

03/17/2020

FOR SIMULATION USE ONLY

DLH ATCT 7110.9A

ORDER

**ORDER
DLH ATCT 7110.9A**

**DULUTH ATCT
STANDARD OPERATING PROCEDURES**




March 17, 2020

**VATSIM MINNEAPOLIS ARTCC
VIRTUAL AIR TRAFFIC SIMULATION NETWORK**

SUBJ: DLH ATCT (DLH) Standard Operating Procedures

This order prescribes air traffic control procedures and phraseology for use by Air Traffic Control Specialists at the Duluth ATCT on the VATSIM network. Controllers are required to be familiar with the provisions of this order that pertain to their operational responsibilities and to exercise their best judgement if they encounter situations not covered by it.



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Air Traffic Manager

VATSIM Minneapolis ARTCC

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CHAPTER 1. GENERAL

Section 1. GENERAL

1-1. PURPOSE. This handbook contains the body of local knowledge in which an air traffic controller at Duluth ATCT must be familiar. It contains descriptions of local procedures, of facility equipment, and of the area environment.

1-2. DISTRIBUTION. This order is distributed to vZMP Facility binders.

1-3. CANCELLATION. This order cancels vZMP Air Traffic Operations Manual Revision 7, Air Traffic Control Standard Operating Procedures, section 2.5 Duluth International Airport (KDLH).

1-4. EFFECTIVE DATE. This order is effective February 13, 2019.

1-5. RESPONSIBILITY. The Air Traffic Manager is responsible for conducting reviews of the material in this handbook.

1-6. TERMS OF REFERENCE. This order conforms to the style conventions specified in JO 7110.65, Air Traffic Control, Chapter 1, Section 2, Terms of Reference, in its word usage, notes, definitions, references, and abbreviations. Interpretation of this order is subject to the same Terms of Reference.

Section 2. AIRPORT INFORMATION

1-20. LOCATION. The Duluth International Airport is located eight miles northwest of downtown Duluth, Minnesota.

1-21. RADIO FREQUENCIES. The following table lists the radio frequencies to be used by DLH ATCT. All controllers must abide by the contents to streamline coordination.

<i>Position Name</i>	<i>Frequency</i>	<i>STARS ID</i>	<i>Callsign</i>	<i>Voice Channel</i>
Ground Control	121.900		DLH_GND	dlh_121.90
Local Control	118.300	T	DLH_TWR	dlh_118.30
ATIS	124.100		KDLH_ATIS	
S AR/DR*	125.450*	S*	DLH_S_APP*	dlh_125.45*
N AR/DR	119.500	N	DLH_N_APP	dlh_119.50

*Position/frequency used when N/S AR/DR are combined.

CHAPTER 2. GROUND CONTROL

2-1. SUMMARY OF DUTIES AND RESPONSIBILITIES.

Ground Control has primary responsibility for the following duties:

- a. Issuing IFR, SVFR, VFR-On-Top clearances to departing aircraft and codes to VFR aircraft requesting Basic Radar Services.
- b. Monitor and transmit radio communications on 121.9.
- c. Control aircraft on the taxiways, and on runway surfaces when coordinated with LC.
- d. Advise LC of outbound traffic's intentions through use of flight progress strips.

2-2. CLEARANCE PROCESSING.

Complete strip marking in accordance with JO 7110.65.

- a. VFR Departures.
 1. Determine direction of flight.
 2. Prepare strip.
 3. Issue departure frequency and beacon code if requesting radar service.
- b. Special VFR departures.
 1. Prepare strip.
 2. Clear the pilot to maintain SVFR conditions at or below 3000'.
- c. IFR
 1. Clear departing IFR aircraft to an initial altitude of 6000' unless the pilot requested a lower final altitude. When appropriate, advise pilot to expect requested altitude ten minutes after departure.

2-3. AIRPORT SURFACES AND THEIR USAGE.

- a. Runway data.
 1. RWY 9/27: 10162' X 150', concrete, grooved.
 2. RWY 3/21: 5718' X 150', asphalt, grooved.

