

Introductory Communications User's Training (ICUT)



Instructor's Manual

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ICUT Course Preparation

Due to required standardization requirements, this instructor's guide must be followed **without changes**.

If ICUT is taught over multiple sessions, repeat the course preparation steps each time.

Before the day of the course...

1. Arrange a location
2. Plan for any refreshments that are needed (optional)
3. Advise Wing HQ that you have scheduled a course
4. Make sure all prospective students are informed, including those from your home unit and any other nearby units
5. Photocopy any handout material you plan to distribute
6. Arrange for any Communications equipment that you will use as visual aids or for actual training (particularly in T1 and OP2)

On the day of the class...

1. Dress in an appropriate CAP uniform and wear it properly
2. Arrive early to arrange the room and any other details needed
3. Set up radios you intend to use for skills demonstrations
4. Greet students as they arrive

Note: Skills demonstrations are required for parts 2 and 3 of the ICUT course. They may be conducted as part of the course, or at a later time. When completed, the training record should be entered into Operations Qualifications per eServices Instructions.

-----Operation Module One-----

INSTRUCTOR INTRODUCTION - 10 Minutes

- Welcome students to the course.

“This is the Civil Air Patrol Introductory Communications Users course, known as ICUT. It is a prerequisite for all use of CAP radio equipment and frequencies without supervision, so almost everyone in CAP takes this course. It will include a general orientation to the CAP Communications system, instruction on how to operate two of our most common models of radio...and training in operating procedures we use on the radio.”

- Introduce yourself and *briefly* give your background that qualifies you to be an instructor.
- Make sure your students know the basics of your classroom or instructional area – fire exits, restrooms, etc.
- Explain the schedule for the course (how long it will take, taught in parts over several squadron meeting nights, etc). Explain that the class will consist of watching video lessons, talking about the information presented, and answering questions. At the end of the first section of training there will be a short written test. At the end of the second and third sections of the class you will practice and demonstrate the skills you have learned for running the radio equipment, and for your on-the-air procedures.
- Ask if there are any questions and answer them.
- When finished, proceed to Operations Module One (OP1).

OP1 Training Part One

- Set the scene for the first video lesson.

“Our first video lesson explains the overall structure and planning considerations that we use in the CAP communications system.”

- PLAY ICUT VIDEO LESSON #1
- Recap the content of the video lesson with the following verbal questions and answers. Ask the question. If the correct answer is not given, be gentle with the person volunteering the answer, but ask for more ideas. When the correct answer is given, repeat the answer yourself, to reinforce the meaning.

Question 1: Why is radio an important tool for CAP?

Answer: It still works when commercial communications systems like cell phones, fail.

Q 2: What does “**simplex**” communications mean?

A: One radio talks directly to another.

Q 3: How does CAP use “duplex” communications?

A: Repeaters receive on one channel and automatically send the signal back out on another channel. Repeaters can greatly extend the range at which the radios can reach each other.

Q 4: When would you use the HF radio?

A: To talk to someone hundreds of miles away, or even across the country.

Q 5: When would you use the VHF-FM radio?

A: To talk to someone fairly close, when you are “line-of-sight”, either direct or through repeaters.

Q 6: We talk about CAP using VHF radios...and pilots also use VHF radios in the airplanes. Are they the same?

A: No, they are different.

Q 7: Why do we use letters to designate channels and NOT talk about the actual frequencies?

A: In order to help keep our communications secure.

Q 8: What organization assigns CAP’s radio frequencies?

A: The Air Force

- At this point, you could stop and continue on another day, take a break, or proceed to the next section of training, which is Part 2 of the OP1 module.

OP1 Training Part Two

- Set the scene for the second OP1 video lesson.

“Our second video lesson covers how we communicate with other emergency agencies...and it explains some of the other rules and guidelines that apply to the CAP Communications program.”

