

Technician Licensing Class

Going On The Air!

Presented by

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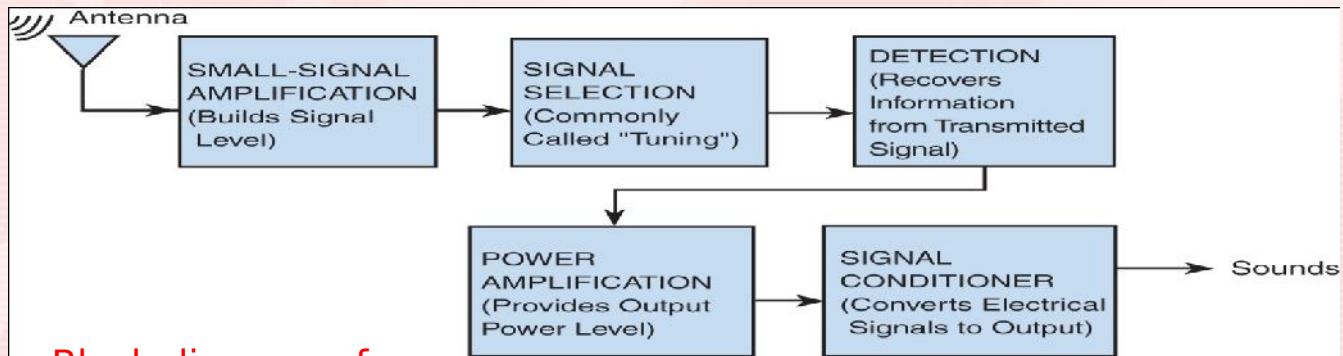
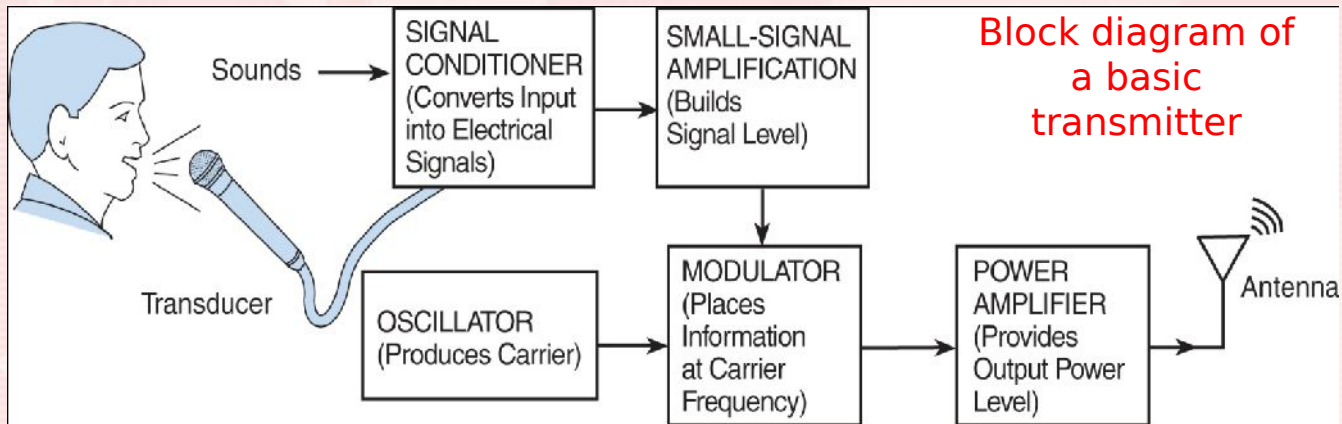


Amateur Radio Technician Class Element 2 Course Presentation

➤ **ELEMENT 2 SUB-ELEMENTS** (Groupings)

- **About Ham Radio**
- **Call Signs**
- **Control**
- **Mind the Rules**
- **Tech Frequencies**
- **Your First Radio**
- **Going On The Air!**
- **Repeaters**
- **Emergency!**
- **Weak Signal Propagation**

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Block diagram of a basic receiver

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- T4B2 The keypad or VFO knob can be used to enter the operating frequency on a modern transceiver
 - VFO - Variable Frequency Oscillator



