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# Lesson 6: Station Licensee Duties

Preparation for  
Amateur Radio  
Technician Class  
Exam

# Topics

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- Your License
- Antenna location
- Control Operator
- Station Records
- Emergency Communication
- Exam Questions for this section

# Reading

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## ➤ Chapter 4

# Your License

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- Your license is in two parts
  - Operator license
    - Lists your license class and gives you authority to operate an amateur station
  - Station license
    - Lists the address of your primary station and your callsign
    - You can operate anywhere the FCC allows, not just at your primary station

# Operator License

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- You may operate anywhere the FCC licenses radio operators or where permitted through a reciprocal operating authority
- You may operate on an airplane or cruise ship only with the approval of the pilot or master of the ship
  - You may not use their radio – you have to use yours

# Primary Station

- The primary station is where the FCC contacts you
  - Keep this address up to date to comply with FCC regulations and to receive letters from the FCC
  - Send form 605 to the FCC in Gettysburg, PA with a copy of your license, or use the Universal Licensing System online to change your address
  - Your amateur license can be revoked if you do not keep your address up to date

# Antenna Location

- We have been talking about RF and the importance of protecting ourselves and others from over-exposure to RF
- This affects the location of the antenna to some degree
- Other factors influencing the location of the antenna include:
  - Restrictions on height of the antenna
  - Height above terrain
  - Distance to transmitter
  - Location of nearby structures

# Antenna height

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- Your whole antenna structure must not be over 200 feet high
  - You can register to have higher antennas with FCC approval
  - You must also contact the FAA and get their permission
    - If you live within 4 miles of an airport the FAA will impose further height restrictions



# Antenna Height

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- You would like your antenna as high above the average terrain as feasible because:
  - You get better performance
  - You keep the radiating elements away from people and animals

# Distance to Transmitter

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- You want to adjust the distance from the antenna to the transmitter because:
  - Keep the antenna away from people to avoid RF exposure
  - Keep the antenna near to transmitter to reduce length of feed line
    - Longer feed lines are more expensive
    - Longer feed lines lead to more signal loss

# Location of Nearby Structures

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- Keep the antenna away from structures that will negatively affect the performance of the antenna, such as:
  - Tall buildings
  - Metal structures
  - Power lines

# Control Operator

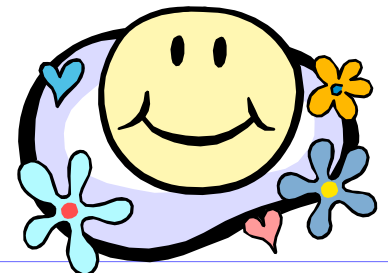
- A control operator is:
  - “Amateur operator designated by the licensee of a station to be responsible for the transmissions from that station to assure compliance with the FCC rules”
  - Often, this is the person operating the station
    - If you are operating your own station, you are the control operator
  - The control operator is always responsible for the proper operation of the station, no matter who is using the radio
  - You may control the operation of any number of transmitters at the same time

# Control Operator

- A control operator must be at the control point whenever the transmitter is operating
  - The control point is “the location at which the control operator function is performed”
    - You may be the control operator to allow an unlicensed person to operate your station
    - You are physically present while someone else uses the radio
    - For example, to allow an unlicensed family member to talk to an astronaut on

# Control Operator

- Being Control Operator also means you must control access to your station at all times to prevent unauthorized use
  - Typically this can be accomplished in the following ways:
    - Have a key-operated on/off switch in the main power line to your equipment
    - Keep the equipment in a locked room
    - Disconnect the microphone (especially good for mobile rigs)
    - Have everyone in the household get a license!



# Station Records

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- You are not required to keep information about the operation of your station
  - Many hams keep a station logbook to record information about who they talked to, when, and what the conditions were like (reception, weather)
  - A logbook will be required if you get into contesting, so that you can prove your contacts

# FCC Inspections

- The FCC can inspect your station at any time
- The FCC can modify the terms of your station license at any time if it is deemed in the public interest
  - For example, if your station is causing harmful interference to a local radio or television transceiver of good engineering design, you may be given operating restrictions
    - Such as you cannot operate between 8 pm and 10:30 pm local time daily or between 10:30 am to 1 pm on Sunday.