- PLAY ICUT VIDEO LESSON #2
- Recap the content of the video lesson with the following verbal questions and answers. Ask the question. If the correct answer is not given, be gentle with the person volunteering the answer, but ask for more ideas. When the correct answer is given, repeat the answer yourself, to reinforce the meaning.

Question 1: Why does CAP avoid using “commercial infrastructure” for mission communications?

Answer: During emergencies, these systems often get jammed making it hard to get messages through.

Q 2: What do we call it when the commercial infrastructure doesn't work but we still have a lot of urgent information we have to radio from one place to another.

A: A Stressed Communications Environment

Q 3: Can CAP use cell phones from aircraft in the air?

A: No, unless the CAP aircraft is experiencing an aircraft emergency.

Q 4: What is it called when we communicate on the radio with other emergency agencies?

A: Liaison Communications

Q 5: What do we do if we hear another agency using our channels when we were not expecting it?

A: Don't interfere, be prepared to assist them if they ask for help, and advise your wing Communications staff.

Q 6: What organization regulates the frequencies CAP uses?

A: The NTIA

Q 7: Are the NTIA rules about the same as the rules for civilian frequencies, like law enforcement, businesses, and amateur radio operators use?

A: No, there are significant differences.

Q 8: If the rules are different, what do we have to do to be able to talk to the police, fire and other public service agencies?

A: Plan and coordinate with the agencies ahead of time. Planning is VERY important for all aspects of the CAP Communications system.

Q 9: Can CAP use Amateur Radio for CAP business, such as mission communications?

A: No. CAP is a federal radio user and both the FCC and the NTIC forbid all federal agencies from using any frequency assigned by the FCC. CAP must have permission in advance from the agency holding the license, and there is no “agency” holding the license for all of Amateur radio.

- Optional: You MAY add local information about nearby repeaters or other special considerations at this time, but remember that these are beginning communicators. Do not overwhelm them with small detail or jargon. This section should not take more than a few minutes.
- Ask: Does anyone have questions?
- Administer the attached test.
 - Students should answer on paper by themselves.
 - After all students have completed the test, go through the correct answers and make sure students understand any they got incorrect. You may generally correct the test(s) to 100%, but use your judgment about suggesting further review of the training materials for student you feel may need remediation.
- At this point, you could stop and continue on another day, take a break, or proceed to the next section of training, which is Part 1 of the T1 Module.

T1 Training Part One

- If available, have an EF Johnson 5317 radio for display. Do not connect the microphone.
- Set the scene for the first T1 video lesson.

“The next section of our course covers the operation of the VHF-FM radios we use in CAP. The first video lesson in this section explains the basic operation of the E.F. Johnson Base and Mobile radios, known as the model 5317 FM radio.”

- PLAY ICUT VIDEO LESSON #3
- Recap the content of the video lesson and make the following points. If you have a radio available, demonstrate as appropriate.
 - These VHF FM radio are used to talk to other CAP radios, including portables, mobiles, base and FM aircraft radios.
 - In order to communicate with another radio your radio must be on the same channel, which means you have to set the zone and channel correctly.
 - Using the scan feature allows the radio to listen to more than one channel at a time, but remember to turn the scan feature off when communicating with another radio.
 - Before use, check your radio to make sure it is plugged into a power source, an antenna and that the microphone is plugged in. Always be careful of the wiring used with a radio. Report any unsafe condition.
- At this point, if you are training local students, you may include comments about the local base radio installation, including instructions or demonstrations of hooking up antenna cables and turning on power supplies. Remember, these are basic instructions, so tell the students what they can do and what they cannot do. This section should not take more than a few minutes.
- Ask review question set #3. Ask the question. If the correct answer is not given, be gentle with the person volunteering the answer, but ask for more ideas. When the correct answer is given, repeat the answer yourself, to reinforce the meaning.