- b. Taxiway data.
 - 1. All movement areas are stressed for heavy aircraft except taxiways: “A3, C, D west of RWY 3/21 and E1”.
- c. Ramp data. Ramps are non-movement areas, thus ATC control jurisdiction does not include them
- d. Special Use Areas
 - 1. Run-Up Pads. Run-up Pads are located at the east and west ends of TXY “A” and on TXY “A1”.
- e. Miscellaneous/Unusual/Hot Spots:
 - 1. TXY Echo: TXY “E” serves a purpose of being a taxiway, a safety area for the approach end of RWY27, and the rollout area of RWY 09. It must be protected as if it is part of RWY 9/27. The designation for this surface area on the airport diagram is E, however the actual signage in place indicates RWY 27 APCH. Therefore, when holding aircraft short of this segment of pavement, the phraseology used must be **“hold short of runway two seven approach”**. In addition, all aircraft instructed to taxi to RWY 27 from the south side of the ANG ramp via TXY “E1” or TXY “E2” must be instructed to hold short of RWY 27 APCH. *Phraseology: “(ACID) Runway 27, taxi via (TXY), Hold Short of RWY 27 Approach.”*
 - 2. TXY “A5”. The approach end of RWY 27 begins at TXY “A5”. Pilots and aircraft taxiing for departure often miss this turn.

2-4. GC/LC COORDINATION.

Before coordinating or authorizing any activity on a runway, scan the runway surface, both final approach areas and the TDW for traffic.

- a. Runway Crossings.
 - 1. Coordinate a specific activity at a specific point.
 - a. Coordinate only when the aircraft is in a position to execute the action.
 - b. Request approval for the intended operation (i/e: “cross runway 27 at Taxiway C?”).
 - c. Report completion of a crossing by stating “crossing complete,” or if multiple crossings are coordinated, state the completion of each specific crossing by stating “runway (rwy) at (txy) crossing complete.” LC will acknowledge with “Complete”.

- d. If operation is not feasible:
 - 1. Plan an action that does not require coordination, or
 - 2. Delay the operation until coordination is feasible.
- 2. If LC states “RCO” or “Runway Crossing Observed”, confirm the RCO is correct by stating “Complete”.

CHAPTER 3. LOCAL CONTROL

3-1. SUMMARY OF DUTIES AND RESPONSIBILITIES.

- a. LC has primary responsibility for the following duties:
 1. Runway separation and control of VFR traffic operating within DLH Class D Airspace.
 2. Initial separation of IFR departures.
 3. Separation between arriving and departing IFR aircraft.
 4. Assigning departure instructions to IFR departures, which ensure the aircraft will remain inside the departure corridor in use (See Appendix 1). IFR go-arounds or IFR missed approach aircraft conducting an instrument approach must be issued control instructions, as necessary, to establish separation.
 5. IFR departure separation from Obstructions (Southeast Antenna Farm)
 6. Designating the runway/s to be broadcast on the ATIS. The advertised runway/s determine the departure corridor. When switching runways, the new departure corridor becomes effective after verbal coordination has been completed with ARDR.
 7. Coordinating control of inactive runways with GC.
 8. Resolving traffic conflicts prior to frequency change.
 9. Issuing landing sequence.

3-2. LC/GC COORDINATION.

- a. General Aircraft Operations:
 1. GC will request approval for the intended operation, giving both the location/operation and the aircraft involved.
 2. LC will give approval/disapproval of the operation.
 3. GC will advise when the operation is complete.
 4. LC will verbally acknowledge GC when they have received the “crossing complete” by stating “Complete”.
 5. LC may state “RCO” or “Runway Crossing Observed” if they observe a completed crossing prior to GC advising of the crossing complete.

