EO C429.03 – DESCRIBE RADIO WAVELENGTHS, SIGNALS, LICENCES AND EQUIPMENT

1. **Performance**: Describe Radio Wavelengths, Signals, Licences and Equipment

2. **Conditions**:

   a. Given:

      (1) Supervision, and

      (2) Assistance as required.

   b. Denied: Nil.

   c. Environmental: Classroom or training area large enough to accommodate the entire group.

3. **Standard**: The cadet shall describe:

   a. radio wavelengths, frequencies and bands;

   b. characteristics of radio signals;

   c. aeronautical terms and definitions;

   d. radio station licences; and

   e. maintenance of equipment.

4. **Teaching Points**:

TP	Description	Method	Time	Refs
TP1	Describe radio wavelengths, frequencies and bands, to include: a. cycle; b. kilohertz; c. megahertz; d. low, medium, high, very high, and ultra high frequencies; and e. frequency allocation.	Interactive Lecture	5 min	C3-116 (pp. 207–209)
TP2	Describe characteristics of radio signals, to include: a. ground waves, and b. sky waves.	Interactive Lecture	5 min	C3-116 (p. 210)
TP3	Describe aeronautical terms and definitions, to include: a. aerodrome, b. aeronautical service, c. aircraft station, d. Aeronautical Operation Control Communications (AOCC), e. aeronautical station, f. Air Traffic Control (ATC) Service,	Interactive Lecture	5 min	C3-182 (pp. 22–23)

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TP	Description	Method	Time	Refs
	g. controlled aerodrome, h. flight service station (FSS), i. General Aviation Communication (GAC), j. ground control communication, k. private advisory service, and l. private multiple station.			
TP4	Describe radio station licences, to include: a. call sign, b. frequencies, c. special conditions, d. equipment, and e. fines.	Interactive Lecture	5 min	C3-116 (p. 218) C3-182 (p. 27)
TP5	Describe maintenance of equipment, to include: a. transceiver (transmitter and receiver), b. speaker (headset), c. microphone and antenna connections, and d. fuses.	Interactive Lecture	5 min	C3-116 (pp. 211–212) C3-182 (p. 26)

5. **Time**:

a.	Introduction / Conclusion:	5 min
b.	Interactive Lecture:	25 min
c.	Total:	30 min

6. **Substantiation**: An interactive lecture was chosen for this lesson to orient the cadets to the topic of radio wavelengths, signals, licences, and equipment and to create interest in the subject.

7. **References**:

   a. C3-116 ISBN 0-9680390-5-7 MacDonald, A. F., & Peppler, I. L. (2000). *From the ground up: Millennium edition*. Ottawa, ON: Aviation Publishers Co. Limited.

   b. C3-182 *Study guide for the radiotelephone operator's restricted certificate (Aeronautical)*. (2008). Retrieved September 28, 2008, from www.ic.gc.ca/epic/site/smt-gst.nsf/en/sf01397e.html

8. **Training Aids**: Presentation aids (eg, whiteboard / flip chart / OHP / multimedia projector) appropriate for classroom / training area.

9. **Learning Aids**:

   a. Handouts, and

   b. Pen / pencils.

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10. **Test Details**: This EO is assessed IAW Chapter 3, Annex B, 429 PC.

11. **Remarks**:

    a. If the squadron chooses to have cadets obtain the ROC-A, all complementary EOs for this PO must be instructed, and a qualified examiner must conduct 429 PC.

    b. Cadets who are qualified Advanced Aviation may assist with this instruction.

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