

To earn the Air-Rangers Voyager rating, you must complete the requirements listed below.



REQUIREMENTS



1. Earn the Navigation merit:

- Study the appropriate chapters in *Aviation Fundamentals/Private Pilot Manual* (these are denoted in the *Air Rangers Handbook*).
- Define the terms and give the oral presentations listed in the *Air Rangers Handbook*.

2. Earn the Air-Traffic Control merit:

- Study the appropriate chapter in *Aviation Fundamentals/Private Pilot Manual* (denoted in the *Air Rangers Handbook*).
- Answer the five questions about air-traffic control listed in the *Air Rangers Handbook*.

ELECTIVES

Earn two additional Royal Rangers merits *from another special-interest group* that you have not yet earned.

SPIRIT CHALLENGE

Successfully complete the one of the [Spirit Challenge steps](#) from *The Bible and Today's Issues*.

Congratulations on earning your Air-Rangers Voyager rating! You can now wear the Voyager pin on your Challengers T-shirt, letter jacket or hat and begin working on your Air Rangers Discoverer Rating.

AIR RANGERS MERIT: NAVIGATION

1. Study the following chapters in the Jeppesen Private Pilot Manual:
 - a. Chapter 4 - Flight Environment, section C - Aeronautical Charts.
 - b. Chapter 8 - Airplane Performance, section C - Flight Computers.
 - c. Chapter 9 - Navigation, section A - Pilotage and Dead Reckoning.

2. Study the following sections of Chapter 9 - Navigation:

- a. Section B - VOR Navigation
- b. Section C - (ADF) Automatic Direction Finder Navigation
- c. Section D - Advanced Navigation

3. Define the following terms:

- a. Compass Deviation.

- b. DME.

- c. GPS

- d. Magnetic Course.

e. Magnetic Heading

f. Magnetic Variation

g. NDB

h. True Course

i. True Heading

j. VOR

k. Wind Correction Angle.

4. Give an oral presentation to your outpost explaining the following methods of navigation, discussing the advantages and disadvantages of each type.

- a. Dead Reckoning
- b. GPS
- c. NDB
- d. Pilotage
- e. VOR

AIR RANGERS MERIT: AIR TRAFFIC CONTROL

1. Study the following chapters in the Jeppesen Private Pilot Manual:

- a. Chapter 4 - The Flight Environment, Section A - Safety of Flight.
- b. Chapter 4 - The Flight Environment, Section B - Airports.
- c. Chapter 4 - The Flight Environment, Section D - Airspace.
- d. Chapter 5 - Communication and Flight Information, section B - Radio Procedures.
- e. Chapter 5 - Communication and Flight Information, section A - Radar and ATC Services.

2. Define the following terms:

a. Active Runway.

b. ATC Clearance.

c. ATIS.

d. Flight Service Station.

e. Mayday.

f. Phonetic Alphabet.

g. Pilot-in-command.

h. Radar Contact/Radar Service.

3. Memorize and recite the entire phonetic alphabet.

4. Diagram and describe precision and nonprecision runways. Include displaced threshold, overrun, threshold marker, touchdown zone markers, fixed distance marker, and runways markers.

(Attach to this worksheet)

5. Diagram an airport traffic pattern. Include traffic pattern altitude, crosswind, downwind, base, final, wind sock, traffic and pattern indicators. (Attach to this worksheet)

6. Diagram and describe class A, B, C, D, E, and G airspace. (Attach to this worksheet)

7. Define the ATC light gun signals, in the air and on the ground.