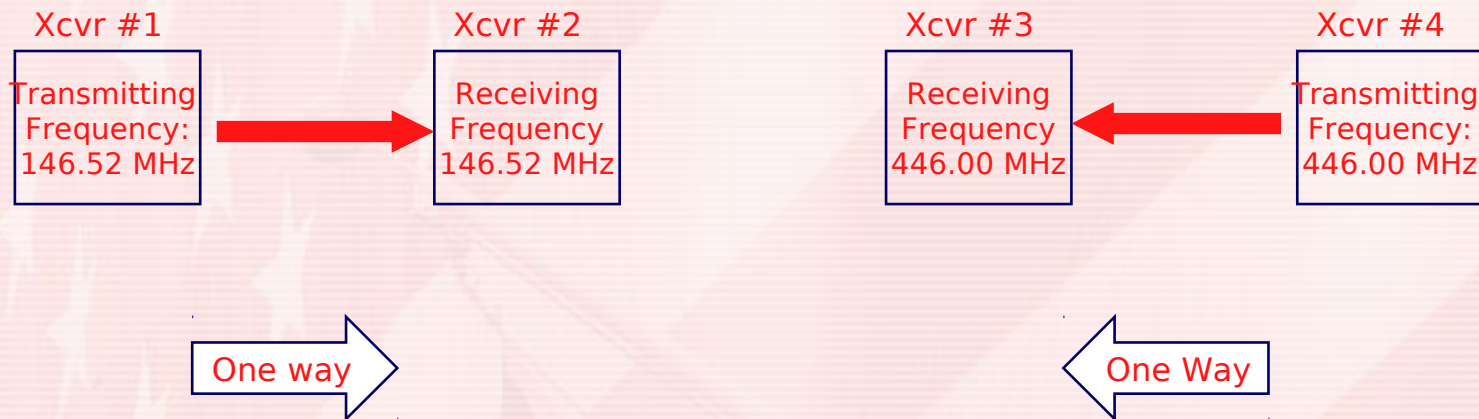
- T4B3 The purpose of the squelch control on a transceiver is to mute receiver output noise when no signal is being received.

- Squelch control is used to mute noise



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- T2B3 Carrier squelch describes the muting of receiver audio controlled solely by the presence or absence of an RF signal.
- T2B1 Simplex communication is the term used to describe an amateur station that is transmitting and receiving on the same frequency.



- No offset frequency used for simplex like with a repeater

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- T2A6 When making on-air transmissions to test equipment or antennas an amateur operator must properly identify the transmitting station.
 - All transmissions must be identified
- T2A7 When making a test transmission a station identification is required at least every ten minutes during the test and at the end.
 - Just like normal ID requirements for a QSO
- T2A8 The procedural signal "CQ" means calling any station.
- T2A5 When responding to a call of CQ you should transmit the other station's call sign followed by your call sign.
 - W5YI this is K3DIO

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- T2A4 An appropriate way to call another station on a repeater if you know the other station's call sign is to say the station's call sign then identify with your call sign.
 - W2HLD this is K3DIO
- T3A1 Should another operator reports that your stations 2 meter signals were strong just a moment ago, but now they are weak or distorted, try moving a few feet, as random reflections may be causing multi-path distortion.
- T3A6 Picket fencing is the term commonly used to describe the rapid fluttering sound sometimes heard from mobile stations that are moving while transmitting.

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- T2B8 The proper course of action to take if your station's transmission unintentionally interferes with another station is to properly identify your transmission and move to a different frequency.
- T2B10 QRM is the "Q" signal used to indicate that you are receiving interference from other stations.
- T2B11 QSY is the "Q" signal used to indicate that you are changing frequency.

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QRM **Something is causing interference**

QRN I am troubled by static/noise.

QR I am running low power.

QRT I am going off the air.

QRZ Who is calling me?

QSB Your signal is fading.

QSL I received the message.

QSO I will communicate with _____

QSY directly.

QTH **I am changing frequency to _____.**

My location is _____.

