

Est. AATD Time – 1.0 Hour

**Objectives**

- Calculate aircraft performance to determine compliance with departure procedure.
- Determine route based on aircraft performance and airspace restrictions.
- Determine alternate requirements.
- Obtain clearance from ATC.
- Fly two instrument approach procedures.
- Perform missed approach.
- Perform standard holds.

**Briefing**

Arrive to briefing with planning completed using weather and information contained in the Pilot Briefing Packet. Assume the aircraft is full fuel and loaded to max gross weight. Everything is operational unless indicated by instructor. The Mission Table can be used as a guide to review regulatory and advisory source material. The briefing will cover your questions that arose during the planning process as well as quizzing by the instructor to ensure a working knowledge of the IFR system.

**LOFT**

Line-Oriented Flight Training (LOFT) is designed to focus on critical thinking and decision making skills rather than procedures. It is assumed that you can meet Instrument-Airplane PTS though the LOFT can be used to address areas of deficiency.

To maximize the training impact approach the simulator as if you were really conducting your planned flight single-pilot IFR. Complete all checklists, procedures and communications as if you are in the airplane. Minor difference will exist between the simulator and airplane (ie alt static source) so verbalize what you are doing when such instances occur. The instructor will act as ATC throughout the flight so treat him/her as such. He/She will provide any assistance you could expect from ATC, provided you ask.

The simulator will not fly exactly like the airplane. The performance characteristics are very close but the controls will seem more sensitive than the airplane. This is normal and you must scan your instruments at a higher rate than normally required to maintain the desired flight attitude. While sometimes frustrating it forces you to increase your instrument scan proficiency so that flying the airplane seems easy in comparison.

Use the automation as appropriate to reduce cockpit workload and increase situational awareness. If you think using the autopilot is cheating – that couldn't be more untrue. The autopilot may someday save your life but you must understand its capabilities and limitations.

**Completion Standards**

- Correctly determines the aircraft can comply with departure procedure performance requirements.
- Completes flight plan with appropriate alternate airport.
- Uses ATC assistance to reduce workload and increase situational awareness.
- Fly two approach procedures to instrument PTS standards.
- Executes missed approach procedures
- Correctly executes standard holding pattern

<b>Activity</b>	<b>Task</b>	<b>Reference</b>	<b>Notes</b>
<b>Flight Planning</b>	Preflight Requirements	FAR 91.103, 91.167, AIM 5-1-1	
	NOTAMs	AIM 5-1-3	
	Aircraft Airworthiness	FAR 91.205	
	VOR/GPS Currency	FAR 91.171	
	Route Selection / Flight Plan	AIM 5-1-4	
	Weather Considerations		
	W&B / Performance	POH	
<b>Departure</b>	Instrument Cockpit Check		
	Takeoff Minimums	AIM 5-2-8	
	Obstacle Departure Procedure	AIM 5-2-8	
	Standard Instrument Dept	AIM 5-2-8	
	Runway Selection		
	Departure Clearances	AIM 5-2-1, 5-2-6	
<b>Enroute</b>	MEA, MOCA, OROCA	AIM 4-4-9	
	GPS Direct	AIM 4-4-9	
	IFR Communications	FAR 91.183, 91.187, AIM 5-3-3	
	Descent Planning		
	Standard Terminal Arrivals	AIM 5-4-1	
<b>Approach</b>	Approach Selection	AIM 5-4-4	
	Transition: Vectors / Feeders	AIM 5-4-5	
	ILS	AIM 1-1-9, 5-4-5	
	Localizer	AIM 1-1-9, 5-4-5	
	GPS: LNAV/VNAV/LPV	AIM 1-1-19, 5-1-16	
	VOR	AIM 1-1-3, 5-4-5	
	NDB	AIM 1-1-2, 5-4-5	
	ASR / PAR	AIM 5-4-3, 5-4-11	
	Visual / Contact	AIM 5-4-23 AIM 5-4-25	
	Circling	AIM 5-4-20	
	Visual Descent Point	AIM 5-4-5	
	Transition to VMC	FAR 91.175	
	Missed Approach	AIM 5-4-21	
<b>Holding</b>	Standard / Non-Standard	AIM 5-3-7	
	Fuel Planning		
	Communication Requirements	AIM 4-4-3	
<b>Emergency</b>	Lost Communications	FAR 91.185	
	Vacuum System	POH	
	Pitot-Static System	POH	
	Electrical	POH	
	Instrument	POH	
	AHRS, ADC, Display	POH	
<b>SRM</b>	Task Management		
	Automation Management		
	Aeronautical Decision Making		
	Situational Awareness		
	Controlled Flight into Terrain		