Review Questions:

1. Regarding the EF Johnson 5317, what does the term “zone” mean?
 - A. Something about time.
 - B. A location for a scan list

- C. A group of up to 16 channels
- D. The part of the front panel where information is displayed

2. If you find a damaged or broken wire leading to a radio, you should:
 - A. Fix the problem, it's not that big of a deal.
 - B. Report the problem to the building janitor, he should be able to handle this.
 - C. Report the problem to your Communications Officer or your supervisor
 - D. Don't worry about it, what could possible go wrong?
3. Will this radio will talk to the aircraft AM radios that pilots use to talk to the air traffic control system.
 - A. True
 - B. False
4. Which of the following is the correct way to describe the location of a channel address in the memory of the radio?
 - A. Channel 6
 - B. TAC 1
 - C. Zone 1, Channel 6
 - D. SCAN
5. How is the radio powered?
 - A. Plugged directly into the wall.
 - B. From a battery on the back of the radio.
 - C. From an Astron 35A power supply only.
 - D. From a vehicle battery or power supply
6. What repairs are you authorized to do after you complete this course?
 - A. None
 - B. Replacing fuses and other simple repairs.
 - C. Component level repairs.
 - D. You may disassemble the radio but only to look.

- At this point, you could stop and continue on another day, take a break, or proceed to the next section of training, which is Part 2 of the T1 Module.

T1 Training Part Two

- Set the scene for the next video lesson:

“Our next video lesson introduces the controls and basic operation of the EF Johnson 5317 FM radio. Later you will need to demonstrate basic use of the controls in order to pass the class.”
- Play ICUT VIDEO LESSON #4
- Recap the content of the video lesson and make the following points. If you have a radio available, demonstrate as appropriate.
 - Quickly review the front panel controls including the off/on/volume control, select switch, and display.
 - Review the three option buttons that are taught: TX PWR, SCAN and SEL SQ (or MON)
 - Review the option buttons that are not taught: SCN ED, C/S, and KY SEL.
- If your Wing has standardized option buttons 5 and 6 on the Version 1 radios, instruct your students concerning those buttons.
- Ask review question set #4. If the correct answer is not given, be gentle with the person volunteering the answer, but ask for more ideas. When the correct answer is given, repeat the answer yourself, to reinforce the meaning.

Review questions:

7. What button is used to turn the radio on or off?
 - A. Select
 - B. Option button 3
 - C. On/Off button
 - D. TX PWR
8. How do you turn off the scan function?
 - A. Push the “SCAN” option button
 - B. Push the “SCN ED” option button
 - C. Push the select button until the marker is over “zone” on the display
 - D. Turn the radio off.
9. If you want to turn off the “Selective Squelch”, which button do you press?
 - A. Sorry you cannot do this
 - B. SEL SQ
 - C. KY SEL
 - D. Select

10. All CAP owned model 5317 radios will have the exact same option or functions available.
- A. True
 - B. False
11. Which of the following functions have you been trained to use?
- A. C/S, TX POWER, AND SCAN ED
 - B. MENU, TX POWER, SCAN
 - C. SCAN, SCAN ED AND SELECT SQ.
 - D. TX POWER, SCAN AND SEL SQ. double check video
12. How do you adjust the volume of the radio?
- A. Rotate the Select Switch
 - B. Rotate the on-off /volume switch
 - C. Push the on-off /volume switch
 - D. The volume is preset and is not adjustable.
13. How is the select control used to change the zone and channel setting?
- A. Pushing the select control switches between the “zone” or “channel” operation, rotating the switch then changes which ever of the two functions has the flashing bar over it.
 - B. The select switch is turned to find your choice of 256 channels.
 - C. Rotation the select switch to the right allows you to change the channel position by then pushing the select switch, rotation to the left allows you to change the zone.
 - D. The select switch has to do with the type of tone, not with zone/channel.
- At this point, you could stop and continue on another day, take a break, or proceed to the next section of training, which is Part 3 of the T1 Module.