3-3. LC/AR/DR COORDINATION.

a. DLH Arrivals:

1. Issuance of departure restrictions from AR/DR cancels previous restrictions unless otherwise restated.
2. Use the radar display to receive handoffs and point outs with AR/DR. When AR/DR flashes a data block to LC it is a request to enter the departure corridor. Acceptance of this handoff, outside of 15 miles from the airport, authorizes AR/DR to enter the departure corridor. LC will ensure IFR separation until visual separation can be applied.
3. Advise AR/DR if changing landing runway of an IFR aircraft.
4. AR/DR will display the following special designator symbols in the full data block except for aircraft conducting the advertised approach:
 - a. G=GPS/RNAV
 - b. K=TACAN
 - c. Z=Visual
 - d. I=ILS
 - e. O=VOR
 - f. E=Enroute
5. AR/DR may use these scratch pad entries when known:
 - a. T/G=Touch and Go
 - b. S/G=Stop and Go
 - c. MID=Midfield Ramp
 - d. L/A=Low Approach
 - e. TWR=Helicopter landing on the Tower Ramp surfaces.

b. DLH Departures:

1. LC must issue the initial departure instructions to IFR departures to ensure initial departure separation and separation from any approved aircraft into the departure corridor.
2. LC must keep IFR departures within the departure corridor when departing from the advertised runway, unless otherwise coordinated.
3. LC may depart IFR aircraft from a non-advertised, non-ODO runway if aircraft will be established in the departure corridor within 2 miles of the radar site. LC must apply visual separation until IFR separation exists.

c. Radar responsibilities. LC Must:

1. Quick look AR/DR North and South.

3-4. LAND AND HOLD SHORT OPERATIONS (LAHSO).

LAHSO clearances must only be issued:

- a. Between sunrise and sunset.
- b. In VFR weather.
- c. When the tailwind on the hold short runway is less than 3 knots and when low-level wind shear advisories are **not** in effect.
- d. When the LAHSO runway Available Landing Distance (ALD) is dry and not contaminated.
- e. To aircraft types listed with LAHSO Group designation in JO 7360.1 and to any helicopter.

RUNWAY	SEGMENT	AVAILABLE LANDING DISTANCE (ALD)	ELIGIBLE AIRCRAFT GROUPS
9	Prior to RY 3/21 intersection	8950 feet	1,2,3,4,5,6,7,8,9

CHAPTER 4. APPROACH CONTROL

4-1. SUMMARY OF DUTIES AND RESPONSIBILITIES.

AR/DR has primary responsibility for the following duties:

- a. Ensuring separation between IFR and SVFR aircraft operating within DLH approach control airspace, per JO 7110.65, except where separation responsibility is delegated to LC.
- b. Providing basic radar service to participating VFR aircraft, including sequencing of VFR and IFR arrivals to the Duluth International Airport.
- c. Choosing the type of approach/s in use. (LC will choose runway)
- d. Maintaining a constant and effective scan of the AR/DR environment in order to detect and anticipate the need for control and coordination.

4-2. DULUTH AR/DR NORTH AND SOUTH SECTOR SPLIT OPERATION.

When necessary for traffic or frequency congestion, N and S can be de-combined, and the approach control airspace is divided between them as follows:

- a. Boundary = RWY 9/27 localizers extended to the east and west boundaries of DLH airspace.
 1. North Sector = DLH airspace north of RWY 9/27 localizer.
 2. South Sector = DLH airspace south of RWY 9/27 localizer.
- b. The South Sector Controller is responsible for determining the arrival sequence to DLH. The North Sector Controller must request sequence of all DLH arrivals with the South Sector Controller.
- c. When the arrival sequence has been determined, each controller is responsible for accomplishing their own coordination with LC as required.
- d. Handoffs between north and south controllers must be accomplished no later than 3 miles prior to the north/south boundary. Communications transfer must be accomplished no later than the north/south boundary.
- e. Transfer of control must occur when the traffic enters the receiving controller's boundary.
- f. Instrument approaches to COQ, DYT, SUW, and MN33, which will utilize both north and south sector airspace may be kept under control of either the north/south controller, provided required point out and coordination action has been accomplished.

