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# Lesson 8: Control Operator Duties

Preparation for  
Amateur Radio  
Technician Class  
Exam

# Topics

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- Control Operator
- Interference
- Station Identification
- Prohibited Practices
- Third Party Communications
- Transmitter Output
- Exam Questions for this section

# Reading

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## ➤ Chapter 5

# 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
- The only exception is for automatically controlled stations, such as repeater stations (repeaters are stations that automatically rebroadcast signals)
  - But, if you set up your mobile dual-band transceiver as a cross-band repeater, you must be present as control operator at the control point

# Control Operator

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- You can operate any amateur radio station, but only at the level of your own license
  - If another ham with a higher license class uses your station, they operate at their level
- Operation privileges go with the person, not the station
- Complete information on your duties, responsibilities, and privileges is in FCC Part 97

# Interference

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- If you are a secondary user of a band, if a primary user interferes with your use of the frequency, you must change frequencies!
- In an emergency, there is generally a net control operator in charge of the communications of a group of hams (a net)
  - To avoid interference, only transmit when asked to by the net control operator; otherwise, just listen

# Station Identification

- Transmit your call sign every 10 minutes and at the end of your transmission
- You must transmit your call sign in English, no matter what language you are using for your transmission
  - You can use the ITU phonetics to identify your call sign, or Morse Code
    - KE7BOF = Kilo Echo 7 Baker Oscar Foxtrot
    - KN6FO = Kilo Nancy 6 Foxtrot Oscar

# Prohibited Practices

- Unidentified communications or signals
  - This is transmitting without identifying your signal
  - It is not legal even to “key up” a repeater without identifying with your call sign
  - The only time you do not have to identify your transmission is when using your radio to control model craft
    - In this case, you must label your transmitter with your name, address, and call sign

# Prohibited Practices

- False or deceptive signals
  - Such as claiming an emergency or calling MAYDAY when there is no emergency
- Harmful or malicious interference
  - You may never deliberately interfere with another station's transmissions
  - Examples of harmful or malicious interference
    - Transmitting on a police frequency as a joke
    - Interfering with a primary user of a frequency
    - Interfering with emergency communications
    - Deliberately interfering with a net

# Third Party Communications

- A message sent between two amateur stations for someone else is third-party communications
  - You may not receive payment for passing third-party messages
  - NTS (National Traffic System) is a nationwide group of hams who daily pass third-party messages around the US
    - They are quite busy during disasters such as the recent string of hurricanes in Florida

# Third Party Communications

- You may not pass third party messages to other countries except in these conditions:
  - The US shares a third-party agreement with the other country
  - In an emergency when there is an immediate threat to lives or property
  - The third part is eligible to be a control operator of the station
- In international communications, in addition to normal identification, you must transmit both call signs at the end of the communication

# Third Party Communications

- Third party participation is where you let an unlicensed person participate in Amateur Radio communications from your station
  - You, the control operator, must always be physically present to be sure this person follows all the rules
  - An unlicensed person who had their license suspended or revoked by the FCC may not participate in any amateur communication, even if a licensed ham is present

# Transmitter Power Output

- In general, use the minimum power necessary to carry out the desired communication
- Transmitter power is measured in watts as Peak Envelope Power (PEP)
  - PEP = average power supplied to an antenna transmission line during one RF cycle at the crest of the modulation envelope
- The maximum PEP you can use is 1500 watts, but the actual number may be much lower, depending on frequency
  - Few hams use more than 200 watts PEP on a regular basis

# Exam Questions

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

# T5A01

- T5A01 If you are the control operator at the station of another amateur who has a higher-class license than yours, what operating privileges are you allowed?
- A. Any privileges allowed by the higher license
  - B. Only the privileges allowed by your license
  - C. All the emission privileges of the higher license, but only the frequency privileges of your license
  - D. All the frequency privileges of the higher license, but only the emission privileges of your license

# T5A02

- T5A02 Assuming you operate within your amateur license privileges, what restrictions apply to operating amateur equipment?
- A. You may operate any amateur equipment
  - B. You may only operate equipment located at the address printed on your amateur license
  - C. You may only operate someone else's equipment if you first notify the FCC
  - D. You may only operate store-purchased equipment until you earn your Amateur Extra class license

# T5A03

- T5A03 When an amateur station is transmitting, where must its control operator be, assuming the station is not under automatic control?
- A. At the station's control point
  - B. Anywhere in the same building as the transmitter
  - C. At the station's entrance, to control entry to the room
  - D. Anywhere within 50 km of the station location