T1 Training Part Three

- If available, have an EF Johnson 5317 radio for display. Do not connect the microphone.
- Set the scene for the next video lesson:

“Our next video lesson explains transmitting with the EF Johnson 5317 radio. These are radios that we often use at our squadron and wing headquarters locations, and in our ground team vehicles.”
- Play ICUT VIDEO LESSON #5
- Recap the content of the video lesson and make the following points. If you have a radio available, demonstrate as appropriate.
 - Review installing and removing the microphone
 - Demonstrate or explain how to hold the microphone for transmission
- Ask review question set #5. If the correct answer is not given, be gentle with the person volunteering the answer, but ask for more ideas. When the correct answer is given, repeat the answer yourself, to reinforce the meaning.
 14. How do you remove the microphone connector from the radio?
 - A. Pull on the microphone cord until it comes out.
 - B. Grasp the collar on the microphone connector and pull it back until the connector comes loose.**
 - C. Unscrew the connector turning it counterclockwise until it comes loose.
 - D. The microphone does not come loose from the radio.
 15. What three things need to be connected to the radio in order for it to properly function?
 - A. Power, coaxial and accessory cables
 - B. Power, microphone and coaxial cables**
 - C. Microphone, accessory and programming cables
 - D. Accessory and programming cables and a dongle.
- At this point, you could stop and continue on another day, take a break, or proceed to the next section of training, which is Part 4 of the T1 Module.

T1 Training Part Four

- If available, have an EF Johnson 5112 radio for display.
- Set the scene for the next video lesson:

“Our next video lesson introduces the EF Johnson 5112 FM radio. These are the portable radios, sometimes called handheld radios, often used by ground teams when the members of the team are away from the vehicle.”
- Play ICUT VIDEO LESSON #6
- Recap the content of the video lesson and make the following points. If you have a radio available, demonstrate as appropriate.
 - The EF Johnson 5112 is similar to the EF Johnson 5317 but smaller, powered by a battery, and will not talk as far.
 - These VHF FM radio are used to talk to other CAP radios, including portables, mobiles, base and FM aircraft radios.
 - While the exact procedure for setting the zone and channel are different between the two radios, they use the same designators for the same channels.
 - Using the scan feature allows the radio to listen to more then one channel at a time, but remember to turn the scan feature off when communicating with another radio.
 - Handle the radio carefully and do not get the battery wet. If the battery gets to hot to hold, turn off the radio and set it down outside.
- Ask review question set #6. If the correct answer is not given, be gentle with the person volunteering the answer, but ask for more ideas. When the correct answer is given, repeat the answer yourself, to reinforce the meaning.
 16. Which of these statements is a correct comparison between the model 5112 and model 5317 radios?
 - A. The 5112 is a higher powered radio
 - B. The 5112 and the 5317 have no relationship at all
 3. **The 5112 is a lower powered radio than the 5317**
 4. The 5112 has more features then the 5317
 17. Will this radio will talk to other CAP FM radios that are set to the same zone and channel
 - A. **Yes**
 - B. No
 18. How is the radio powered?
 - A. Plugged directly into the wall.
 - B. **From a battery on the back of the radio.**
 - C. From a 35A power supply only.

D. From a vehicle battery or power supply

19. The antenna is flexible and soft so using it to strike, poke or jab other people is ok

A. True

B. False

- At this point, you could stop and continue on another day, take a break, or proceed to the next section of training, which is Part 5 of the T1 Module.