# Emergency Communication

## ➤ According to the FCC:

- No provision of these rules prevents the use by an amateur station in distress of any means at its disposal to attract attention, make known its condition and location, and obtain assistance
- No provision of these rules prevents the use by a station, in the exceptional circumstances described above, of any means of radiocommunication at its disposal to assist a station in distress

# Emergency Communication

## ➤ What this means to you:

- If you hear a distress call outside of frequencies where you are allowed to operate, and no one else responds, you may use those frequencies to help out
- If you are involved in a serious emergency situation, you may use any means at your disposal to get help, even if it means using frequencies outside those you are normally allowed to use

# Emergency Communication

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- Additionally, the FCC can declare a temporary state of communication emergency
  - The declaration will state any special conditions or rules to follow during the emergency
    - Such as restricting frequencies for particular uses, or not allowing amateur use of the frequencies except by those working for ARES or RACES

# Emergency Communication

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- In an emergency, a radio amateur may make any transmissions that are necessary to meet essential communication needs and facilitate relief actions

# Making Distress Calls

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- If you need immediate help, you can call MAYDAY, identifying with your call sign
- If there is an ongoing conversation, you may interrupt by saying BREAK, followed by your call sign
- If you hear a BREAK during one of your conversations, immediately stop and offer assistance

# Emergency Operations

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- In an emergency, such as the recent hurricanes in Florida, amateur radio operators bring out their gear to assist in communications efforts
  - This includes backup power such as deep cell marine batteries to power equipment, extra charged batteries for handheld radios, and portable dipole antennas to be able to set up a communication station anywhere

# Emergency Operations

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- In an emergency, a ham network will often use tactical call signs to make communications more efficient
  - These may identify locations, functions or agencies
  - Our local ARES group uses tactical call signs such as Jackson County EOC, Ashland Hospital, or Rogue Valley Manor

# Emergency Operations

- There are a variety of message types that hams handle during an emergency:
  - Emergency traffic – come out of a disaster area, life-and-death urgency, critical needs for help
  - Priority traffic – disaster related messages that are not as urgent as emergency traffic
  - Health and welfare traffic – information from people in the area for friends and family outside the area, or inquiries from friends and family to someone located in the disaster area



# Emergency Services

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## ➤ RACES

- Radio Amateur Civil Emergency Service
  - Communication assistance to civil defense organization in times of need
  - You must be registered with the responsible civil defense organization to participate in RACES

## ➤ ARES

- Amateur Radio Emergency Services
  - Communication assistance to any agency that requests help

# Emergency Services

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- The emergency services groups conduct periodic drills and tests to prepare for actual emergencies
  - Hams are involved with these as well
  - To avoid confusion, messages sent during a drill or test are identified, such as “This is a drill” or “This is a test”

# Exam Questions

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- The following slides contain questions from the exam pool that are covered in this section of the notes

# T4A01

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- T4A01 When may you operate your amateur station aboard a cruise ship?
- A. At any time
  - B. Only while the ship is not under power C.
  - Only with the approval of the master of the ship and not using the ship's radio equipment
  - D. Only when you have written permission from the cruise line and only using the ship's radio equipment

# T4A02

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- T4A02 When may you operate your amateur station somewhere in the US besides the address listed on your license?
- A. Only during times of emergency
  - B. Only after giving proper notice to the FCC
  - C. During an emergency or an FCC-approved emergency practice
  - D. Whenever you want to

# T4A03

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- T4A03 What penalty may the FCC impose if you fail to provide your correct mailing address?
- A. There is no penalty if you do not provide the correct address
  - B. You are subject to an administrative fine
  - C. Your amateur license could be revoked
  - D. You may only operate from your address of record

# T4A04

- T4A04 Under what conditions may you transmit from a location different from the address printed on your amateur license?
- A. If the location is under the control of the FCC, whenever the FCC Rules allow
  - B. If the location is outside the United States, only for a time period of less than 90 days
  - C. Only when you have written permission from the FCC Engineer in Charge
  - D. Never; you may only operate at the location printed on your license

# T4A05

- T4A05 Why must an amateur operator have a current US postal mailing address?
- A. So the FCC has a record of the location of each amateur station
  - B. To follow the FCC rules and so the licensee can receive mail from the FCC
  - C. Because all US amateurs must be US residents
  - D. So the FCC can publish a call-sign directory



