

### Collision Avoidance/Traffic Pattern Procedures [141.93(a)(3)(viii)]

- The following traffic pattern procedures must be used to avoid a collision:
  - Scan in all directions prior to any turn
  - Switch on all lights within 10NM of the airport (day and night)
  - Adhere to FAR 91.113 right-of-way rules
  - Make standard radio calls, beginning 10NM from the airport when inbound
  - Adhere to strict sterile cockpit rules; instruction might have to cease in order to hear the radios
  - Solo student pilots will NOT perform Touch and Go or Stop and Go landings
- Mankato-specific pattern procedures include the following:
  - Solo student pilots will use the call sign “Solo” whenever a position report is made (e.g. “Solo 282MK”)
  - Enter the pattern on a 45° to Downwind (same side) or a 45° to Upwind (opposite side.) Entry to these legs for runways 15 and 33 will begin over the Quarry or Madison Lake. Runways 04 and 22 will begin over the Walmart Distribution Center or the North West corner of Lake Washington.
  - The Downwind leg should be entered abeam the numbers on the DER, and the Upwind leg should be entered abeam the numbers on the AER.
  - Aircraft established in the traffic pattern (Downwind, Base, Final, or Crosswind) have the right-of-way over aircraft entering the pattern. Traffic on the 45° Downwind has the right-of-way over traffic on the Upwind and 45° to Upwind.
  - Pilots established on the Upwind leg must use sound aeronautical decision making to decide when to turn crosswind. Crosswind may be turned anywhere beyond mid-field. Caution should be used to avoid departing aircraft.
  - If added spacing is needed traffic will depart the pattern and re-enter on the appropriate entry leg. At no time should a 360° maneuver be performed in the pattern.
  - Care should be taken to avoid extended downwind legs over 2.5NMs. If a conflict arises on the downwind, break out and re-enter on the 45° downwind.
  - If the conflict arises on the base leg plan to fly a low approach and continue with the pattern.





Revision	Date
R-6	10/??/2018

- Mankato-specific pattern departure procedures:
  - All North Star Training flights will adhere to the AIM specified pattern departure procedure.
  - Depart the pattern either straight out (runway heading) or 45° to the left of runway heading (e.g. heading 285° when departing runway 33).
  - Continue climbing until reaching 3,000’.
  - Turn enroute to the applicable practice area or cross-country course once clear of pattern airspace.

**Practice Areas [141.93(a)(3)(x)]**

During the dispatch process students must request a practice area.

The practice areas form a circle around the Mankato VOR from 7 to 20 DME, with each area occupying a 20° section, excluding those areas along the departure and arrival paths of Runway 15/33. In times of low congestion two practice areas may be reserved to allow more room for maneuvering (e.g. N1 and N2 can be combined to make the North Practice area). During periods of high congestion, dispatch may assign altitude restrictions to each practice area. The practice areas are defined as follows:

N1	340° to 360°	S1	160° to 180°
N2	360° to 020°	S2*	180° to 200°
NE1	020° to 040°	SW1	200° to 220°
NE2	040° to 060°	SW2*	220° to 240°
E1	060° to 080°	W1	240° to 260°
E2	080° to 100°	W2*	260° to 280°
SE1	100° to 120°	NW1	280° to 300°
SE2	120° to 140°	NW2	300° to 320°

\*Use caution in the W2, SW2, and S2 practice areas for large towers.

All pilots must remain within the lateral boundaries of their assigned practice area when performing maneuvers. Use pilotage as the primary means of navigation (i.e. look out the window), backed up by radial and DME information displayed on the HSI. Each aircraft binder will contain a map of the practice areas (next page.) Perform clearing turns prior to beginning maneuvers in the practice area, and maintain a constant listening watch on Mankato Unicom (122.725)