T1 Training Part Five

- If available, have an EF Johnson 5112 radio for display.
- Set the scene for the next video lesson:

“Our next video lesson covers the EF Johnson 5112 controls....”
- Play ICUT VIDEO LESSON #7
- Recap the content of the video lesson and make the following points. If you have a radio available, demonstrate as appropriate.
 - There are controls on the top, side and front of the radio
 - Review top panel controls: on/off/volume and channel switch. Leave the ABC switch on A
 - Review front panel controls including the up/down switch, F3 High/Low power and F4 SQ SEL
 - Review side panel controls: Button 1 Wing programming. Remind the students that this button may be different in another wing. Button 2 Scan, Button 3 Backlight
- Ask review question set #7. If the correct answer is not given, be gentle with the person volunteering the answer, but ask for more ideas. When the correct answer is given, repeat the answer yourself, to reinforce the meaning.
 - 20. How do you adjust the volume of the radio?
 - A. Rotate the A-B-C Switch
 - B. Rotate the on-off /volume switch**
 - C. Push the up/down switch.
 - D. The volume is preset and is not adjustable.
 - 21. Which of the following controls have you been trained to use with the model 5112?
 - A. On/Off Volume, A-B-C switch and D-E-F switch
 - B. PTT, F3 and UP/DOWN switch**
 - C. SCAN, SCAN ED AND the orange button
 - D. AUX switch, option button 1 and F1
- At this point, you could stop and continue on another day, take a break, or proceed to the next section of training, which is Part 6 of the T1 Module.

T1 Training Part Six

- If available, have an EF Johnson 5112 radio for display.
- Set the scene for the next video lesson:

“Our next video lesson describes transmitting with the EF Johnson 5112 portable radio.”
- Play ICUT VIDEO LESSON #8
- Recap the content of the video lesson and make the following points. If you have a radio available, demonstrate as appropriate.
 - Review position of the microphone and speaker
 - Review how to hold the radio when speaking
 - Review the multifunction light.
- Ask review question set #8
 22. What two things must be connected to the radio in order for it to properly function?
 - A. Battery and Antenna
 - B. Battery and external microphone
 - C. External Microphone and programming cable
 - D. Power cable and Antenna
 23. The PTT switch is held down in order to listen to other stations
 - A. True
 - B. False
 24. The proper way to hold this radio is:
 - A. At your ear like a cell phone
 - B. Vertically about 3 inches from your mouth in front your face.
 - C. Horizontally about 3 inches from your mouth in front your face.
 - D. Hold it 12 inches from your mouth and talk really loud.
- Perform the evaluation of operation of the 5317 and 5312 radios in Attachment #2. This evaluation may be done:
 - Immediately following the completion of the questions above, or
 - After watching the OP2 videos, or
 - On a different day, such as another squadron meeting night

OP2 Training Part One

- Set the scene for the next video lesson:

“Our next video lesson of OP2 covers:

1. The concept of proword usage, how and why they are used, and the definitions of the more common prowords
2. The use and pronunciation of the Phonetic Alphabet
3. How to use and send numerals over the air
4. International Urgency signals”

Play section 1 of ICUT video OP 2

- Recap the content of the video lesson by asking the following questions:
 1. What do prowords do for us in passing traffic? (They give us a set of words or phrases with assigned meanings for the purpose of expediting message handling on nets or during radio conversations.)
 2. Why do we need a standardized phonetic alphabet? (Having a standard pronunciation format for the alphabet lets us spell words or character groups such as aircraft tail numbers with no confusion.)
 3. Spoken numbers can be pronounced whatever way you want. True or false and why? (False, because spoken numbers can be easily misunderstood. We have a standard pronunciation to prevent this.)
 4. What do you do when you hear an International Urgency Signal? (Listen, then offer assistance if no one answers. If someone else answers the call, standby to give assistance if needed.)
- At this point, you could stop and continue on another day, take a break, or proceed to the next section of training, which is Part 2 of the OP2 Module.

OP2 Training Part Two

- Set the scene for the second section of the video.

“Our next video lesson of OP2 covers:

1. The various tactical call signs and functional designators used in CAP.
2. Making and answering radio calls.
3. The different types of nets and basic net operations.
4. And last, prohibited practices while talking on the radio.”

- Play section 2 of ICUT video OP 2.

- Recap the points of the second section using the following questions.

1. What is the difference between a tactical call sign and a functional designator?
(A tactical call sign, assigned by the Air Force Voice Callsign Office, is assigned to a base or mobile for all uses. A functional designator is used during a mission or special event, not for day to day operations.)