# T4A06

- T4A06 What is one way to notify the FCC if your mailing address changes?
- A. Fill out an FCC Form 605 using your new address, attach a copy of your license, and mail it to your local FCC Field Office
  - B. Fill out an FCC Form 605 using your new address, attach a copy of your license, and mail it to the FCC office in Gettysburg, PA
  - C. Call your local FCC Field Office and give them your new address over the phone
  - D. Call the FCC office in Gettysburg, PA, and give them your new address over the phone

# T4A10

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- T4A10 When may you operate your amateur station aboard an aircraft?
- A. At any time
  - B. Only while the aircraft is on the ground
  - C. Only with the approval of the pilot in command and not using the aircraft's radio equipment
  - D. Only when you have written permission from the airline and only using the aircraft's radio equipment

# T4A07

- T4A07 What do FCC rules require you to do if you plan to erect an antenna whose height exceeds 200 feet?
- A. Notify the Federal Aviation Administration and register with the FCC
  - B. FCC rules prohibit antenna structures above 200 feet
  - C. Alternating sections of the supporting structure must be painted international airline orange and white
  - D. The antenna structure must be approved by the FCC and DOD

# T4A08

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- T4A08 Which of the following is NOT an important consideration when selecting a location for a transmitting antenna?
- A. Nearby structures
  - B. Height above average terrain
  - C. Distance from the transmitter location
  - D. Polarization of the feed line

# T4A09

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- T4A09 What is the height restriction the FCC places on Amateur Radio Service antenna structures without registration with the FCC and FAA?
- A. There is no restriction by the FCC
  - B. 200 feet
  - C. 300 feet
  - D. As permitted by PRB-1

# T4B01

- T4B01 What is the definition of a control operator of an amateur station?
- A. Anyone who operates the controls of the station
  - B. Anyone who is responsible for the station's equipment
  - C. Any licensed amateur operator who is responsible for the station's transmissions
  - D. The amateur operator with the highest class of license who is near the controls of the station

# T4B02

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- T4B02 What is the FCC's name for the person responsible for the transmissions from an amateur station?
- A. Auxiliary operator
  - B. Operations coordinator
  - C. Third-party operator
  - D. Control operator

# T4B03

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- T4B03 When must an amateur station have a control operator?
- A. Only when training another amateur
  - B. Whenever the station receiver is operated
  - C. Whenever the station is transmitting
  - D. A control operator is not needed



# T4B04

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- T4B04 What is the term for the location at which the control operator function is performed?
- A. The operating desk
  - B. The control point
  - C. The station location
  - D. The manual control location

# T4B05

- T4B05 What is the control point of an amateur station?
- A. The on/off switch of the transmitter
  - B. The input/output port of a packet controller
  - C. The variable frequency oscillator of a transmitter
  - D. The location at which the control operator function is performed

# T4B06

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- T4B06 When you operate your transmitting equipment alone, what is your official designation?
- A. Engineer in Charge
  - B. Commercial radio operator
  - C. Third party
  - D. Control operator

# T4B07

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- T4B07 When does the FCC assume that you authorize transmissions with your call sign as the control operator?
- A. At all times
  - B. Only in the evening hours
  - C. Only when operating third party traffic
  - D. Only when operating as a reciprocal operating station

# T4B08

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- T4B08 What is the name for the operating position where the control operator has full control over the transmitter?
- A. Field point
  - B. Auxiliary point
  - C. Control point
  - D. Access point

# T4B09

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- T4B09 When is the FCC allowed to conduct an inspection of your amateur station?
- A. Only on weekends
  - B. At any time
  - C. Never, the FCC does not inspect stations
  - D. Only during daylight hours

# T4B10

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- T4B10 How many transmitters may an amateur licensee control at the same time?
- A. Only one
  - B. No more than two
  - C. Any number
  - D. Any number, as long as they are transmitting in different bands

# T4B11

- T4B11 If you have been informed that your amateur radio station causes interference to nearby radio or television broadcast receivers of good engineering design, what operating restrictions can FCC rules impose on your station?
  - A. Require that you discontinue operation on frequencies causing interference during certain evening hours and on Sunday morning (local time)
  - B. Relocate your station or reduce your transmitter's output power
  - C. Nothing, unless the FCC conducts an investigation of the interference problem and issues a citation
  - D. Reduce antenna height so as to reduce the area affected by the interference



# T4B12

- T4B12 How could you best keep unauthorized persons from using your amateur station at home?
- A. Use a carrier-operated relay in the main power line
  - B. Use a key-operated on/off switch in the main power line
  - C. Put a "Danger - High Voltage" sign in the station
  - D. Put fuses in the main power line

