# RADIO FIX AND HOLDING DATA RECORD

**NAME:** BOZEMAN VOR/DME **STATE:** MT **COUNTRY:** US **ICAO REGION CODE:** K1

**LATITUDE/LONGITUDE:** 454702.04N/1110919.64W **TYPE:**

**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 | DIST FROM FAC FEET | MRA | MAA |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | BOZEMAN | BZN | VOR/DME | VH | | | | | | | 45000 |

**FIX RESTRICTIONS:**
MCA V365 10200 SOUTHEAST BOUND
MCA V86 10200 SOUTHEAST BOUND
MCA V343 10500 SOUTHBOUND
MCA V536 9300 SOUTHEAST BOUND

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

**PATTERNS:**

| PAT | DIR | IDENT | TYPE | RAD/CRS/BRG | CRS INBOUND | TURN (L OR R) | LEG LENGTH TIME | LEG LENGTH DME | HOLDING ALTITUDES MIN | HOLDING ALTITUDES MAX | TEMPLATES MIN | TEMPLATES MAX |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | W | BZN | VOR/DME | 283.88 | 103.88 | R | 1 | | 8000 | 17500 | 8 | 16 |

**CONTROLLING OBSTRUCTIONS:**

| PAT | AIRSPEED | OBSTRUCTION | COORDINATES | ELEVATION | ACCURACY CODE |
|---|---|---|---|---|---|
| 1 | 230 | AAO | 454724.00N/1105857.00W | 7874 | 4E |

**HOLDING RESTRICTIONS:**
HOLDING LIMITED TO ESTABLISHED PATTERN

**REMARKS:**
PRECIPITOUS TERRAIN EVALUATION COMPLETED.
HOLDING PATTERN PER ATC REQUEST.
CONTROLLING OBSTACLE IN SECONDARY AREA, PRIMARY EQ ELEVATION 6890.
ASSIGNED FACILITY MAGVAR 18 DEGREES EAST.

**FIX USE:**

| USE TYPE | USE TITLE | FAC | PAT | AIRPORT IDENT | CITY | STATE |
|---|---|---|---|---|---|---|
| DP | BILLINGS | | | BIL | BILLINGS | MT (US) |
| DP | WHITEHALL | | | BZN | BOZEMAN | MT (US) |
| DP | STAKK | | | HLN | HELENA | MT (US) |
| DP | BILLINGS | | | 6S8 | LAUREL | MT (US) |
| DP | LIVINGSTON | | | LVM | LIVINGSTON | MT (US) |
| EN ROUTE | V343 | | | | | (US) |
| EN ROUTE | V365 | | | | | (US) |
| EN ROUTE | V536 | | | | | (US) |
| EN ROUTE | V86 | | | | | (US) |
| IAP | ILS Y OR LOC Y RWY 12 | | | BZN | BOZEMAN | MT (US) |
| IAP | ILS Z OR LOC Z RWY 12 | | | BZN | BOZEMAN | MT (US) |
| IAP | RNAV (GPS) - A | | | BZN | BOZEMAN | MT (US) |
| IAP | VOR RWY 12 | | | BZN | BOZEMAN | MT (US) |

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

**COMPULSORY REPORTING POINT:** LOW

**RECORD REVISION NUMBER:** 20 **DATE OF REVISION:** 12/24/2026

**REASON FOR REVISION:**
1. FIX RESTRICTIONS: ADDED MCA V536 9300 SOUTHEAST BOUND.
2. REMARKS: ADDED ASSIGNED FACILITY MAGVAR 18 DEGREES EAST.
3. FIX USE: CHANGED BZN TAKE-OFF MINIMUMS TO WHITEHALL.
4. FIX USE: REMOVED BOZEMAN DP.

**INITIATED BY:** **DATE:** **ORGANIZATION:** **NAME:**

**OFFICE OF PRIMARY RESPONSIBILITY:** AJV-A432 **NAME:** JOHN KEEFER

**APPROVED BY:** **DATE:** 11/19/2026 **OFFICE:** AJV-A430 **NAME:** APRIL SARMENTO

**SIGNATURE:**

# RADIO FIX AND HOLDING DATA RECORD

**NAME:** BRIGR **STATE:** MT **COUNTRY:** US **ICAO REGION CODE:** K1

**LATITUDE/LONGITUDE:** 453944.28N/1112802.00W **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 | DIST FROM FAC FEET | MRA | MAA |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | BOZEMAN | BZN | VOR/DME | VH | 223.00 | 241.00 | 15.00 | 15.00 | | 7700 | 17500 |
| 2 | WHITEHALL | HIA | VOR/DME | VH | 093.83 | 111.83 | | 31.84 | | 7700 | 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 | LEG LENGTH DME | HOLDING ALTITUDES MIN | HOLDING ALTITUDES MAX | TEMPLATES MIN | TEMPLATES MAX |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | W | HIA | VOR/DME | 273.83 | 093.83 | L | 1 | | 8000 | 17500 | 10 | 17 |
| 2 | W | HIA | VOR/DME | 273.83 | 093.83 | L | 1 | | 9000 | 17500 | 11 | 17 |