## Pilot Briefing Packet

**This briefing packet contains a standard DUATS weather briefing for the route/area described for the LOFT. Some information such as NOTAMS are been omitted and can be assumed not applicable for this flight.**

\*\*\*\*\* Departure Closest Terminal Weather \*\*\*\*\*

METAR KBZN 052056Z 25008KT 10SM OVC070 12/01 A2977 RMK AO2 SLP077  
P0001 60001 T01220011 56013

TAF KBZN 051720Z 0518/0618 25010G20KT P6SM VCSH SCT040 BKN070  
TEMPO 0518/0522 P6SM -SHRA SCT040 OVC050  
FM060200 VRB06KT P6SM BKN080

No Notams available for BZN

\*\*\*\*\* Destination Closest Terminal Weather \*\*\*\*\*

METAR KBTM 052053Z AUTO 30011G14KT 10SM BKN055 OVC070 09/M01 A2981  
RMK AO2 RAB34E43 SLP081 P0000 60000 T00941011 56008

TAF KBTM 051720Z 0518/0618 02003KT P6SM BKN110  
FM051900 28015G22KT P6SM VCSH OVC080  
FM052100 28020G28KT P6SM BKN100  
FM060300 30006KT P6SM BKN100

!BTM 08/028 BTM RWY 15/33 NONSTD MARKING WEF 1208141510  
!BTM 11/009 BTM NAV ILS RWY 15 LLZ/GP UNMONITORED WEF 1211132128

\*\*\*\*\* FA Hazards and Flight Precautions \*\*\*\*\*

current report not available

\*\*\*\*\* FA Synopsis and VFR Clouds/Weather \*\*\*\*\*

SLCC FA 051945  
SYNOPSIS AND VFR CLDS/WX  
SYNOPSIS VALID UNTIL 061400  
CLDS/WX VALID UNTIL 060800...OTLK VALID 060800-061400  
ID MT WY NV UT CO AZ NM

SEE AIRMET SIERRA FOR IFR CONDS AND MTN OBSCN.  
TS IMPLY SEV OR GTR TURB SEV ICE LLWS AND IFR CONDS.  
NON MSL HGTS DENOTED BY AGL OR CIG.

SYNOPSIS...ALF...SHRTWV TROF EXTDS FM WRN MT TO CNTRL UT AND WL  
MOV EWD TO WRN ND-NW KS BY 12Z.  
SFC...WK LOW IS OVR WRN SD WITH CDFNT THRU NWRN CO-SRN UT. STNR  
FNT EXTDS FM THE LOW TO SW SASK. BY 12Z LOW WL MOV TO NW IA WITH  
CDFNT THRU SW KS-NERN NM.

MT

CONTDVD WWD...BKN070-090 TOPS 140. ISOL TO WDLY SCT -SHRA.  
OTLK...MVFR CIG SHRA.  
SWRN MTNS...BKN100 BKN130 TOPS 160. WDLY SCT -SHRA. ISOL -TSRA.  
CB TOPS FL350. 02Z BKN-SCT110-130. OTLK...VFR.  
ERN SLOPES OF CONTDVD-N CNTRL...SCT140 BKN CI. WND WLY G30KT. 02Z  
SCT140 SCT CI. OTLK...VFR.  
S CNTRL...SCT-BKN090 BKN140 TOPS FL180. WDLY SCT -SHRA/-TSRA. CB  
TOPS FL350. 03Z SCT110. OTLK...VFR.

NERN...SCT-BKN120 TOPS 150 BKN CI. 04Z SCT130 SCT CI. OTLK...VFR  
BECMG AFT 12Z MVFR CIG.  
SERN...SCT-BKN070-080 BKN130 TOPS FL180. WDLY SCT -SHRA. ISOL  
-TSRA. CB TOPS FL350. 04Z SCT090 BKN-SCT130. OTLK...VFR.

