

TEAM CEOIS FOR
EXERCISE NOBLE SKYWAVE 2020

- References: A. 4500-1 (G6) 6 August 1999 - Unauthorized Use of Non-Tactical Radios
B. LFCO 26-6 Procurement of Non-Military Radios
C. Ex NS 2020 Instructions, Sep 2020
D. Call for Participation, Sep 2020
E. Ex NS 2020 International Invitation, Sep 2020
F. ACP 125 CANSUPP-1(E)

Time Zone: ZULU

1. SITUATION

IAW ref D, the Canadian Armed Forces (CAF) Communication and Electronics (C&E) Branch will conduct Ex NOBLE SKYWAVE 20 (Ex NS 20), 281000Z – 291900Z Oct 20, during its annual Professional Development week.

2. AIM

From the successful momentum of previous years, Ex NS 20 continues to invite communicators across the CAF, Canadian Forces Affiliated Radio System (CFARS), Military Auxiliary Radio System (MARS), 5 EYES community and other NATO players to compete against one another in a spirit of friendly competition. In addition, Ex NS 20 will provide an excellent opportunity to refresh HF operator skills and capabilities.

3. EXECUTION

- a. Concept of Training: Regular and Reserve force units, bases, wings and ships with in-house HF capabilities from Canada, Britain, Australia, New Zealand, the United States and other NATO militaries are eligible to enter representing teams. Each team will be responsible for designing their own setup and tear down plans and managing their people during exercise play.
- b. Operational Capabilities
 - (1) Initial Operating Capability (IOC): Will be achieved when all teams have established HF equipment, phone lines and internet systems and are prepared to commence communication checks.

(2) Full Operating Capability (FOC): Will be declared when all teams successfully completed a radio check with the Net Control Station (NCS).

c. Net Control Station (NCS)

(1) The exercise OIC will command the NCS and control the exercise and radio net.

(2) The NCS will consist of a command post supported by the Canadian Forces School of Electronics (CFSC) located in Kingston, Ontario.

d. Priority of Communication Nets: Priority of nets as follows:

(1) HF SSB Net;

(2) HF 2G ALE Net;

(3) HF 3G ALE Net;

(4) Internet;

(5) Noble Skywave Web App (WA) Home - Noble Skywave ; and

(6) Phone.

e. Primary Means of Communication – HF Radio

(1) HF Nets: There will be three HF nets established: 3G ALE, 2G ALE and the SSB nets. In the event of issues related to the nets, units are to contact the NCS in order to troubleshoot and move forward.

(2) Call Signs: IAW Appendix 2.

(3) Authorized Frequencies: IAW Appendix 1.

(4) Participants: IAW Appendix 2.

(5) Equipment:

- (a) Participating teams shall use HF equipment normally assigned to their unit. Teams are encouraged to use HF radio equipment capable of supporting 2G and 3G ALE.
- (b) A myriad of antennas can and should be used including static placed masts / antennas, the Barker Williams, Fan Tails, NVIS and Dipole. Field Expedient Antennas are permitted and encouraged IOT build on communicator's skill sets. Antennas perform to varying degrees based on how well it will receive and transmit signals which directly affect distance.
- (c) Canadian military participants should take note that IAW references A and B, the use of such Commercial Off The Shelf (COTS) and non-military radios (including FRS) is prohibited in "any instance where the safety and security of troops is dependent on the radio in use."

f. Secondary Means of Communication: Two secondary means will be utilized in order to facilitate instantaneous communication and provide en masse or individual direction.

(1) Data – Internet

- (a) A Web Application (WA) has been developed IOT centralize in an easy to access platform all Ex related communications, contact reporting and scoring. This platform will be the primary mean to report all contact to NCS. WA will allow real time score monitoring, public and private chat rooms for Ex participants to use. Teams will be responsible for signing up in the new WA by following instructions on the website NLT 212100Z Oct 20.
- (b) Internet based email will be used as a secondary mean to coordinate national and international requirements as well as pass on direction to facilitate success of the Exercise and report contact with NCS in the event of a malfunction of the WA.
- (c) The NCS can also be contacted at cafnobleskywave@gmail.com.

(2) Voice – Phone

- (a) All teams are to have access to a phone that can make and receive calls to and from Kingston, Ontario, Canada.
- (b) Use of the telephone will be used as a tertiary means and will be at the discretion of the exercise OIC.

- (c) The NCS can be contacted at 613-541-5010 ext. 3869.
- g. COMSEC: Due to the nature of the Exercise, all communications will be non-secure and unclassified. No crypto will be used.
- h. Coordinating Instructions
 - (1) Safety: Commanders at all levels are to ensure that strict safety practices are adhered to at all times and that personnel are reminded of safety hazards occurring in both field and urban deployments. Commanders are to ensure that teams are briefed prior to deployment emphasizing (but not limited to) the following:
 - (a) Electrical hazards associated with generators and grounding spikes;
 - (b) Radiation/Shock hazards associated with HF and satellite emitters; and
 - (c) Proper sighting of vehicles and antennae in urban environments must be adhered to, keeping in mind overhead power lines, gas lines and other overhead or underground safety risks.
 - (2) Radio Procedures
 - (a) All teams are to maintain a radio log which should, at a minimum, detail operator on duty, time of all entries, radio contacts, call sign of contact, and any pertinent remarks.
 - (b) Proper voice procedure will be followed in accordance with the parent organization's guidelines. Participants should remain respectful of different organizations' use of different voice procedures.

CFARS/MARS Participation: The only civilian operators eligible to participate in Ex NS 20 are licensed HAM operators who are also members of CFARS or US MARS.



Timings: Phase 2:

	Timings Start / Finish <u>ALL Timings</u> <u>ZULU</u>	Activity	Scoring
2.1	Start: 281000Z Oct 20 Finish: 281400Z Oct 20	<u>Establishing the Net – SSB:</u> IAW Appendix 1, each team will attempt to conduct a radio check with the NCS.	All scoring is IAW Appendix 1.
2.2	Start: 281400Z Oct 20 Finish: 290200Z Oct 20	<u>Free Play:</u> IAW Appendix 1, this period will be open to all types of communication including SSB, 2G ALE, 3G ALE, and data.	
2.3	Start: 290200Z Oct 20 Finish: 291400Z Oct 20	<u>Team Contact Challenge – SSB-Only, 2G ALE, and 3G ALE:</u> IAW Appendix 1, each team will attempt to make contact with as many of their assigned team targets as possible. ALE teams will be created based on registration of ALE Capability IAW Annex A.	
2.4	Start: 291400Z Oct 20	<u>Back to the future challenge - SSB:</u> IAW Appendix 1, each team will utilize SSB to attempt to make contact with as many teams as possible. The greater	

	Finish: 291800Z Oct 20	the distance between the two teams OR the more time zones the signal crossed before being received, the more points that will be awarded.	
2.5	End Ex: 291900Z Oct 20	<u>End Ex:</u> End Ex will be called and the winning team will be announced via HF and Email.	

4. **SERVICE SUPPORT:** IAW Exercise instruction.
5. **COMMAND AND SIGNAL**
 - a. **Command:** IAW Exercise instruction.
 - b. **Participant Points of Contact:** IAW Appendix 2.
 - c. **Locations:** IAW Appendix 2.
 - d. **Supplements:** Supplements to this CEOI shall be issued as required, and may include further/amended frequency allocations.

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Appendices

- Appendix 1 – Comms Card
- Appendix 2 – Team Communication Schedule (TBI)