**CONTROLLING OBSTRUCTIONS:**

| PAT | AIRSPEED | OBSTRUCTION | COORDINATES | ELEVATION | ACCURACY CODE |
|---|---|---|---|---|---|
| 1 | 230 | AAO | 453418.00N/1112427.00W | 6339 | 4E |
| 2 | 230 | AAO | 453336.00N/1112818.00W | 6785 | 4B |
| 2 | 310 | AAO | 454112.00N/1115818.00W | 8534 | 4B |

**PRECIPITOUS TERRAIN ADDITIONS:**

| PAT | SPEED | ADDITION |
|---|---|---|
| 2 | 230 | 180 |
| 2 | 310 | 300 |

**REASON FOR NONSTANDARD HOLDING:**
PAT 1 -LEFT FOR TERRAIN AVOIDANCE.
PAT 2 -LEFT FOR TERRAIN AVOIDANCE.

**HOLDING RESTRICTIONS:**
HOLDING LIMITED TO ESTABLISHED PATTERNS.
230 KTS PRECIPITOUS TERRAIN ADJ 180
310 KTS PRECIPITOUS TERRAIN ADJ 300S

**PROCEDURES REQUIRING CLIMB-IN-HOLD:**

| PAT | PROCEDURE TITLE | AIRPORT IDENT | CITY | STATE |
|---|---|---|---|---|
| 1 | ILS Y OR LOC Y RWY 12 | BZN | BOZEMAN | MT (US) |
| 2 | ILS Z OR LOC Z RWY 12 | BZN | BOZEMAN | MT (US) |

**REMARKS:**
PRECIPITOUS TERRAIN EVALUATION COMPLETED
BOZEMAN (FAC 1) AND WHITEHALL (FAC 2) USED TO ESTABLISH FIX COORDINATES

**FIX USE:**

| USE TYPE | USE TITLE | FAC | PAT | AIRPORT IDENT | CITY | STATE |
|---|---|---|---|---|---|---|
| DP | WHITEHALL | 1, 2 | | BZN | BOZEMAN | MT (US) |
| IAP | ILS Y OR LOC Y RWY 12 | 1, 2 | 1 | BZN | BOZEMAN | MT (US) |
| IAP | ILS Z OR LOC Z RWY 12 | 1 | 2 | BZN | BOZEMAN | MT (US) |
| IAP | VOR RWY 12 | 1, 2 | 1 | BZN | BOZEMAN | MT (US) |

**REQUIRED CHARTING:** DP, IAP

**COMPULSORY REPORTING POINT:** NO

**RECORD REVISION NUMBER:** 3 **DATE OF REVISION:** 12/24/2026

**REASON FOR REVISION:**
FIX USE: REMOVED BOZEMAN DP.

**INITIATED BY:** **DATE:** **ORGANIZATION:** **NAME:**

**OFFICE OF PRIMARY RESPONSIBILITY:** AJV-A432 **NAME:** JOHN BRUNO

**APPROVED BY:** **DATE:** 11/19/2026 **OFFICE:** AJV-A432 **NAME:** APRIL SARMENTO

**SIGNATURE:**

# RADIO FIX AND HOLDING DATA RECORD

**NAME:** WHITEHALL VOR/DME **STATE:** MT **COUNTRY:** US **ICAO REGION CODE:** K1

**LATITUDE/LONGITUDE:** 455142.44N/1121010.59W **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 | DIST FROM FAC FEET | MRA | MAA |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | WHITEHALL | HIA | VOR/DME | VH | | | | | | | 45000 |

**FIX RESTRICTIONS:**
MCA V86 9100 WESTBOUND
MCA V21 9300 NORTHBOUND

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

**PATTERNS:**

| PAT | DIR | IDENT | TYPE | RAD/CRS/BRG | CRS INBOUND | TURN (L OR R) | LEG LENGTH TIME | LEG LENGTH DME | HOLDING ALTITUDES MIN | HOLDING ALTITUDES MAX | TEMPLATES MIN | TEMPLATES MAX |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | E | HIA | VOR/DME | 077.90 | 257.90 | R | 1 | | 9500 | 17500 | 9 | 13 |
| 2 | E | HIA | VOR/DME | 095.10 | 275.10 | R | 1 | | 10500 | 17500 | 9 | 13 |
| 3 | N | | WP | 010.52 | 190.52 | R | | 7 | 10600 | 17500 | 10 | 14 |