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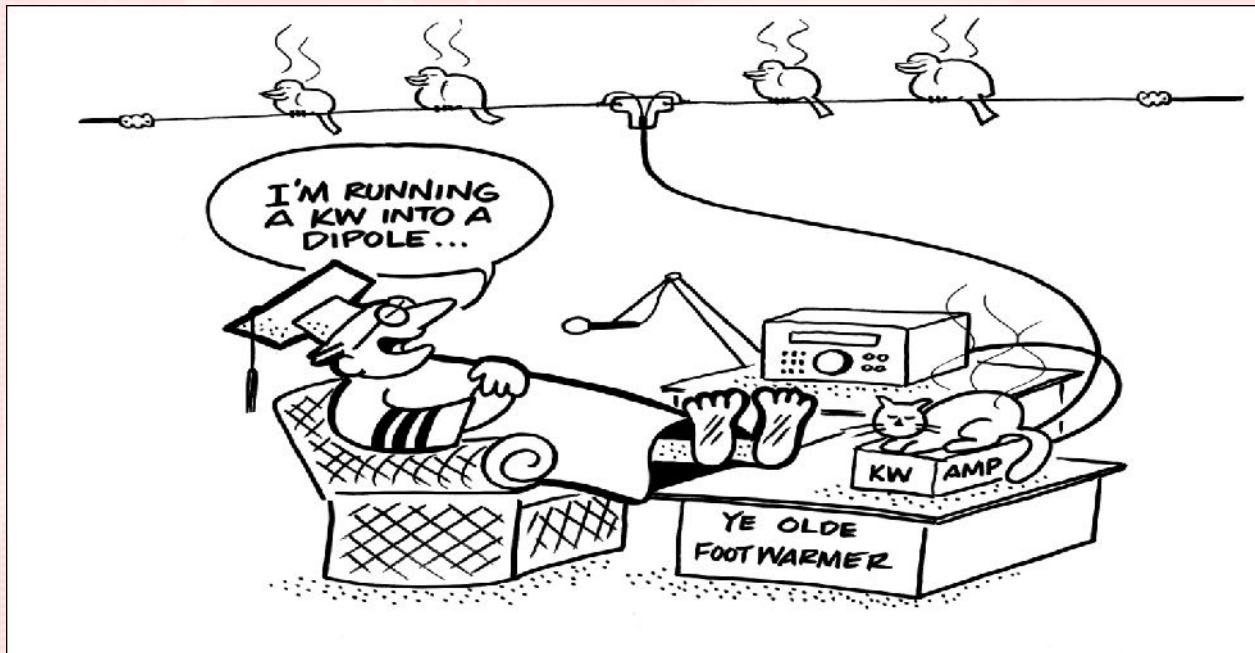
- T8C3 Contesting is a popular operating activity that involves contacting as many stations as possible during a specified period of time.



Field Day Every June Enjoyed By Hams the World Over

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T8C4 A good procedure when contacting another station in a radio contest is to send only the minimum information needed for proper identification and the contest exchange.

