

ANNEX B CEOI APPENDIX 1 – COMMS CARD

Time Zone: ZULU

1. GENERAL

a. Definitions

- (1) Assignment / Centre frequency: Center of the frequency band assigned to a station.
- (2) Window / Dial frequency: Frequency which is displayed on the front panel of a radio. For Ex NS 20 this will be 1.5 kHz lower than the Assignment frequency.

b. Loss of Contact

- (1) Should a station lose contact with the net after the initial check in with the NCS on day one, the following drill is used:
 - (a) Check and adjust antennas and cables, both internal and external;
 - (b) Check frequency and CEOIs;
 - (c) Turn radio “OFF”, then “ON” and attempt to re-establish communications; and
 - (d) Attempt to make radio contact with NCS on the following radio dial frequencies:
 - i. 2.44750 MHz;
 - ii. 6.78550 MHz;
 - iii. 13.88150 MHz; and
 - iv. 20.97750 MHz.
- (2) The NCS will monitor a multitude of HF radio frequencies in SSB and 2G ALE HF radio modes.
- (3) If a team is having difficulty contacting the NCS via radio, the team can request the NCS to move to a different frequency based on propagation prediction.
- (4) If a team is unable to contact the NCS via radio or chat room of the Web Application (WA) located at: [Home - Noble Skywave](#), the team can contact the NCS via email: cafnoleskywave@gmail.com or via phone: 1-613-541-5010 ext. 3869.

2. CONTACT REPORTS

- a. All contact reports will be logged and scored via NS WA which will be hosted at [Home - Noble Skywave](#).

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- b. Each team will sign up on WA NLT 152100Z Oct 20 IOT gain access to the portal which will contain the NS Contact Report GUIs for the various challenges.
- c. Any team that have not registered on the WA during assigned timelines will have to contact NCS to gain access to WA or will not be scored during competition.
- d. GUIs for challenges will be unlocked from WA IAW timing provided in phase 2.1, 2.2, 2.3 and 2.4. Team will be able to report contact for each challenges once GUIs unlocked.
- e. NS WA will automatically score all contact reported by teams using scoring scheme IAW phase 2.1, 2.2, 2.3 and 2.4. Points will be allocated for contacts when both teams have reported the same contact on WA. If only one team report a contact, WA will not award point until the second team report the contact from his end.
- f. WA contains a scoreboard which will be available at all time for team to consult. Scoring will be done in real time as the contact reports are being logged in WA.
- g. WA will automatically calculate distance and time zone difference between team as well as other parameters. It is imperative that team provide accurate information when performing the sign up procedures. WA administrators will confirm data entered from each team using NS registration forms.
- h. NS Chat room will be available on WA for team to synchronize and coordinate their efforts.
- i. Detailed instructions will be [Home - Noble Skywave](#) team having difficulty to sign up on WA during assigned timelines will contact Ex CCO, Ex OIC or NCS at cafnobleskywave@gmail.com.

3. EXERCISE

- a. Phase 2.1 - Establishing the Net – SSB only
 - (1) Timings: 281000 – 281400Z Oct 20.
 - (2) Activity: Each team will attempt to conduct a radio check with the NCS;
 - (a) The NCS will have two Harris QRT systems (1x RF-5800, and 1x RF-7800), and a Babcock 36 channel HF monitor receiver system, all setup for SSB;
 - (b) A multitude of antennas will be used by the NCS to encompass as many participants as possible including: Delta, LPH-89J, LFH 230/1 (Fanlite), and AS-5216 Whip; and
 - (c) NCS will be monitoring the following 16 SSB frequencies:

| Dial freq (mhz) SSB |
|------------------------|
| 2.01150 |
| 2.42750 |

| |
|----------|
| 2.70150 |
| 3.39050 |
| 4.87150 |
| 4.95150 |
| 5.21050 |
| 5.90050 |
| 6.84450 |
| 7.97650 |
| 9.94250 |
| 10.93250 |
| 14.3860 |
| 16.03550 |
| 20.2695 |
| 27.91150 |

(3) Scoring

- i. Two Points: Full radio check or Scenario 4.a;
- ii. One Point: Scenario 4.b; and
- iii. No points: Zero contact with the NCS.