\*\*\*\*\* FA Turbulence \*\*\*\*\*  
current report not available

\*\*\*\*\* Severe Weather Warnings \*\*\*\*\*  
current report not available

\*\*\*\*\* SIGMETs \*\*\*\*\*  
current report not available

\*\*\*\*\* Convective SIGMET \*\*\*\*\*  
current report not available

\*\*\*\*\* Center Weather Advisory \*\*\*\*\*  
current report not available

\*\*\*\*\* AIRMETS \*\*\*\*\*  
SLCS WA 052045  
AIRMET SIERRA UPDT 3 FOR IFR AND MTN OBSCN VALID UNTIL 060300

.  
NO SGFNT IFR EXP OUTSIDE OF CNVTV ACT.

.  
AIRMET MTN OBSCN...ID MT WA  
FROM 80E YDC TO 50WSW YXC TO 40SW YQL TO 60SE FCA TO LKT TO  
50SSW GEG TO 80E YDC  
MTNS OBSC BY CLDS/PCPN. CONDS CONTG BYD 03Z THRU 09Z.

.  
AIRMET MTN OBSCN...ID MT WY UT  
FROM BIL TO 20SSE OCS TO MTU TO SLC TO DLN TO BIL  
MTNS OBSC BY CLDS/PCPN. CONDS ENDG 00-03Z.

....

SLCT WA 052045  
AIRMET TANGO UPDT 3 FOR TURB VALID UNTIL 060300

.  
AIRMET TURB...ID MT WY CO  
FROM 40SE YXC TO 50N GGW TO CYS TO OCS TO PIH TO 40SE YXC  
MOD TURB BLW 150. CONDS ENDG 00-03Z.

.  
OTLK VALID 0300-0900Z...TURB ID NV OR CA AND CSTL WTRS  
BOUNDED BY 20N BKE-60WSW ELY-CZQ-120SW PYE-140WSW FOT-150W ONP-  
20N BKE  
MOD TURB BTN FL240 AND FL370. CONDS CONTG THRU 09Z.

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SLCZ WA 052045  
AIRMET ZULU UPDT 3 FOR ICE AND FRZLVL VALID UNTIL 060300

.  
AIRMET ICE...ID MT WY  
FROM HLN TO 60WSW DIK TO 70SW RAP TO 30S BOY TO PIH TO HLN

MOD ICE BTN 100 AND FL200. CONDS ENDG 00-03Z.

OTLK VALID 0300-0900Z...ICE ID MT NV WA OR CA AND CSTL WTRS  
BOUNDED BY YDC-50WSW YXC-50ESE YXC-40NW LKT-70SW BAM-40SSW  
FMG-130WSW SNS-140WSW FOT-140W TOU-YDC  
MOD ICE BTN 080 AND FL180. CONDS CONTG THRU 09Z.

FRZLVL...RANGING FROM 050-135 ACRS AREA  
080 ALG 40ENE REO-30SSE BOI-50SSE LKT-80SSW BIL-30SSE BIL-  
70SE MLS-80SW DIK  
120 ALG 50S LAS-20ESE TBC-30WNW RSK-20NNE ALS-20NNW GLD

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\*\*\*\*\* Surface Observations \*\*\*\*\*

METAR KBZN 052056Z 25008KT 10SM OVC070 12/01 A2977 RMK AO2 SLP077  
P0001 60001 T01220011 56013  
METAR KBTM 052053Z AUTO 30011G14KT 10SM BKN055 OVC070 09/M01 A2981  
RMK AO2 RAB34E43 SLP081 P0000 60000 T00941011 56008

\*\*\*\*\* Pilot Reports \*\*\*\*\*

current report not available

\*\*\*\*\* Radar Summaries \*\*\*\*\*

RIW 2135 AREA 3RW++ 351/111 193/120 138W MT 270 11/76 C2616  
AREA 3R- 107/114 128/119 14W  
AUTO  
^HN1 IM231 JJ11233 KJ2222 LK1 LM11 MK4312 NL2222 OL2 PM1 QL11  
  
BLX 2135 AREA 3RW++ 247/91 96/115 200W MT 280 182/100 C2704  
AUTO  
^IP1 JO121 KO2 KQ1 LN2411 ML233411 NJ122432111 OK1 OM132 OQ1 PN43 QM1  
  