2. What are the two types of net and who controls them? (Directed and free nets, controlled by a Net Control Station)

3. Traffic is passed whenever a station is on the air during a net. True or false and why? (False, Net Control Stations direct when traffic is passed.)

4. Chit chat is ok as long as it doesn't interfere with mission traffic. True or false and why? (False, personal conversation is a prohibited practice.)

5. What is the procedure for contacting another station on the radio? (The station calling gives the call sign of the station or stations they wish to talk to first, followed by the proword **THIS IS** and the calling station's call sign.)

- Remind the students they must see an evaluator within 45 days to finish the ICUT, or have the students evaluated at this time.
- When the student completes the demonstration, enter it into Ops Quals.

Attachment #1: OP1 Test

ICUT – OP1 – Orientation to the CAP Communications System

Final test – Correct to 100%

Students may use their own notes & regulations

This attachment is for reference only. See the separate test and answer sheet in the ICUT Instructor's Package.

1. CAP uses radio for communicating during missions because:
 - a) The Air Force says we have to
 - b) Commercial communications systems sometimes fail when we need them most**
 - c) So the news media can keep track of our missions and inform the public
 - d) Because cell phones do not work well inside vehicles

2. When radios use a single frequency to talk directly to another radio, it is called:
 - a) Duplex
 - b) Multiplex
 - c) Quadraplex
 - d) Simplex**

3. CAP often uses repeaters to extend the range of VHF-FM signals because:
 - a) They are at high points and radios a lot farther away can reach them**
 - b) They have 100 times the power of our individual radios
 - c) Repeating the words makes it easier to hear through static
 - d) They cost less than handheld radios

4. CAP designators that we use instead of saying the actual frequencies of our HF radio channels consist of:
 - a) Four numbers to stand for each channel
 - b) A code word for each channel
 - c) Three letters to stand for each channel**
 - d) The actual channel we use is always one higher than the channel number we say, to promote security

5. Which of the following is true about the aviation VHF-AM radio system?
 - a) It is not a system controlled by CAP**
 - b) It is the same as VHF-FM
 - c) It is used only for interagency communication
 - d) It is regulated by the NTIA

6. Which of the following is NOT true? When CAP uses HF radio channels:

- a) You may need to use different frequencies at different times of day
 - b) HF is trickier to operate than VHF-FM
 - c) You can usually use a smaller antenna for HF than for VHF-FM**
 - d) There is usually more static on HF than on VHF-FM
7. What is the main reason we use combinations of letters and numbers to stand for radio channels instead of saying the actual frequencies we use?
- a) The FCC requires secrecy on CAP frequencies
 - b) The actual frequencies are different in different CAP regions but the numbers and letters remain the same
 - c) The letters and numbers are “plain text” required by the Incident Command System
 - d) Other people aren’t supposed to know the actual frequencies we are using and we do not want them to overhear us**
8. CAP aircraft may use Federal Aviation Administration radios to talk to CAP units on the ground:
- a) Whenever needed
 - b) Only in rare circumstances, otherwise it is prohibited**
 - c) Only during takeoff and landing
 - d) Whenever the aircraft is in “controlled airspace”
9. Cellular telephones, wireless Internet and satellite phones are examples of “Commercial Infrastructure” which:
- a) Provide effective, economical emergency communications for CAP
 - b) May fail when too many members of the public try to use them**
 - c) Rarely experience stressed communications environments during emergency situations
 - d) Comply with all federal government rules for security and encryption
10. What does “train the way we fight...and fight the way we train” mean for CAP Communications?
- a) We should not use commercial infrastructure for training so that we can get along without it when it fails**
 - b) It is OK to use the commercial infrastructure for training, as long as we do not use the commercial infrastructure during actual missions
 - c) We should always use whichever system is easiest
 - d) This strategy does not really affect CAP Communications
11. Which of the following is true about CAP use of cell phones for mission communications?
- a) Cell phone systems are part of the commercial infrastructure
 - b) In disasters, cell phone systems often become jammed up with people calling each other, making it hard for CAP to get through

