

Radio Merit Badge Worksheet



Requirement 1

Learn the safety precautions necessary in:

Building, Repairing, and Testing of Radio Equipment	
Erection of Transmitting and Receiving Antennas	

Requirement 2

- Demonstrate the correct soldering techniques suitable for the wiring of radio equipment.
- Show how to avoid heat damage to transistors and other small parts during soldering.

Explain why rosin-core solder is used rather than acid-core solder in the building of equipment.	
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Requirement 3

Draw ten schematic symbols commonly used in diagrams of radio receiver, radio transmitters, or audio-frequency equipment. Explain in general terms what each of the parts represented by the schematic symbol does.

Schematic Symbol	Explain in general terms what the part represented by the schematic symbol does

Scout Name _____ Unit # _____ Date _____

Schematic Symbol	Explain in general terms what the part represented by the schematic symbol does

Requirement 4

SPECIAL NOTE FROM THE MERIT BADGE CENTER. This requirement of the Radio Merit Badge discusses in part some obsolete technology and is no longer in use. You may need to consult your counselor, and with the approval of your District Advancement Committee, make adjustments to requirement to fit the current practice in the field of Radio and Telephony.

- Using the knowledge gained from the first three requirements, build from individually purchased parts or from a kit at least one piece of radio equipment using a vacuum tube, transistor, or diode (including selenium, germanium, or silicon rectifiers).
- Demonstrate the equipment for your Counselor to show that it works correctly, and to show that the wiring is safe, correctly soldered, and reasonably neat. (Acceptable equipment includes a portable radio, short-wave receiver, amateur transmitter, hi-fi amplifier, AC-DC multimeter, vacuum-tube, voltmeter, FM tuner, shortwave converter, tube, or transistor code-practice set, and similar apparatus. Because they are usually too simple – crystal radios, buzzer-type code sets, and continuity testers would not be considered acceptable).

Requirement 5

- Demonstrate your ability to send and receive the Morse Code by ear for at least one minute at the rate of at least five words per minute without any errors. (Holders of unexpired amateur licenses of any class, issued by the National Telecommunications Commission are exempted from this requirement).

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NTC License _____ Expiration Date _____

Requirement 6

Name and explain five of the common “Q” codes or signals.

“Q” Code	Explain

Five common abbreviations used by radio operators

Abbreviations	Explain

Scout Name _____ Unit # _____ Date _____

Explain how amateur radio operations prepare to handle emergency messages during the following:

Flood	
Typhoons	
Earthquakes	
Other Similar Disasters	

Requirement 7

Investigate job opportunities in radio.

Discuss with your Counselor.

Tell what job, if any, would interest you, and what training is advisable in preparing for it.

Job	Training in Preparation for It