4-3. LC/AR/DR COORDINATION.

a. DLH Arrivals:

1. IFR arrivals must not be descended below 7000 feet MSL until they are clear of the departure corridor in use (see Appendix 1). AR/DR must then restrict LC to guarantee separation from IFR departures in the departure corridor. Issuance of departure restrictions to LC cancels previous restrictions, unless they are restated.
2. When AR/DR flashes a data block at LC it is a request to enter the departure corridor with a DLH arrival. Acceptance of this pointout authorizes AR/DR to enter the departure corridor. LC will ensure IFR separation until visual separation can be applied. If the pointout is not accepted by 15 miles from the airport, AR/DR must not enter the departure corridor unless a restriction is placed on LC.
3. AR/DR will display the following special designator symbols in the full data block except for aircraft conducting the advertised approach:
 - a. G=GPS/RNAV
 - b. K=TACAN
 - c. Z=Visual
 - d. I=ILS
 - e. O=VOR
 - f. E=Enroute
4. AR/DR may use these scratch pad entries when known:
 - a. T/G=Touch and Go
 - b. S/G=Stop and Go
 - c. MID=Midfield Ramp
 - d. L/A=Low Approach
 - e. TWR=Helicopter landing on the Tower Ramp surfaces.
5. Communication transfer must be accomplished no later than the FAF or 6 NM from the airport, whichever is further.
6. AR/DR must advise LC when IFR aircraft are maintaining visual separation.

b. DLH Departures:

1. AR/DR must not turn aircraft back toward the extended centerline of the departure runway unless authorized by LC or at least 5 miles from the airport.

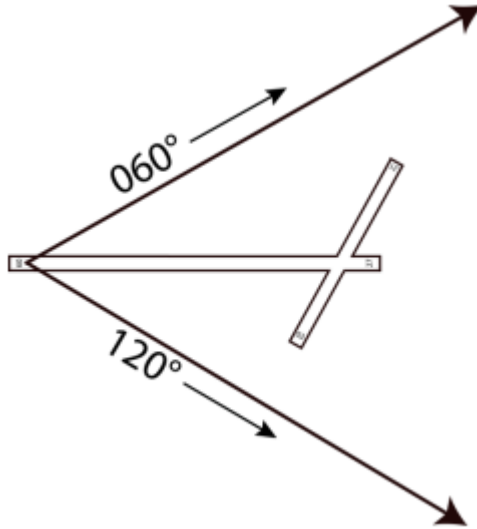
c. Radar Responsibilities. AR/DR must:

1. As a minimum, set altitude filter limits to display Mode C between 1,400 and 23,000 feet.
2. Ensure IFR aircraft on opposing base legs, which may reduce to less than standard separation (due to winds, aircraft characteristics, lost communications, missed control instruction, etc.) are vertically separated unless other standard separation is applied and maintained.

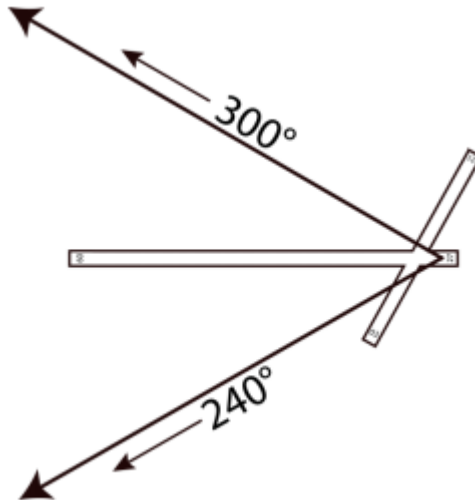
APPENDIX 1. DEPARTURE CORRIDORS

Departure corridors are 30 degrees on either side of the departing runway centerline beginning at the approach end for single runway operations.