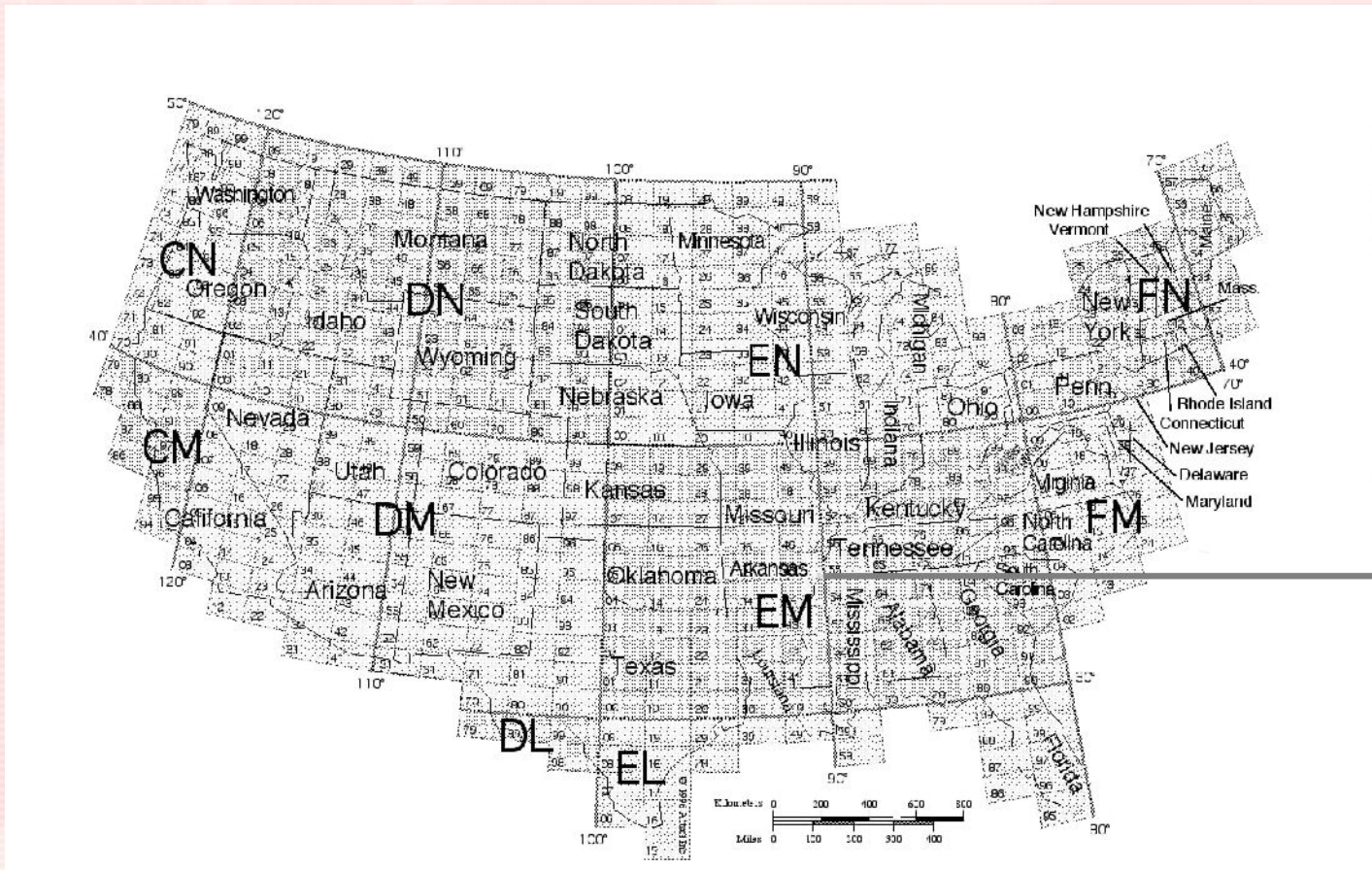


Chit chat is great for normal QSO's, but not for contests.

Contesting needs your call sign and info for contest only.

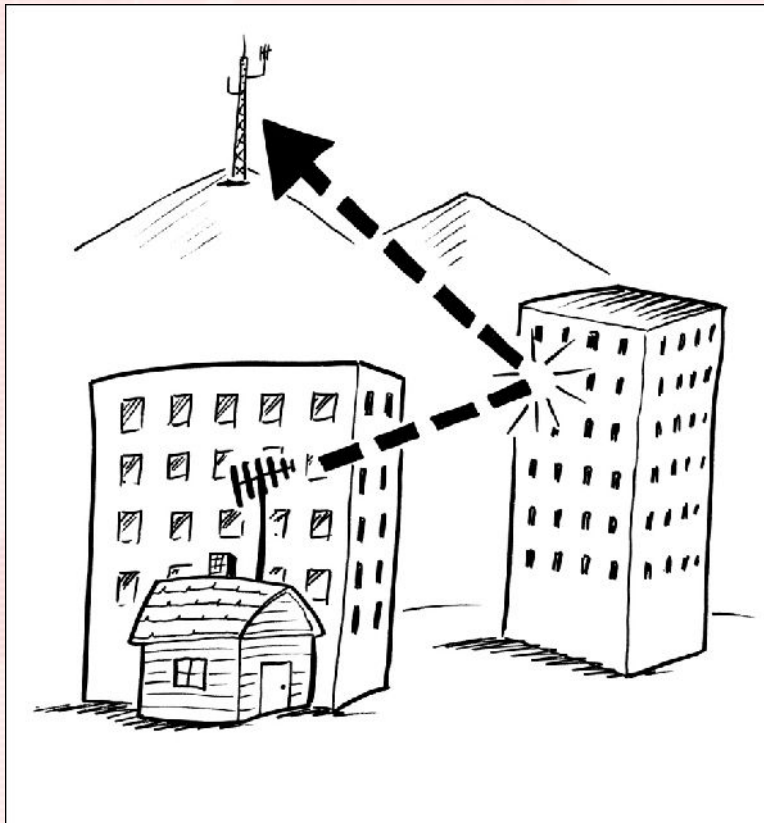
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- T8C5 A grid locator is a letter-number designator assigned to a geographic location.



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- T3A2 UHF signals are often more effective from inside buildings than VHF signals as the shorter wavelength allows them to more easily penetrate the structure of buildings.

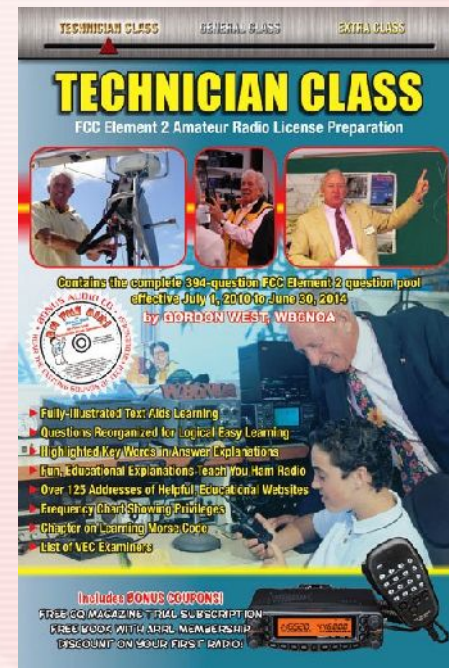


UHF signals are short enough in wavelength to permit bouncing around inside buildings and penetrating of walls.