- c) Federal government rules do not allow use of cell phones from aircraft, unless there is a legitimate in-flight emergency
- d) **All of above**

12. "Liaison Communications" refers to:

- a) Communications between CAP aircrews and ground teams
- b) Communications among staff at the CAP Incident Command Post
- c) **Communication with other agencies**
- d) Communication for purposes of advance planning, before a formal mission begins

13. Which of the following is true, in order to communicate via radio with other agencies?

- a) On an active Air Force assigned mission, CAP can use the frequencies of any other federal, state or local agency, as needed in order to achieve mission accomplishment
- b) CAP may use the frequencies of other federal agencies as needed, but advance coordination is required for use of state and local radio channels
- c) **You can't just turn your radio to somebody else's frequency and give them a call because special arrangements are required first**
- d) You can turn your radio to any other agency's frequency and give them a call, if one of their representatives has given your verbal permission

14. CAP is considered to be a Federal Agency as far as radio communications is concerned. Therefore:

- a) Federal (FCC & NTIA) rules prohibit CAP members from using amateur radio to conduct C-A-P business
- b) Amateur radio may be used on CAP missions, because missions are always emergencies, but not for routine CAP communication
- c) Amateur radio operators who are not CAP members may transmit messages on behalf of CAP
- d) **A & C**

15. If advance planning is not conducted properly for liaison communications:

- a) **Other agencies may not be expecting CAP to contact them, and may consider the radio call to be from an unauthorized trouble maker**
- b) The Unit Digital ID will not show that CAP is calling
- c) The mission Communication Unit Leader may authorize operation on any required frequency
- d) There will be no problem – CAP is already authorized to talk on all liaison frequencies

16. If you hear people you do not recognize using CAP radio channels or repeaters:

- a) Advise them via radio that they are improperly using CAP frequencies and ask them to leave the channel
- b) **Do not interfere, but be prepared to assist them, if requested**

- c) Submit an interference complaint directly to National Headquarters
- d) Initiate a Digital Unit ID Poll to determine the identity of the offending radio operators

17. When radios use a repeater, talking on one frequency and listening on another, it is called:

- a) **Duplex**
- b) Multiplex
- c) Quadraplex
- d) Simplex

18. High Frequency (HF) radio systems are good for CAP to use because:

- a) **They can talk as far as across the country**
- b) Their short range makes them ideal for training
- c) They generally use smaller antennas than VHF radio systems
- d) They are the easiest to operate of all of the types of CAP radios

19. In CAP, we do not talk about the actual frequencies our radios use for security reasons. If you have a need to know the frequencies...

- a) You can find them on CAPMembers.COM
- b) You need to apply to National Headquarters in writing
- c) **You can be told them only after you have taken Operational Security Training (OPSEC)**
- d) You are not allowed to know them, under any circumstances

20. When the public communications systems don't work and/or we still have a lot of information we have to get from one place to another, it is called:

- a) **A "Stressed Communications Environment"**
- b) An "Essie" standing for S.E. or Strained Environment
- c) An "Overload Status"
- d) A "Condition Red"

Attachment #2: T1 Equipment evaluation

The evaluator will:

1. Have each student complete the full evaluation
2. Allow any student to watch the evaluation of another
3. Prompt a student who fails to demonstrate an action correctly, but only a few times during the evaluation of each radio.
4. Use the form provided to record this evaluation.

Required equipment:

EF Johnson 5317 radio with power supply.

EF Johnson 5112 radio with charger and charged battery.

EF Johnson 5317 radio evaluation

Begin with the radio off, set to Zone 1 channel 1, Microphone disconnected.
During the evaluation the student is not to transmit.

Have the student check the AC power cord and antenna cable (if available) or have the student describe the checks that need to be made before operating the radio.