# T5A04

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- T5A04 Where will you find a detailed list of your operating privileges?
- A. In the OET Bulletin 65 Index
  - B. In FCC Part 97
  - C. In your equipment's operating instructions
  - D. In Part 15 of the Code of Federal Regulations

# T5A05

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- T5A05 If you transmit from another amateur's station, who is responsible for its proper operation?
- A. Both of you
  - B. The other amateur (the station licensee)
  - C. You, the control operator
  - D. The station licensee, unless the station records show that you were the control operator at the time

# T5A06

- T5A06 If you let another amateur with a higher class license than yours control your station, what operating privileges are allowed?
- A. Any privileges allowed by the higher license, as long as proper identification procedures are followed
  - B. Only the privileges allowed by your license
  - C. All the emission privileges of the higher license, but only the frequency privileges of your license
  - D. All the frequency privileges of the higher license, but only the emission privileges of your license

# T5A07

- T5A07 If a Technician class licensee uses the station of a General class licensee, how may the Technician licensee operate?
- A. Within the frequency limits of a General class license
  - B. Within the limits of a Technician class license
  - C. Only as a third party with the General class licensee as the control operator
  - D. A Technician class licensee may not operate a General class station

# T5A08

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- T5A08 What type of amateur station does not require the control operator to be present at the control point?
- A. A locally controlled station
  - B. A remotely controlled station
  - C. An automatically controlled station
  - D. An earth station controlling a space station

# T5A09

- T5A09 Why can't unlicensed persons in your family transmit using your amateur station if they are alone with your equipment?
- A. They must not use your equipment without your permission
  - B. They must be licensed before they are allowed to be control operators
  - C. They must first know how to use the right abbreviations and Q signals
  - D. They must first know the right frequencies and emissions for transmitting

# T5A10

- T5A10 If you own a dual-band mobile transceiver, what requirement must be met if you set it up to operate as a crossband repeater?
- A. There is no special requirement if you are licensed for both bands
  - B. You must hold an Amateur Extra class license
  - C. There must be a control operator at the system's control point
  - D. Operating a crossband mobile system is not allowed

# T5B09

- T5B09 If you are helping in a communications emergency that is being handled by a net control operator, how might you best minimize interference to the net once you have checked in?
- A. Whenever the net frequency is quiet, announce your call sign and location
  - B. Move 5 kHz away from the net's frequency and use high power to ask for other emergency communications
  - C. Do not transmit on the net frequency until asked to do so by the net operator
  - D. Wait until the net frequency is quiet, then ask for any emergency traffic for your area

# T5B11

- T5B11 Why is transmitting on a police frequency as a "joke" called harmful interference that deserves a large penalty?
- A. It annoys everyone who listens
  - B. It blocks police calls that might be an emergency and interrupts police communications
  - C. It is in bad taste to communicate with non-amateurs, even as a joke
  - D. It is poor amateur practice to transmit outside the amateur bands

# T5B12

- T5B12 If you are using a frequency within a band assigned to the amateur service on a secondary basis, and a station assigned to the primary service on that band causes interference, what action should you take?
- A. Notify the FCC's regional Engineer in Charge of the interference
  - B. Increase your transmitter's power to overcome the interference
  - C. Attempt to contact the station and request that it stop the interference
  - D. Change frequencies; you may be causing harmful interference to the other station, in violation of FCC rules

# T5C12

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- T5C12 What device is commonly used to retransmit amateur radio signals?
- A. A beacon
  - B. A repeater
  - C. A radio controller
  - D. A duplexer

# T5B01

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- T5B01 How often must an amateur station be identified?
- A. At the beginning of a contact and at least every ten minutes after that
  - B. At least once during each transmission
  - C. At least every ten minutes during and at the end of a contact
  - D. At the beginning and end of each transmission

# T5B02

- T5B02 What identification, if any, is required when two amateur stations end communications?
- A. No identification is required
  - B. One of the stations must transmit both stations' call signs
  - C. Each station must transmit its own call sign
  - D. Both stations must transmit both call signs

# T5B03

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- T5B03 What is the longest period of time an amateur station can operate without transmitting its call sign?
- A. 5 minutes
  - B. 10 minutes
  - C. 15 minutes
  - D. 30 minutes

# T5B04

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- [T5B04 - THIS QUESTION HAS BEEN FORMALLY WITHDRAWN BY THE QPC. IT WILL NOT BE USED ON TESTS.]