Element 2 Technician Class Question Pool

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Valid July 1, 2010
Through
June 30, 2014



T4B02

Which can be used to enter the operating frequency on a modern transceiver?

- A. The keypad or VFO knob
- B. The CTCSS or DTMF encoder
- C. The Automatic Frequency Control
- D. All of these choices are correct

T4B03 What is the purpose of the squelch control on a transceiver?

- A.** To set the highest level of volume desired
- B.** To set the transmitter power level
- C.** To adjust the automatic gain control
- D.** To mute receiver output noise when no signal is being received

T2B03

Which describes the muting of receiver audio controlled solely by the presence or absence of an RF signal?

- A. Tone squelch
- B. Carrier squelch
- C. CTCSS
- D. Modulated carrier

T2B01

What term describes a station that is transmitting and receiving on the same frequency?

- A.** Full duplex communication
- B.** Diplex communication
- C.** Simplex communication
- D.** Half duplex communication

T2A06

What must an amateur operator do when making on-air transmissions to test equipment or antennas?

- A. Properly identify the transmitting station
- B. Make test transmissions only after 10:00 p.m. local time
- C. Notify the FCC of the test transmission
- D. State the purpose of the test during the test procedure

T2A07 Which of the following is true when making a test transmission?

- A. Station identification is not required if the transmission is less than 15 seconds
- B. Station identification is not required if the transmission is less than 1 watt
- C. Station identification is required only if your station can be heard
- D. Station identification is required at least every ten minutes during the test and at the end

T2A08 What is the meaning of the procedural signal "CQ"?

- A. Call on the quarter hour
- B. A new antenna is being tested (no station should answer)
- C. Only the called station should transmit
- D. Calling any station

T2A05 What should you transmit when responding to a call of CQ?

- A. CQ followed by the other station's call sign
- B. Your call sign followed by the other station's call sign
- C. The other station's call sign followed by your call sign
- D. A signal report followed by your call sign

T2A04

What is an appropriate way to call another station on a repeater if you know the other station's call sign?

- A. Say "break, break" then say the station's call sign
- B. Say the station's call sign then identify with your call sign
- C. Say "CQ" three times then the other station's call sign
- D. Wait for the station to call "CQ" then answer it

T3A01

What should you do if someone reports that your stations' 2m signals were strong just a moment ago, but now are weak/distorted?

- A. Change the batteries in your radio to a different type
- B. Turn on the CTCSS tone
- C. Ask the other operator to adjust his squelch control
- D. Try moving a few feet, as random reflections may be causing multi-path distortion

T3A06

What term describes the rapid fluttering sound sometimes heard from mobile stations that are moving while transmitting?

- A. Flip-flopping
- B. Picket fencing
- C. Frequency shifting
- D. Pulsing

T2B08

What is the proper course of action if your station's transmission unintentionally interferes with another station?

- A. Rotate your antenna slightly
- B. Properly identify your transmission and move to a different frequency
- C. Increase power
- D. Change antenna polarization

T2B10

What is the "Q" signal used to indicate that you are receiving interference from other stations?

- A. QRM
- B. QRN
- C. QTH
- D. QSB

T2B11 What is the "Q" signal used to indicate that you are changing frequency?

- A. QRU
- B. QSY
- C. QSL
- D. QRZ

T8C03

What popular activity involves contacting as many stations as possible during a specific time?

- A. Contesting
- B. Net operations
- C. Public service events
- D. Simulated emergency exercises

T8C04

Which of the following is good procedure when contacting another station in a radio contest?

- A. Be sure to sign only the last two letters of your call if there is a pileup calling the station
- B. Work the station twice to be sure that you are in his log
- C. Send only the minimum information needed for proper identification and the contest exchange
- D. All of these choices are correct

T8C05 What is a grid locator?

- A. A letter-number designator assigned to a geographic location
- B. A letter-number designator assigned to an azimuth and elevation
- C. An instrument for neutralizing a final amplifier
- D. An instrument for radio direction finding

T3A02 Why are UHF signals often more effective from inside buildings than VHF signals?

- A. Change the batteries in your radio to a different type
- B. The shorter wavelength allows them to more easily penetrate the structure of buildings
- C. This is incorrect; VHF works better than UHF inside buildings
- D. UHF antennas are more efficient than VHF antennas