RUNWAY 09

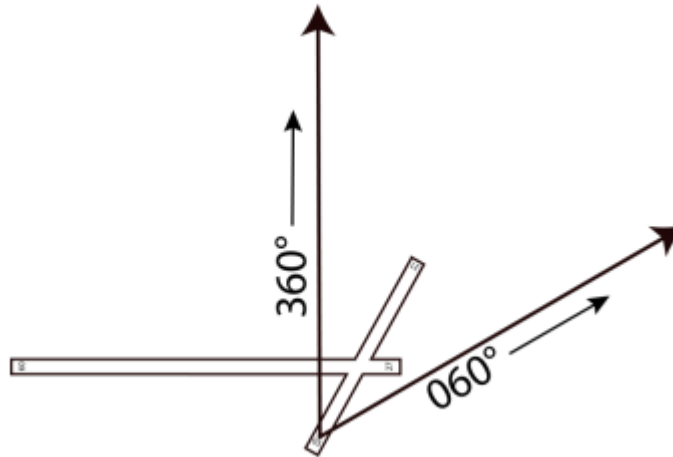


RUNWAY 27

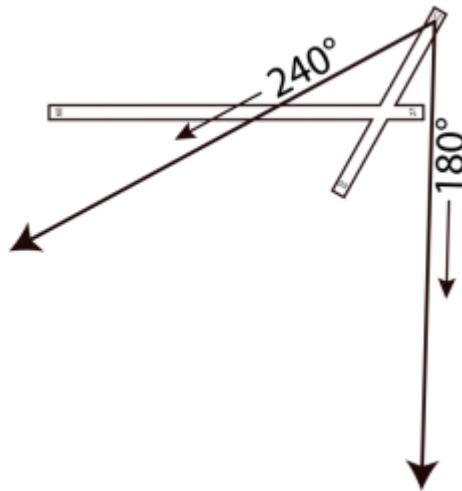


Departure corridors are 30 degrees on either side of the departing runway centerline beginning at the approach end for single runway operations.