Direct the student to demonstrate the following:

- ✓ Turn the radio on
- ✓ Adjust the volume
- ✓ Change channel. Have the student set the radio to at least two different zone and channel combinations. They should clearly understand pressing and rotating the select control.
- ✓ Adjust Hi/Low power
- ✓ Turn scan on and off
- ✓ Set squelch to "Squelch select"

If the demonstration radio is a version 1 radio:

The instructor will demonstrate how to proceed if the user accidentally presses "Scan ED" by pressing this button a second time to return to normal function.

The instructor will demonstrate the use of the two last option buttons which are programmed according to the Wing standard, and are not national standard.

If the demonstration radio is a version 4 radio:

The instructor will demonstrate how to proceed if the user accidentally presses

“Scan ED”, “C/S” or “KY SEL” by pressing these buttons a second time to return to normal function.

Have the student:

- ✓ Turn off the radio
- ✓ Connect the microphone
- ✓ Demonstrate the proper way to hold the microphone 2 to 3 inches from the mouth.

See attached form

ICUT Evaluation Worksheet: T1 & OP1

Date: _____ Evaluator Name: _____ Evaluator ID: _____

Name	Check (or describe check) of AC power cord and antenna cable (if available)	Turn the radio on	Adjust the volume	Change channel – at least two different zone and channel combinations	Adjust Hi/Low power	Turn scan on and off	Set squelch to "squelch select"	Instructor Demo: Accidental "Scan ED", "C/S" or "KY SEL" procedure.	Turn off radio	Connect Microphone	Demonstrate holding microphone 2-3 in. from mouth	Send informal tactical message successfully	Who will the message go to? (Importance of delivery)	When are MAYDAY SECURITE and PAN-PAN used?	Give at least 2 of 10 prohibited practices	Define tactical call signs, & functional descriptors, & when each are used	Define "Directed Net" and "Free Net"
	T1						OP2										
	Radio Off						Radio On										
	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Note: This is most certainly not a form, but maybe possibly it is a kind a, sorta a worksheet.

Attachment #3: OP2 Evaluation Guide

The evaluator will:

1. Prepare two informal tactical radio messages in advance (such as an Ops check request, ground team movement, or any other typical mission traffic). Messages should be short to medium length with at least two words the student will spell phonetically and two number groups with at least three numbers in each group per message (CAPR 100-3 Chapter 2).
2. Have each student complete the full evaluation
3. Allow any student to watch the evaluation of another.
4. Use appropriate tactical call signs assigned to your unit.
5. Have student send message #1. Copy the message as sent, and then go over the student's performance, correcting any mispronunciations or procedural errors. If there are more than five errors, then have the student send the second message that you have prepared.
6. Ask the following verbal questions:
 - ✓ Query the student, on who the message reply will go to, ensuring the student understands the importance of delivering a message to the addressee.
 - ✓ Ask the student when MAYDAY, SECURITE, and PAN-PAN are used (CAPR 100-3, Para 1-6).
 - ✓ See if they can give you at least two of the ten prohibited practices (CAPR100-3, Para 2-11).
 - ✓ Have the student define tactical call signs, functional designators, and when each are used (CAPR100-1, Para7-15 and CAPR 100-3, Para 1-9).
 - ✓ Have the student define "Directed Net" and "Free Net." (CAPR 100-3, para. 1-10)
7. Coach a student who fails to demonstrate an action correctly, but only a few times during the evaluation on each radio. If student fails an action too many times or can't perform too many tasks in the evaluation, then the student needs to go back through the portions of the training that were performed less than satisfactorily.
8. Use the form provided to record this evaluation.

Required equipment:

Any CAP radio, including EF Johnson 5317 radios installed for base or mobile operation, EF Johnson 5112 radios, or ISR radios. This evaluation should ordinarily not be done using HF equipment, but special circumstances may warrant use of a Micom 2 or 3.