# T5B08

- T5B08 If you are using a language besides English to make a contact, what language must you use when identifying your station?
- A. The language being used for the contact
  - B. The language being used for the contact, provided the US has a third-party communications agreement with that country
  - C. English
  - D. Any language of a country that is a member of the International Telecommunication Union

# T5B10

- T5B10 What are the station identification requirements for an amateur transmitter used for telecommand (control) of model craft?
- A. Once every ten minutes
  - B. Once every ten minutes, and at the beginning and end of each transmission
  - C. At the beginning and end of each transmission
  - D. Station identification is not required if the transmitter is labeled with the station licensee's name, address and call sign

# T5C07

- T5C07 Besides normal identification, what else must a US station do when sending third-party communications internationally?
- A. The US station must transmit its own call sign at the beginning of each communication, and at least every ten minutes after that
  - B. The US station must transmit both call signs at the end of each communication
  - C. The US station must transmit its own call sign at the beginning of each communication, and at least every five minutes after that
  - D. Each station must transmit its own call sign at the end of each transmission, and at least every five minutes after that

# T5B05

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- T5B05 What is the term for the average power supplied to an antenna transmission line during one RF cycle at the crest of the modulation envelope?
- A. Peak transmitter power
  - B. Peak output power
  - C. Average radio-frequency power
  - D. Peak envelope power

# T5B06

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- [T5B06 - THIS QUESTION HAS BEEN FORMALLY WITHDRAWN BY THE QPC. IT WILL NOT BE USED ON TESTS.]

# T5B07

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- T5B07 What amount of transmitter power must amateur stations use at all times?
- A. 25 watts PEP output
  - B. 250 watts PEP output
  - C. 1500 watts PEP output
  - D. The minimum legal power necessary to communicate

# T5C01

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- T5C01 If you answer someone on the air and then complete your communication without giving your call sign, what type of communication have you just conducted?
- A. Test transmission
  - B. Tactical signal
  - C. Packet communication
  - D. Unidentified communication

# T5C08

- T5C08 If an amateur pretends there is an emergency and transmits the word "MAYDAY," what is this called?
- A. A traditional greeting in May
  - B. An emergency test transmission
  - C. False or deceptive signals
  - D. Nothing special; "MAYDAY" has no meaning in an emergency

# T5C09

- T5C09 If an amateur transmits to test access to a repeater without giving any station identification, what type of communication is this called?
- A. A test emission; no identification is required
  - B. An illegal unmodulated transmission
  - C. An illegal unidentified transmission
  - D. A non-communication; no voice is transmitted

# T5C10

- T5C10 When may you deliberately interfere with another station's communications?
- A. Only if the station is operating illegally
  - B. Only if the station begins transmitting on a frequency you are using
  - C. Never
  - D. You may expect, and cause, deliberate interference because it can't be helped during crowded band conditions

# T5C11

- T5C11 If an amateur repeatedly transmits on a frequency already occupied by a group of amateurs in a net operation, what type of interference is this called?
- A. Break-in interference
  - B. Harmful or malicious interference
  - C. Incidental interference
  - D. Intermittent interference

# T5C03

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- T5C03 What kind of payment is allowed for third-party messages sent by an amateur station?
- A. Any amount agreed upon in advance
  - B. Donation of repairs to amateur equipment
  - C. Donation of amateur equipment
  - D. No payment of any kind is allowed

# T5C04

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- T5C04 What is the definition of third-party communications?
- A. A message sent between two amateur stations for someone else
  - B. Public service communications for a political party
  - C. Any messages sent by amateur stations
  - D. A three-minute transmission to another amateur

# T5C05

- T5C05 When are third-party messages allowed to be sent to a foreign country?
- A. When sent by agreement of both control operators
  - B. When the third party speaks to a relative
  - C. They are not allowed under any circumstances
  - D. When the US has a third-party agreement with the foreign country or the third party is qualified to be a control operator

# T5C06

- T5C06 If you let an unlicensed third party use your amateur station, what must you do at your station's control point?
- A. You must continuously monitor and supervise the third-party's participation
  - B. You must monitor and supervise the communication only if contacts are made in countries that have no third-party communications agreement with the US
  - C. You must monitor and supervise the communication only if contacts are made on frequencies below 30 MHz
  - D. You must key the transmitter and make the station identification