

Amateur Radio Technician Class License Prep

What is Amateur Radio?

- Amateur (or Ham) Radio is a personal radio service authorized by the Federal Communications Commission (FCC) which is codified to:
 - encourage the advancement of the art and science of radio,
 - promote the development of an emergency communication capability to assist communities when needed,
 - develop a pool of trained radio operators, and
 - promote international good will by connecting private citizens in countries around the globe.
- Through ham radio, you will become an ambassador for your community and your country.

What Makes Ham Radio Different?

- There are many unlicensed radio services available (e.g. FRS, CB, MURS).
- Ham radio is authorized:
 - Fewer restrictions
 - More frequencies (channels or bands to utilize)
 - More power (to improve range and quality)
 - More ways to communicate (voice, Morse code, digital, TV, etc)
 - It's free to operate your radio

With More Privileges Comes More Responsibility

- Because ham radios are much more capable and have the potential of interfering with other radio services.
- Because ham radios have unlimited reach. They easily reach around the globe and into space.
- FCC authorization is required to ensure the operator is qualified to operate the ham radio safely, appropriately and within the rules and regulation – that is why you are here.

Amateur Radio License Classes (Levels)

- Technician Class
 - Entry level
 - CW privileges only, on 80, 40, and 15 m; RTTY, data and phone privileges on 10 m (HF bands for long distance/international communications)
 - All privileges on VHF (2 m) and UHF (70 cm) bands (most commonly used bands)
- General Class
 - More electronics understanding required
 - Phone privileges on all HF bands
- Amateur Extra Class
 - Advanced electronics understanding required
 - All privileges everywhere

Amateur Radio Technician Class License Prep (cont.)

Technician Class License

The Technician test covers the following elements:

- FCC Rules and station license responsibilities 6 exam questions
- Operating procedures 3 exam questions
- Radio wave characteristics, propagation 3 exam questions
- Amateur radio practices and station set up 2 exam questions
- Electrical principles, electronics math, ohm's law 4 exam questions
- Electrical components, circuit diagrams 4 exam questions
- Station equipment, troubleshooting, repair 4 exam questions
- Modulation modes, satellite ops, digital 4 exam questions
- Antennas and feedlines 2 exam questions
- Electrical safety, power circuits, RF hazards 3 exam questions

Steps to Obtaining Your License

- Study the material and test questions in *The ARRL Ham Radio License Manual, Fourth Edition*. Text cover price \$32.95; Kindle version currently avail on Amazon for \$19.99.
- **There is a new question pool starting July 1, 2018 - get the FOURTH Edition!**
- Take interactive practice exams.
- Pass a proctored 35-question multiple choice test.
 - Questions pulled directly from the published question pool.
 - Need to answer 26 questions correctly.
- No Morse code is required.

On-line Resources

Exam Practice Tests and other information:

- <http://radioexam.org>
- <http://www.qrz.com/hamtest>
- <http://www.eham.net/exams>
- <http://www.arrl.org/question-pools>

Local Groups:

- <http://ares.santa-cruz.ca.us> (Santa Cruz County Amateur Radio Emergency Service)
- <http://www.k6bj.org> (Santa Cruz County Amateur Radio Club)

National Association for Amateur Radio (ARRL):

- <http://www.arrl.org>

Testing

- Available 1st and 3rd Saturdays in the Bay Area
 - Silicon Valley VE Group, Saratoga Fire Station, 8 am
- **Santa Cruz County VE Exam Session often follow local classes**
 - VE (Volunteer Examiners)

Questions? Email me (Jerry Inman) ae6i@live.com