

Technician License Course Chapter 7

Lesson Module 15 – License Regulations and Privileges



Section 1 – License Rules

- Licensing authority for Amateur Radio
 - Federal Communications Commission
 - FCC rules published in Part 97 of Title 47 – Code of Federal Regulations.
 - Usually referred to as “Part 97”



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Why Is There Ham Radio? (Part 97.1)

- Providing emergency communication capability.
- Advancement of the art and science of radio.
- Advance communication and technical skills of radio.
- Provide a trained reservoir of operators, technicians and electronics experts.
- Promote and enhance international goodwill.



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Some Definitions

- Amateur Service – no pecuniary interest (private and personal, non commercial).
- Amateur Operator – the person holding authorization (license) to operate an Amateur Radio station.
- Amateur Station – equipment capable of transmitting on frequencies authorized for Amateur Service.



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The Amateur License

- No age limit or citizenship restrictions.
 - One exception – foreign representatives
- License actually contains two parts.
 - Operator license
 - Station license (the call sign)
- Three levels of operator privileges:
Technician, General, Amateur Extra.



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Licensing Examinations

- Volunteer Examiners (VEs)
- Volunteer Examiner Coordinators (VECs)
- Preparation
 - Study the content
 - Question Pool
- Taking the exam
 - Proctored exam
 - Multiple choice
 - What the fee pays for



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License Term and Renewal

- The license is free and good for 10 years.
 - Renewable within 90 days of the expiration date.
- Some personal identification information is required.
 - Tax ID (Social Security Number).
 - Current Mailing Address.
 - Federal Registration Number (FRN).



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Responsibilities of Licensure

- Prevent unauthorized operation of your station.
- Provide personal information as required – keep a current mailing address on file.
- Make your station available for FCC inspection upon request.



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FCC ULS Web Site

www.wireless.fcc.gov/uls

- Register for on-line access to your license information.
- Make changes to your address and other information.
- Renew your license.
- Search for other station information.



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Section 2 – Privileges

- What can you do with a Technician license?
- Power privileges
 - Maximum of 1500 watts peak envelope power (PEP)
 - Don't use excessive power for the purpose
- Some special cases where power is restricted
 - 200 watts on 80, 40, 15, 10 meters
 - 50 watts on 219–220 MHz
 - See §97.313 for other restrictions

Technician HF Privileges 200 watts PEP maximum output	
Band (Wavelength)	Frequency (MHz)
80 meters	3.525-3.600 (CW only)
40 meters	7.025-7.125 (CW only)
15 meters	21.025-21.200 (CW only)
10 meters	28.000-28.300 (CW, RTTY and data)
	28.300-28.500 (CW and SSB)



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What Can You Do with a Technician Class License?

- Frequency Privileges:
 - Band versus frequency.

$$\text{Band} \approx \frac{300}{\text{Freq(MHz)}}$$

VHF and UHF Technician Amateur Bands

ITU Region 2	
Band (Wavelength)	Frequency Limits
VHF Range	
6 meters	50 – 54 MHz
2 meters	144 – 148 MHz
1.25 meters	219 – 220 MHz
1.25 meters	222 – 225 MHz
UHF Range	
70 centimeters	420 – 450 MHz
33 centimeters	902 – 928 MHz
23 centimeters	1240 – 1300 MHz
13 centimeters	2300 – 2310 MHz
13 centimeters	2390 – 2450 MHz



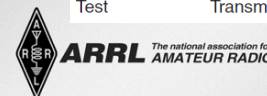
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What Can You Do with a Technician Class License?

- Emission Privileges:

Amateur Emission Types

Emission	Description
CW	Morse code telegraphy
Data	Computer-to-computer communication modes, usually called digital modes
Image	Television (fast-scan and slow-scan) and facsimile or fax
MCW	Tone-modulated CW, Morse code generated by keying an audio tone
Phone	Speech or voice communications
Pulse	Communications using a sequence of pulses whose characteristics are modulated in order to carry information
RTTY	Narrow-band, direct-printing telegraphy received by automatic equipment, such as a computer or teleprinter
SS	Spread-spectrum communications in which the signal is spread out over a wide band of frequencies
Test	Transmissions containing no information



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Primary and Secondary Allocations

- Some authorized amateur frequencies are shared.
 - Primary Users
 - Secondary Users – must avoid interfering with users of the primary service



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Band Plans

- Voluntary arrangements that apply under normal band loading conditions

10 Meters (28-29.7 MHz)

28.000-28.070	CW
28.070-28.150	RTTY
28.150-28.190	CW
28.200-28.300	Beacons
28.300-29.300	Phone
28.680	SSTV
29.000-29.200	AM
29.300-29.510	Satellite Downlinks
29.520-29.590	Repeater Inputs
29.600	FM Simplex
29.610-29.700	Repeater Outputs



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Frequency Coordinators

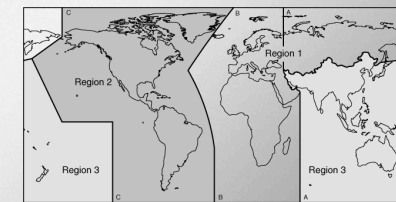
- Groups that help allocate repeater channels to minimize interference
- Elected by local or regional amateurs
- Repeaters approved by the coordinators are *coordinated*
- FCC considers frequency coordination “good amateur practice.”



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Section 3 – International Rules

- International Telecommunication Union (ITU).
 - Regions 1, 2 and 3
 - Continental US hams are in Region 2
 - Some Pacific possessions in Region 3



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International Operating Authorization

- Reciprocal operating authority
- International Amateur Radio Permit (IARP)
- CEPT licensing
- ARRL website on international operating
 - www.arrl.org/international-operating



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International Operating Authorization

- Must comply with host country regulations
- May operate from US-flagged vessels
 - Host country's rules apply in territorial waters
- Contacts with other countries must be allowed by that country and by the US
 - Very rare for contacts to be prohibited!



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