# T4B13

- T4B13 How could you best keep unauthorized persons from using a mobile amateur station in your car?
- A. Disconnect the microphone when you are not using it
  - B. Put a "do not touch" sign on the radio
  - C. Turn the radio off when you are not using it
  - D. Tune the radio to an unused frequency when you are done using it

# T4C01

- T4C01 If you hear a voice distress signal on a frequency outside of your license privileges, what are you allowed to do to help the station in distress?
- A. You are NOT allowed to help because the frequency of the signal is outside your privileges
  - B. You are allowed to help only if you keep your signals within the nearest frequency band of your privileges
  - C. You are allowed to help on a frequency outside your privileges only if you use international Morse code
  - D. You are allowed to help on a frequency outside your privileges in any way possible

# T4C02

- T4C02 When may you use your amateur station to transmit an "SOS" or "MAYDAY"?
- A. Never
  - B. Only at specific times (at 15 and 30 minutes after the hour)
  - C. In a life- or property-threatening emergency
  - D. When the National Weather Service has announced a severe weather watch

# T4C03

- T4C03 If a disaster disrupts normal communication systems in an area where the FCC regulates the amateur service, what kinds of transmissions may stations make?
- A. Those that are necessary to meet essential communication needs and facilitate relief actions
  - B. Those that allow a commercial business to continue to operate in the affected area
  - C. Those for which material compensation has been paid to the amateur operator for delivery into the affected area
  - D. Those that are to be used for program production or newsgathering for broadcasting purposes

# T4C04

- T4C04 What information is included in an FCC declaration of a temporary state of communication emergency?
  - A. A list of organizations authorized to use radio communications in the affected area
  - B. A list of amateur frequency bands to be used in the affected area
  - C. Any special conditions and special rules to be observed during the emergency
  - D. An operating schedule for authorized amateur emergency stations

# T4C05

- T4C05 If you are in contact with another station and you hear an emergency call for help on your frequency, what should you do?
- A. Tell the calling station that the frequency is in use
  - B. Direct the calling station to the nearest emergency net frequency
  - C. Call your local Civil Preparedness Office and inform them of the emergency
  - D. Stop your QSO immediately and take the emergency call

# T4C06

- T4C06 What is the proper way to interrupt a repeater conversation to signal a distress call?
- A. Say "BREAK" once, then your call sign
  - B. Say "HELP" as many times as it takes to get someone to answer
  - C. Say "SOS," then your call sign
  - D. Say "EMERGENCY" three times



# T4C07

- T4C07 What is one reason for using tactical call signs such as "command post" or "weather center" during an emergency?
- A. They keep the general public informed about what is going on
  - B. They are more efficient and help coordinate public-service communications
  - C. They are required by the FCC
  - D. They increase goodwill between amateurs

# T4C08

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- T4C08 What type of messages concerning a person's well being are sent into or out of a disaster area?
- A. Routine traffic
  - B. Tactical traffic
  - C. Formal message traffic
  - D. Health and welfare traffic

# T4C09

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- T4C09 What are messages called that are sent into or out of a disaster area concerning the immediate safety of human life?
- A. Tactical traffic
  - B. Emergency traffic
  - C. Formal message traffic
  - D. Health and welfare traffic

# T4C10

- T4C10 Why is it a good idea to have a way to operate your amateur station without using commercial AC power lines?
- A. So you may use your station while mobile
  - B. So you may provide communications in an emergency
  - C. So you may operate in contests where AC power is not allowed
  - D. So you will comply with the FCC rules

# T4C11

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- T4C11 What is the most important accessory to have for a hand-held radio in an emergency?
- A. An extra antenna
  - B. A portable amplifier
  - C. Several sets of charged batteries
  - D. A microphone headset for hands-free operation

# T4C12

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- T4C12 Which type of antenna would be a good choice as part of a portable HF amateur station that could be set up in case of an emergency?
- A. A three-element quad
  - B. A three-element Yagi
  - C. A dipole
  - D. A parabolic dish

# T4C13

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- T4C13 How must you identify messages sent during a RACES drill?
- A. As emergency messages
  - B. As amateur traffic
  - C. As official government messages
  - D. As drill or test messages

# T4C14

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- T4C14 With what organization must you register before you can participate in RACES drills?
- A. A local Amateur Radio club
  - B. A local racing organization
  - C. The responsible civil defense organization
  - D. The Federal Communications Commission