RUNWAY 03

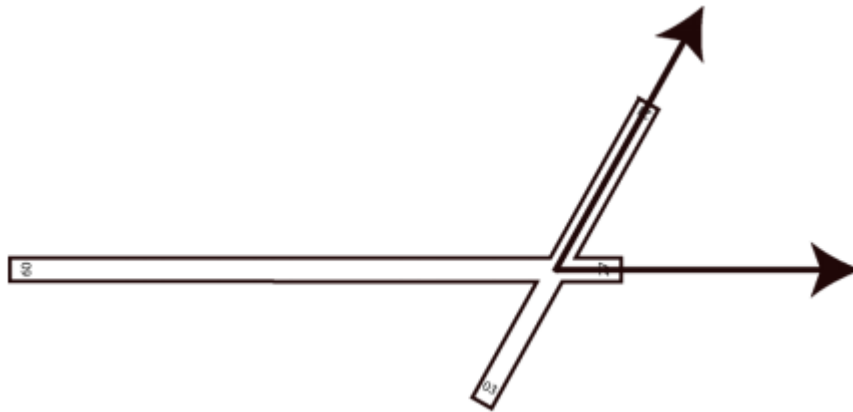


RUNWAY 21

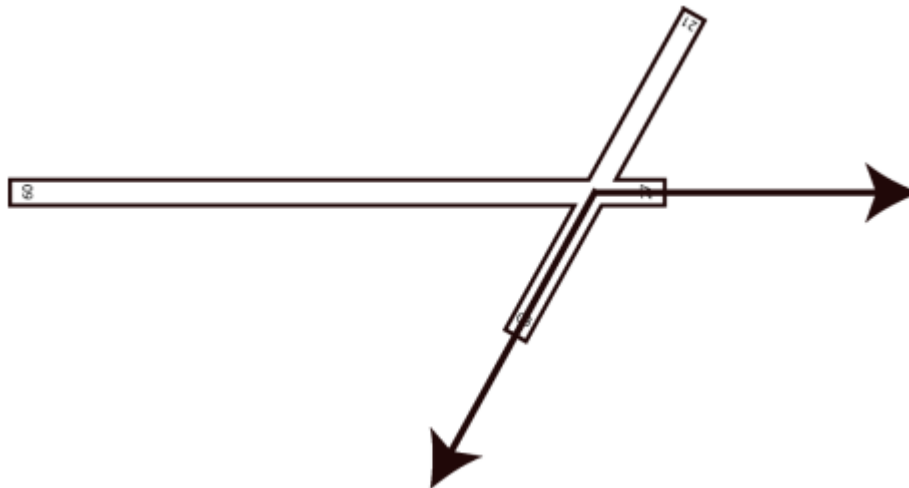


Departure corridors are runway centerline to runway centerline beginning at the runway intersection for multiple runway operations.

RUNWAY 03 & 09

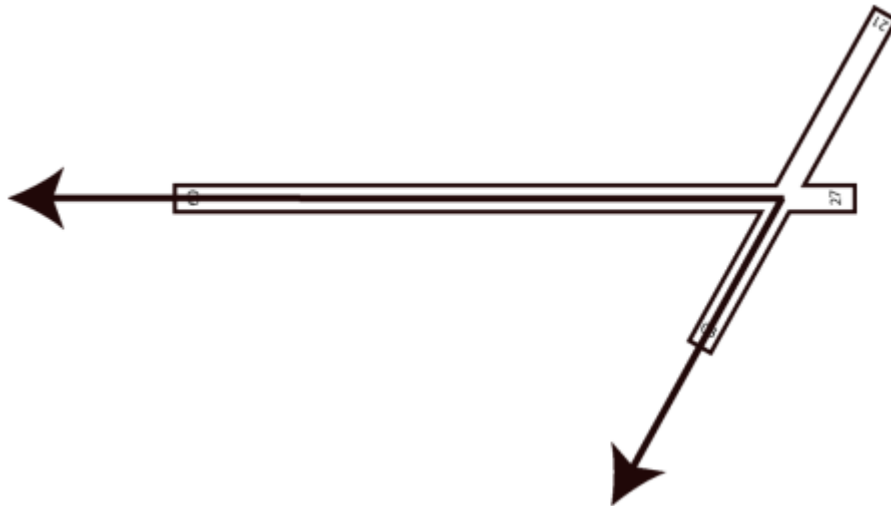


RUNWAY 09 & 21

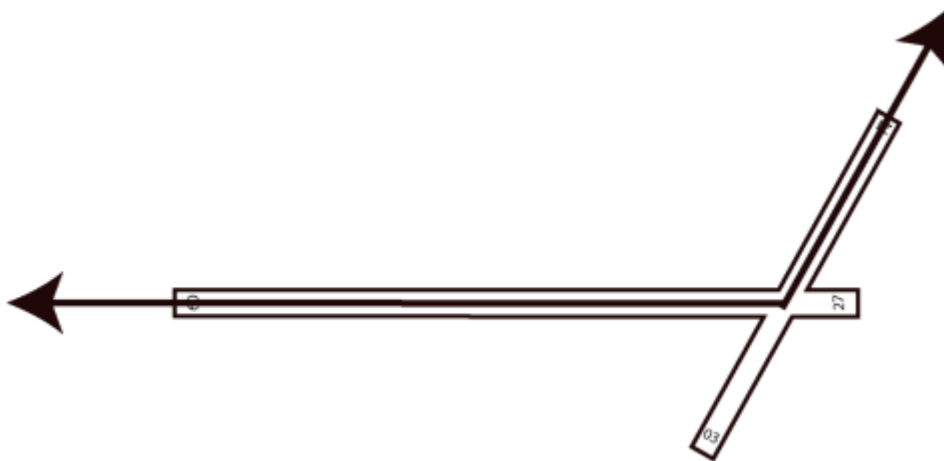


Departure corridors are runway centerline to runway centerline beginning at the runway intersection for multiple runway operations.

