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
ELEMENT 2 SUB-ELEMENTS (Groupings)

- Talk to Outer Space!
- Your Computer Goes Ham Digital!
- Multi-Mode Radio Excitement
- Run Some Interference Protection
- Electrons - Go With the Flow!
- It’s the Law, per Mr. Ohm!
- Go Picture These!
- Antennas
- Feed Me with Some Good Coax!
- Safety First!
Emergency!

• T2C6 Common practice during net operations to get the immediate attention of the net control station when reporting an emergency is to begin your transmission with “Priority” or “Emergency” followed by your call sign.

Another way to interrupt a conversation to signal a distress call is to say the word “BREAK” several times to indicate a priority or emergency distress call.
Emergency!

- When normal communications systems are not available, an amateur station may use any means of radio communications at its disposal for essential communications in connection with immediate safety of human life and protection of property.
  - in an *emergency, anything goes!*

Amateur radio operators are well known for their volunteer assistance in emergencies—from local problems to national disasters like 9/11 and Hurricanes Katrina and Rita.
Emergency!

- **T2C7** In order to minimize disruptions to an emergency traffic net once you have checked in, do not transmit on the net frequency until asked to do so by the net control station.

- **T2C1** FCC rules apply to proper operation of your station when using amateur radio at the request of public service officials.
  - Amateur radio operators are not relieved from FCC rules at request from FBI, FEMA, or any other Federal agency.

- **T2C5** Radio Amateur Civil Emergency Service (RACES) is a radio service using amateur stations for emergency management and civil defense communications.
Both RACES (Radio Amateur Civil Emergency Service) and ARES (Amateur Radio Emergency Service) organizations may provide communications during emergencies.

In an emergency, authorized hams participating in a RACES organization may communicate from a police helicopter.
Emergency!

- T2C10 In a formal traffic message the information needed to track the message as it passes through the amateur radio traffic handling system is called the preamble.
  - Keep track of emergency messages as they pass through the well structured amateur radio traffic-handling system.

Hams are well known for their work with the Red Cross, Salvation Army, and others providing emergency communications.
Emergency!

- T2C8  Passing messages exactly as written, spoken or as received is usually considered to be the most important job of an amateur operator when handling emergency traffic messages.

- Write in block letters, word for word.
The term "check" in reference to a formal traffic message is a count of the number of words or word equivalents in the text portion of the message. Include a ‘check’ to make sure all words in a message indeed were received in their entirety.

When you’re working emergency traffic, it’s important to make sure every word and number is passed along just as you received it. A “check” helps assure accuracy.
Emergency!

Valid July 1, 2010
Through
June 30, 2014
T2C06 Which of the following is common practice during net operations to get the immediate attention of the net control station when reporting an emergency?

A. Repeat the words SOS three times followed by the call sign of the reporting station
B. Press the push-to-talk button three times
C. Begin your transmission with “Priority” or “Emergency” followed by your call sign
D. Play a pre-recorded emergency alert tone followed by your call sign
When may an amateur station use any means of radio communications at its disposal for essential communications in connection with immediate safety of human life and protection of property?

A. Only when FEMA authorizes it by declaring an emergency
B. When normal communications systems are not available
C. Only when RACES authorizes it by declaring an emergency
D. Only when authorized by the local MARS program director
What should you do to minimize disruptions to an emergency traffic 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 other hams to keep clear of the net frequency
C. Do not transmit on the net frequency until asked to do so by the net control station
D. Wait until the net frequency is quiet, then ask for any emergency traffic for your area
What set of rules applies to proper operation of your station when using amateur radio at the request of public service officials?

A. RACES Rules
B. ARES Rules
C. FCC Rules
D. FEMA Rules
What is the Radio Amateur Civil Emergency Service?

A. An emergency radio service organized by amateur operators
B. A radio service using amateur stations for emergency management or civil defense communications
C. A radio service organized to provide communications at civic events
D. A radio service organized by amateur operators to assist non-military persons
What do RACES and ARES have in common?

A. They represent the two largest ham clubs in the United States
B. Both organizations broadcast road and weather traffic information
C. Neither may handle emergency traffic supporting public service agencies
D. Both organizations may provide communications during emergencies
What is the preamble in a formal traffic message?

A. The first paragraph of the message text
B. The message number
C. The priority handling indicator for the message
D. The information needed to track the message as it passes through the amateur radio traffic handling system
What is usually considered to be the most important job of an amateur operator when handling emergency traffic messages?

A. Passing messages exactly as written, spoken or as received
B. Estimating the number of people affected by the disaster
C. Communicating messages to the news media for broadcast outside the disaster area
D. Broadcasting emergency information to the general public
T2C11 What is meant by the term “check in” reference to a formal traffic message?

A. The check is a count of the number of words or word equivalents in the text portion of the message
B. The check is the value of a money order attached to the message
C. The check is a list of stations that have relayed the message
D. The check is a box on the message form that tells you the message was received