

**BOY SCOUT RADIO MERIT BADGE REQUIREMENT CHECKLIST**

No.	Requirement	Verified By (name and callsign)
1 a	Explain what radio is [general description].	
b	Explain the differences between broadcast radio and hobby radio.	
c	Explain the differences between broadcasting and two-way communicating.	
d	Explain what broadcast radio and amateur radio call signs are and how they differ.	
e	Explain what phonetics are and how they are used.	
2 a	Sketch a diagram showing how radio waves travel locally and around the world.	
b	How do broadcast stations WWV and WWVH help determine what you will hear when you listen to the radio?	
3 a	Draw a chart of the electromagnetic spectrum covering 100 kHz to 1000 MHz.	
b	Label the MF, HF, VHF, UHF and microwave portions of the spectrum on your chart.	
c	Locate on your chart at least eight radio services, such as AM and FM commercial broadcasts, citizens band (CB), television, amateur radio (at least four ham bands), and police.	
d	Discuss why some radio stations are called DX and other are called local.	
e	Explain what the FCC and ITU are.	
4 a	Explain how radio waves carry information.	
b	Include in your explanation: Transceiver, transmitter, amplifier and antenna.	
5	Explain the safety precautions for working with radio gear, particularly direct current and RF grounding.	
6 a	Explain the difference between a block diagram and a schematic diagram.	
b	Draw a block diagram that includes a transceiver, amplifier, microphone, antenna and feedline.	
c	Explain the differences between an open circuit, a closed circuit, and a short circuit.	
d	Draw eight schematic symbols for electrical parts.	
e	Explain what three of the electrical parts do.	
f	Find three electrical parts to match three of the schematic symbols.	
7 a	Amateur Radio	
1	Describe some of the activities that licensed amateur radio operators can do on the air.	
2 a	Carry on a 10-minute real or simulated ham radio contact using voice; use proper call signs, Q signals and abbreviations	
b	Properly log the real or simulated ham radio contact and record the signal report.	
3	Explain at least five Q signals or amateur radio terms you hear while listening.	
4 a	Explain some of the requirements for a Technician Class license.	
b	Explain some of the privileges a Technician Class licensed radio operator has.	
c	Explain who gives amateur radio exams.	
5 a	Explain how you would make an emergency call using voice or Morse code.	
b	Tell why the Federal Communications Commission has an amateur radio service.	
6 a	Discuss handheld transceivers versus home "base" stations.	
b	Explain the uses of mobile amateur radios.	
c	Explain the uses of amateur radio repeaters.	
8 a	Visit a ham radio station.	
b	Discuss what types of equipment you saw in use and how it was used.	
c	Discuss what types of licenses are required to operate and maintain the equipment.	
d	Discuss the purpose of the station.	

**REVIEWED AND APPROVED BY RADIO MERIT BADGE COUNSELOR** (also complete and sign scout's blue card)

Name: Ralph H. Clark, NM5RC Signature: \_\_\_\_\_ Date: \_\_\_\_\_