**CONTROLLING OBSTRUCTIONS:**

| PAT | AIRSPEED | OBSTRUCTION | COORDINATES | ELEVATION | ACCURACY CODE |
|---|---|---|---|---|---|
| 1 | 230 | AAO | 455812.00N/1120051.00W | 8042 | 4E |
| 2 | 230 | AAO | 454251.00N/1120245.00W | 9452 | 4E |
| 3 | 230 | AAO | 460506.00N/1120345.00W | 8793 | 4E |
| 3 | 310 | AAO | 454436.00N/1122624.00W | 10040 | 4E |

**PRECIPITOUS TERRAIN ADDITIONS:**

| PAT | SPEED | ADDITION |
|---|---|---|
| 3 | 230 | 380 |
| 3 | 310 | 380 |

**HOLDING RESTRICTIONS:**
HOLDING LIMITED TO ESTABLISHED PATTERNS.

**PROCEDURES REQUIRING CLIMB-IN-HOLD:**

| PAT | PROCEDURE TITLE | AIRPORT IDENT | CITY | STATE |
|---|---|---|---|---|
| 3 | BRIDGES (RNAV) | RVF | TWIN BRIDGES | MT (US) |

**REMARKS:**
PRECIPITOUS TERRAIN EVALUATION COMPLETED.
PAT 1 AND 2 USED BY ZLC.
ASSIGNED FACILITY MAGVAR: 18 DEGREES EAST/1975

**FIX USE:**

| USE TYPE | USE TITLE | FAC | PAT | AIRPORT IDENT | CITY | STATE |
|---|---|---|---|---|---|---|
| DP | BILLINGS | | | BIL | BILLINGS | MT (US) |
| DP | BGSKY (RNAV) | | | BZN | BOZEMAN | MT (US) |
| DP | MEADO (RNAV) | | | BZN | BOZEMAN | MT (US) |
| DP | WHITEHALL | | | BZN | BOZEMAN | MT (US) |
| DP | ENNIS (RNAV) | | | EKS | ENNIS | MT (US) |
| DP | BILLINGS | | | 6S8 | LAUREL | MT (US) |
| DP | BRIDGES (RNAV) | | 3 | RVF | TWIN BRIDGES | MT (US) |
| EN ROUTE | J151 | | | | | (US) |
| EN ROUTE | J16 | | | | | (US) |
| EN ROUTE | V21 | | | | | (US) |
| EN ROUTE | V86 | | | | | (US) |
| IAP | RNAV (GPS)-B | | | 3U3 | ANACONDA | MT (US) |
| IAP | VOR-A | | | 3U3 | ANACONDA | MT (US) |
| IAP | ILS Y OR LOC Y RWY 12 | | | BZN | BOZEMAN | MT (US) |
| IAP | ILS Y RWY 12 (SA CAT II) | 1 | | BZN | BOZEMAN | MT (US) |
| IAP | ILS Z OR LOC Z RWY 12 | | | BZN | BOZEMAN | MT (US) |
| IAP | ILS Z RWY 12 (SA CAT II) | 1 | | BZN | BOZEMAN | MT (US) |
| IAP | RNAV (GPS) Y RWY 12 | | | BZN | BOZEMAN | MT (US) |
| IAP | VOR RWY 12 | | | BZN | BOZEMAN | MT (US) |
| IAP | ILS OR LOC RWY 15 | | | BTM | BUTTE | MT (US) |
| IAP | RNAV (GPS) RWY 17 | | 3 | DLN | DILLON | MT (US) |
| IAP | RNAV (GPS) RWY 35 | | 3 | DLN | DILLON | MT (US) |
| IAP | RNAV (GPS) RWY 16 | | | EKS | ENNIS | MT (US) |
| IAP | RNAV (RNP) Y RWY 27 | | | HLN | HELENA | MT (US) |
| IAP | RNAV (RNP) Z RWY 27 | | | HLN | HELENA | MT (US) |
| IAP | RNAV (GPS) RWY 17 | | | RVF | TWIN BRIDGES | MT (US) |

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

**COMPULSORY REPORTING POINT:** NO

**RECORD REVISION NUMBER:** 21 **DATE OF REVISION:** 12/24/2026

**REASON FOR REVISION:**
FIX USE: REMOVED BOZEMAN DP.
FIX USE: ADDED BZN ILS Y RWY 12 (SA CAT II) AND BZN ILS Z RWY 12 (SA CAT II).

| | | | |
|---|---|---|---|
| **INITIATED BY:** | **DATE:** | **ORGANIZATION:** | **NAME:** |
| **OFFICE OF PRIMARY RESPONSIBILITY:** | | AJV-A432 | **NAME:** JOHN BRUNO |
| **APPROVED BY:** | **DATE:** 11/19/2026 | **OFFICE:** AJV-A432 | **NAME:** APRIL SARMENTO |
| | **SIGNATURE:** | | |