RUNWAY 21 & 27



RUNWAY 27 & 03



APPENDIX 2. POSITION RELIEF CHECKLISTS

POSITION RELIEF CHECKLIST FOR GROUND CONTROL

1. SIA/ATIS/ACTIVE RUNWAY/S
2. WX/ALT TRENDS AND PIREPS
3. AIRPORT ACTIVITIES/CONDITIONS/EQUIPMENT
4. FLOW/METERING
5. PERTINENT OPERATIONAL NOTAMs
6. SPECIAL INSTRUCTIONS/RESTRICTIONS
7. SPECIAL ACTIVITIES/TRAINING
8. TRAFFIC
 - a. SPECIAL ACTIVITY ACFT
 - b. VFR ADVISORY AIRCRAFT
 - c. AIRCRAFT STANDING BY FOR SERVICE
 - d. COORDINATION WITH OTHER POSITIONS

NOTE: CONTROLLERS MUST MONITOR AND OBSERVE THE POSITION FOR TWO (2) MINUTES AFTER THE POSITION RELIEF BRIEFING IS COMPLETED UNLESS THERE ARE LESS THAN 2 OPERATIONS ON FREQUENCY.

POSITION RELIEF CHECKLIST FOR LOCAL CONTROL

1. SIA/ATIS/DEPARTURE CORRIDOR/ACTIVE RUNWAY/S
2. WX/ALT TRENDS AND PIREPS
3. AIRPORT ACTIVITIES/CONDITIONS
4. FLOW/METERING/TRAFFIC COUNT
5. PERTINENT OPERATIONAL NOTAMs
6. SPECIAL INSTRUCTIONS AND RESTRICTIONS
7. SPECIAL ACTIVITIES/TRAINING
8. VERBALLY STATE RUNWAY STATUS
 - a. AVAILABLE/UNAVAILABLE
 - b. CLOSED
 - c. OCCUPIED
9. LUAW STATUS
10. TRAFFIC
 - a. SPECIAL ACTIVITY ACFT
 - b. POINT-OUT/HOLDING ACFT
 - c. PRIMARY ONLY ACFT
 - d. VFR ADVISORY AIRCRAFT
 - e. NORDO/SUSPECT AIRCRAFT COMMUNICATIONS
 - f. CLEARANCE STATUS
 - g. AIRCRAFT STANDING BY FOR SERVICE
 - h. COORDINATION WITH OTHER POSITIONS

NOTE: CONTROLLERS MUST MONITOR AND OBSERVE THE POSITION FOR A MINIMUM OF TWO (2) MINUTES AFTER THE POSITION RELIEF BRIEFING IS COMPLETED UNLESS THERE ARE LESS THAN 2 OPERATIONS ON FREQUENCY.

POSITION RELIEF CHECKLIST FOR AR/DR

1. SIA/ATIS/DEPARTURE CORRIDOR
2. WX/ALT TRENDS & PIREPS
3. POSITION/EQUIPMENT CONFIGURATION
4. PERTINENT OPERATIONAL NOTAMs
5. FLOW/METERING/TRAFFIC COUNT
6. SPECIAL INSTRUCTIONS/RESTRICTIONS
7. SPECIAL ACTIVITIES
8. PENDING DUTIES
9. TRAINING
10. TRAFFIC
 - A. MOA/POINT OUT/HOLDING
 - B. PRIMARY AIRCRAFT
 - C. VFR ADVISORY AIRCRAFT
 - D. HANDOFF/APREQ STATUS
 - E. AIRCRAFT RELEASED BUT NOT YET AIRBORNE
 - F. NORDO/SUSPECT AIRCRAFT COMMUNICATIONS
 - G. NON-RADAR TRAFFIC
 - H. COORDINATION WITH OTHER POSITIONS
 - I. CLEARANCE STATUS

NOTE: CONTROLLERS MUST MONITOR AND OBSERVE THE POSITION FOR A MINIMUM OF TWO (2) MINUTES AFTER THE POSITION RELIEF BRIEFING IS COMPLETED UNLESS THERE ARE LESS THAN 2 OPERATIONS ON FREQUENCY.