TFX 2135 AREA 4RW+ 212/27 90/31 45W  
AREA 2R- 302/108 251/72 42W MT 190 302/107  
AUTO  
^JI1 LI1 MM33 NM1

SFX 2135 CELL TRWXX 63/38 D9  
CELL TRWX 192/27 D6  
AREA 4RW++ 290/46 70/119 129W C2821  
AUTO  
^IN1 JM12 KL432 KP11 LL243622 ML142121 NL351 NP2 QM2

MSX 2135 AREA 3R 1/71 207/98 124W MT 210 203/63  
AUTO  
^JM11 KM12 LM21 MJ111111 NJ211 OJ211

\*\*\*\*\* Terminal Forecasts \*\*\*\*\*

TAF KBZN 051720Z 0518/0618 25010G20KT P6SM VCSH SCT040 BKN070  
TEMPO 0518/0522 P6SM -SHRA SCT040 OVC050  
FM060200 VRB06KT P6SM BKN080  
TAF KBTM 051720Z 0518/0618 02003KT P6SM BKN110  
FM051900 28015G22KT P6SM VCSH OVC080  
FM052100 28020G28KT P6SM BKN100  
FM060300 30006KT P6SM BKN100

# LOFT 7 - KBZN to KBTM

# STUDENT GUIDE

\*\*\*\*\* FD Winds Aloft Forecast \*\*\*\*\*

DATA BASED ON 051800Z REQUESTED  
VALID 060000Z FOR USE 2000-0300Z. TEMPS NEG ABV 24000 ALTITUDE  
FT 3000 6000 9000 12000 18000 24000 30000 34000 39000 11000  
GTF 2727 2830-04 2834-10 2634-23 2831-35 293852 284156 272953 2832-08  
DLN 2818-02 2829-09 2726-22 2932-35 295050 295457 273855 2825-06

\*\*\*\*\* NOTAMs \*\*\*\*\*

\*\*\*\*\* Runway NOTAMs \*\*\*\*\*

!GTF 03/061 GTF RWY 25 PAPI OTS  
!GTF 09/104 7S1 RWY 35 PAPI OTS  
!GTF 11/094 7S1 RWY 17 PAPI OTS  
!DLN 08/009 DLN RWY 35 PAPI OTS  
!BTM 08/028 BTM RWY 15/33 NONSTD MARKING WEF 1208141510

\*\*\*\*\* Aerodrome NOTAMs \*\*\*\*\*

\*\*\*\*\* Obstruction NOTAMs \*\*\*\*\*

\*\*\*\*\* Navigation NOTAMs \*\*\*\*\*

!BTM 11/009 BTM NAV ILS RWY 15 LLZ/GP UNMONITORED WEF 1211132128

\*\*\*\*\* Communication NOTAMs \*\*\*\*\*

!GTF 02/024 GTF COM JUDITH MOUNTAIN EN ROUTE FLIGHT ADVISORY SERVICE  
122.0 OTS WEF 1302101627

\*\*\*\*\* Airspace NOTAMs \*\*\*\*\*

!CARF 09/239 ZLC AIRSPACE LUCIN A/B STATIONARY ALTITUDE RESERVATION  
WITHIN AN AREA BNDD BY THE LATERAL CONFINES OF LUCIN A/B MOA  
7500-17999 TIL 1309261800  
!CDC 05/082 ZLC AIRSPACE LGTS OUT/NVG TRNG NIGHT VISION GOGGLES  
REVEILLE NORTH/SOUTH MOAS/ATCAA ALL ALTS AVOIDANCE ADVISED NIGHT  
!CDC 05/083 ZLC AIRSPACE LGTS OUT/NVG TRNG NIGHT VISION GOGGLES  
HAYS/MOA BEARPAW/ATCAA ALL ALTS AVOIDANCE ADVISED NIGHT  
!CDC 05/084 ZLC AIRSPACE LGTS OUT/NVG TRNG NIGHT VISION GOGGLES  
OWYHEE MOA/ATCAA ALL ALTS AVOIDANCE ADVISED NIGHT  
!CDC 05/087 ZLC AIRSPACE LGTS OUT/NVG TRNG NIGHT VISION GOGGLES  
JARBIDGE MOA/ATCAA ALL ALTS AVOIDANCE ADVISED NIGHT  
!SUAW 04/539 ZLC AIRSPACE SEVIER C MOA ACT 14500FT UP TO BUT NOT  
INCLUDING FL180 WEF 1304051300-1304060001  
!SUAW 04/543 ZLC AIRSPACE R6412A ACT SFC-9000FT WEF  
1304051300-1304060500  
!SUAW 04/542 ZLC AIRSPACE R6412C ACT SFC-9000FT WEF  
1304051300-1304060500  
!SUAW 03/334 ZLC AIRSPACE R3203A ACT SFC-15000FT WEF  
1303061400-1306302300  
!SUAW 04/594 ZLC AIRSPACE LUCIN A MOA ACT 100FT AGL-9000FT WEF  
1304052301-1304060001  
!SUAW 03/335 ZLC AIRSPACE R3203C ACT SFC-6000FT WEF  
1303061400-1306302300  
!SUAW 04/595 ZLC AIRSPACE LUCIN B MOA ACT 100FT AGL-7500FT WEF  
1304052301-1304060001  
!SUAW 04/584 ZLC AIRSPACE IR293 ACT 100FT AGL-14000FT AA TO SS WEF  
1304051900-1304052200  
!SUAW 04/540 ZLC AIRSPACE SEVIER D MOA ACT 9500FT UP TO BUT NOT  
INCLUDING FL180 WEF 1304051300-1304060001

