO	421903.00N/0715527.00W	1405	4E
2	200	AAO	421859.62N/0715527.01W	1420	2C

REASON FOR NONSTANDARD HOLDING:

PAT 1 ATC REQUEST
 PAT 2 ATC REQUEST

HOLDING RESTRICTIONS:

HOLDING LIMITED TO ESTABLISHED PATTERNS

REMARKS:

WORCESTER (FAC 1) USED TO ESTABLISH FIX COORDINATES
 PRECIPITOUS TERRAIN EVALUATION COMPLETED
 I-RSR DME COORDINATES: 421605.50N/0715334.53W

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
IAP	ILS OR LOC RWY 11	1, 2	2	KORH	WORCESTER	MA (US)
IAP	ILS RWY 11 (CAT II & III)	1, 2		KORH	WORCESTER	MA (US)
IAP	RNAV (GPS) RWY 11			KORH	WORCESTER	MA (US)
IAP	RNAV(GPS) RWY 29		1	KORH	WORCESTER	MA (US)

REQUIRED CHARTING: IAP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 3 DATE OF REVISION: 12/07/2017

REASON FOR REVISION:

CONTROLLING OBST: UPDATED PAT 2 200 KIAS OBST FROM AAO 1405 (4E) TO AAO 1420 (2C).
 REMARKS: DELETED "8260.54A L-V RNP PFAF FORMULA APPLIED."
 FIX USE: ADDED KORH - ILS RWY 11 (CAT II & III).

DEVELOPED BY: DATE: 08/03/2017 OFFICE: AJV-5433 NAME: BEV L BORDY (JACOB MAXFIELD)

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

SIGNATURE: *Digitally signed by*
BEV L BORDY

DISTRIBUTION: NFDC Sep 13, 2017
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 ARTCC: ZBW
 ATC FACILITY: BDL
 OTHER: ORH TOWER

QUALITY
4
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RADIO FIX AND HOLDING DATA RECORD

NAME: SPENO **STATE:** MA **COUNTRY:** US **ICAO REGION CODE:** K6

LATITUDE/LONGITUDE: 421648.55N/0720914.70W **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	MRA	MAA
1	WORCESTER	I-RSR	LOC/DME		288.84	273.84	11.65	12.97	3000	5400
2	GARDNER	GDM	VOR/DME	L	209.00	195.00	16.50	16.50	3000	17500
3	CHESTER	CTR	VOR/DME	L	103.81	090.81	35.43	35.43	4000	45000

EXPANDED SERVICE VOLUME (ESV):

FAC IDENT	FAC TYPE	RADIAL/BEARING	DISTANCE	MIN ALTITUDE	MAX ALTITUDE
CTR	VOR/DME	R-104	36	18000	45000

HOLDING: **HOLDING TYPE OF ACTION:** NO CHANGE

REMARKS:

WORCESTER (FAC 1) AND GARDNER (FAC 2) USED TO ESTABLISH FIX COORDINATES
 DEPICT FAC 3 (CTR) ON HIGH ENROUTE CHARTS PER ATC REQUEST FOR VECTORING AND AUTOMATION REQUIREMENTS.
 I-RSR DME COODINATES: 421605.50N/0715334.53W

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
DP	BLZZR (RNAV)			KBOS	BOSTON	MA (US)
DP	REVSS (RNAV)			KBOS	BOSTON	MA (US)
DP	WYLYY (RNAV)			KBOS	BOSTON	MA (US)
EN ROUTE	V229	2, 3				(US)
EN ROUTE	V270	2, 3				(US)
IAP	RNAV (GPS) RWY 32			KORE	ORANGE	MA (US)
IAP	ILS OR LOC RWY 11	1, 2		KORH	WORCESTER	MA (US)
IAP	ILS RWY 11 (CAT II & III)	1, 2		KORH	WORCESTER	MA (US)
IAP	RNAV (GPS) RWY 11			KORH	WORCESTER	MA (US)

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

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 17 **DATE OF REVISION:** 12/07/2017

REASON FOR REVISION:

FIX MAKE-UP: UPDATED FAC 1 TYPE FROM LOC TO LOC/DME AND UPDATED FAC 1 DIST FROM FAC NM FROM 12.95 TO 12.97.
 FIX USE: ADDED KORH - ILS RWY 11 (CAT II & III).

DEVELOPED BY: **DATE:** 08/01/2017 **OFFICE:** AJV-5433 **NAME:** BEV L BORDY (JACOB MAXFIELD)

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

SIGNATURE: *Digitally signed by*
BEV L BORDY

DISTRIBUTION: **NFDC** Sep 13, 2017
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ATC FACILITY: BOS APP CON
OTHER:



RADIO FIX AND HOLDING DATA RECORD

NAME: TROY Y STATE: MA COUNTRY: US ICAO REGION CODE: K6
 LATITUDE/LONGITUDE: 420449.55N/0714742.34W 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	MRA	MAA
1	PUTNAM	PUT	VOR/DME	H	030.28	016.28	7.81	7.81	3000	17500
2	PROVIDENCE	PVD	VOR/DME	H	336.64	322.64		26.91	3000	17500

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	NE	PUT	VOR/DME	030.28	210.28	L	1	3000 6000	5 6

CONTROLLING OBSTRUCTIONS:

PAT	AIRSPEED	OBSTRUCTION	COORDINATES	ELEVATION	ACCURACY CODE
1	200	TOWER (25-000622)	420313.00N/0714904.00W	1548	5D

REASON FOR NONSTANDARD HOLDING:

PAT 1 PER ATC REQUEST

HOLDING RESTRICTIONS:

HOLDING LIMITED TO ESTABLISHED PATTERN

REMARKS:

PUTNAM (FAC 1) AND PROVIDENCE (FAC 2) USED TO ESTABLISH FIX COORDINATES
 PRECIPITOUS TERRAIN EVALUATION COMPLETED

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
IAP	ILS OR LOC RWY 11	1, 2	1	KORH	WORCESTER	MA (US)
IAP	ILS RWY 11 (CAT II & III)	1, 2	1	KORH	WORCESTER	MA (US)
IAP	RNAV (GPS) RWY 33			KORH	WORCESTER	MA (US)

REQUIRED CHARTING: IAP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 4 DATE OF REVISION: 12/07/2017

REASON FOR REVISION:

FIX MAKE-UP: UPDATED FAC 2 DIST FROM FAC NM FROM 26.90 TO 26.91.
 FIX USE: ADDED KORH - ILS RWY 11 (CAT II & III).

DEVELOPED BY: DATE: 08/01/2017 OFFICE: AJV-5433 NAME: BEV L BORDY (JACOB MAXFIELD)

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

SIGNATURE: *Digitally signed by*
BEV L BORDY

DISTRIBUTION: NFDC
 FPO: EST
 ARTCC: ZBW
 ATC FACILITY: BDL ATCT, ORH ATCT
 OTHER:
 Sep 13, 2017

QUALITY
4
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