



# Royal Rangers

Merit Requirements: **Green-Bordered Merit**

## **AMATEUR RADIO**

1. Explain in writing the answers to the following questions:
  - a. What does it take to get started in ham radio operation and what beginning license do you need?
  - b. What is the FCC and what is its purpose?
  - c. What amateur radio licenses are available and what privileges are yours after obtaining such a license?
2. Qualify for any class of amateur radio license by the proper government agency. Then, do the following activities:
  - a. Carry on at least five fifteen-minute conversations with other ham radio operators. Submit at least five QSL cards as evidence of contact with other amateur radio operators.
  - b. Participate in, or listen for, procedures used in emergency situations. Write out the things you learned.
  - c. Observe signal strengths during different parts of the day. Define "sunspots" and tell how they aid or hamper transmitting and receiving signals.
3. Explain in writing how amateur radio operators prepare to handle emergency messages and transmissions during floods, tornadoes, hurricanes, earthquakes, forest fires, motorist accidents, chemical spills, search and rescues, or similar disasters. List and cite what government rules and FCC codes say about such transmissions.
4. Write a 200-word report on the origin of the term "ham radio."
5. List at least three kinds of receivers/transmitters. Answer the following questions.
  - a. At what frequencies and bands do they operate?
  - b. How much power output do they have?
  - c. Which receiver/transmitter would best suit your needs?
  - d. What reason do you have for choosing that model?
  - e. Ask a ham radio operator what he or she thinks about your choice.
6. Name the two basic radiation patterns for antenna. What are their characteristics? List at least one type of antenna for each radiation pattern. List the advantages and disadvantages of each.
7. Interview a ham radio operator. Ask the following questions.
  - a. When did you get started?
  - b. What do you like about amateur radio?
  - c. How has it helped you in life?
  - d. How has it helped others?