!CDC 10/099 ZLC AIRSPACE LGTS OUT/NVG TRNG NIGHT VISION GOGGLES  
PARADISE SOUTH MOA/ATCAA ALL ALTS AVOIDANCE ADVISED NIGHT  
!CDC 10/100 ZLC AIRSPACE LGTS OUT/NVG TRNG NIGHT VISION GOGGLES  
PARADISE NORTH MOA/ATCAA ALL ALTS AVOIDANCE ADVISED NIGHT  
!CDC 05/088 ZLC AIRSPACE LGTS OUT/NVG TRNG NIGHT VISION GOGGLES  
SEVIER A/B, C/D MOAS ALL ALTS AVOIDANCE ADVISED NIGHT  
!CDC 05/089 ZLC AIRSPACE LGTS OUT/NVG TRNG NIGHT VISION GOGGLES  
LUCIN A/B/C, LUCIN ALTRV ALL ALTS AVOIDANCE ADVISED NIGHT  
!CDC 05/090 ZLC AIRSPACE LGTS OUT/NVG TRNG NIGHT VISION GOGGLES  
GANDY MOA ALL ALTS AVOIDANCE ADVISED NIGHT  
!SUAW 04/593 ZLC AIRSPACE LUCIN C MOA ACT 100FT AGL-6500FT WEF  
1304052301-1304060001  
!DLN 04/001 DLN AIRSPACE UNMANNED ROCKETS 3 NMR DLN347018  
FL260/BLW WEF 1304061500-1304062359

\*\*\*\*\* Taxiway NOTAMS \*\*\*\*\*

!GTF 03/066 GTF TWY R3 CLSD WEF 1203211655

\*\*\*\*\* Ramp/Apron NOTAMS \*\*\*\*\*

!GTF 09/012 GTF APRON TERMINAL RAMP WORK IN PROGRESS  
CONSTRUCTION USE CAUTION 1300-0000 DLY

\*\*\*\*\* Service NOTAMS \*\*\*\*\*

\*\*\*\*\* Unverified Aeronautic Information NOTAMS \*\*\*\*\*

\*\*\*\*\* Other NOTAMS \*\*\*\*\*

\*\*\*\*\* NOTAMS without keywords \*\*\*\*\*

\*\*\*\*\* FDC NOTAMS \*\*\*\*\*

!FDC 3/7010 BTM FI/P IAP BERT MOONEY, BUTTE, MT.  
RNAV (GPS) Z RWY 15, AMDT 1A..  
ALTERNATE MINIMUMS NA.  
THIS IS RNAV (GPS) Z RWY 15, AMDT 1B.

!FDC 2/3253 BTM FI/T IAP BERT MOONEY, BUTTE, MT.  
(SPECIAL) ILS Z RWY 15, AMDT 1..  
CIRCLING MINIMUMS NA.  
DISREGARD NOTES: CIRCLING NOT AUTHORIZED NORTHEAST OF  
RWY 15-33 AND CIRCLING REQUIRES DESCENT ON GLIDESLOPE TO MDA.