(4) Scoring Scenarios

- i. If the NCS receives a radio check from a team, and the team is unable to receive a NCS response, confirmation that the NCS received the transmission will be made via WA chat room; and
- ii. If a team is unable to complete a radio check with the NCS, confirmation that the team is online will be performed via WA chat room, email, or phone.

b. Phase 2.2 - Free Play

(1) Timing: 281400 – 290200Z Oct 20.

(2) Activity: This phase is open to all types of HF radio communications to attempt to make contact with as many teams as possible using all available frequencies IAW section 3.1.

- (a) During this phase teams are highly encouraged to attempt communications in different HF radio modes including but not limited to:
 - i. SSB – analog or digital;
 - ii. 2G ALE, 3G ALE, 3G+ ALE;

iii. Data; and

iv. CW.

(b) Use of email contacts to directly coordinate attempts with the other station POCs is highly encouraged.

(3) Scoring

(a) One Point: per team contacted and all contacts must be logged within 15 min of each other on the NS WA.

(b) Multipliers

2x: For each successful 2G ALE communication; and

3x: For each successful 3G ALE communication.

(c) Additional Multiplier

i. 1.5x: For each successful data communication.

(d) Teams are responsible to report scores via WA as soon as possible.

(e) IOT reach maximum points for this phase, teams must attempt additional modes of radio communication.

(f) Upon reaching all stations on all modes, teams are still highly encouraged to continue to participate IOT develop HF operator skills and capabilities.

(4) Scoring Scenarios

(a) Multipliers can be mixed for phase 2.2, e.g. if a team has five contacts total: two 2G ALE, one 3G ALE, one SSB, and one SSB + data the following score would be calculated:

Two 2G ALE contacts = four points;

One 3G ALE contact = three points;

One SSB contact = one point; and

One SSB + data contact = 2.5 points.

c. Phase 2.3 – Team Contact Challenge – SSB-Only, 2G ALE, and 3G ALE

(1) Timings: 290200 – 291400Z Oct 20.

- (2) Activity: 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. For this challenge, Teams will have to identify on which category they wish to compete when signing up on WA. WA GUI will allow the reporting of contacts only with the Team that registered in the same category.
 - (a) SSB-Only: Teams will attempt to make contact with as many other SSB-only teams as possible on authorized frequencies IAW section 3.c.6.a
 - (b) 2G ALE Capability: 2G ALE teams will attempt to make contact with as many other 2G ALE teams as possible within their assigned nets IAW section 2.c.5:
 - i. 2G ALE capable teams shall program their radios with the contacts and associated frequencies from their net and only their net (will be available on WA 270000Z Oct 20). All 2G ALE nets will include the NCS as a contact.
 - (c) 3G ALE Capability: 3G ALE teams will attempt to make contact with as many other 3G ALE teams as possible within their assigned nets (will be available on WA 270000Z Oct 20).
 - (d) Each ALE capable team will be placed in a net containing a certain number of teams. Net will be balanced with regard to difficulty and location.
 - (e) Use of WA chatroom as well as email to directly coordinate attempts with the other teams POCs is highly encouraged.
- (3) Scoring
 - (a) One Point: per team contacted. A team can only claim points for having contacted another specific team once.
 - (b) Multipliers
 - i. 2x: For each successful 2G ALE communication; and
 - ii. 3x: For each successful 3G ALE communication.
 - (c) Additional Multiplier
 - i. 1.5x: For each successful data communication.
 - (d) Teams are responsible to report scores via WA as soon as possible. Ships that do not have access to internet may call the NCS every two hours to report their contacts.
- (4) 2G ALE Teams

2G ALE Net Call Sign – NS1/NS2

| Dial freq (mhz) 2G NS1 | Dial freq (mhz) 2G NS2 |
|---------------------------------------|---------------------------------------|
| 2.27350 | 2.03650 |
| 2.45550 | 2.47550 |
| 4.64150 | 4.02350 |
| 4.81750 | 4.81500 |
| 5.40150 | 5.30150 |
| 5.84500 | 5.80150 |
| 6.98150 | 6.80150 |
| 7.35150 | 7.52000 |
| 10.2840 | 10.5625 |
| 13.41650 | 13.56850 |
| 15.73450 | 14.3745 |
| 18.91500 | 18.72750 |
| 20.30150 | 20.90150 |
| 24.50150 | 24.70150 |
| 27.73150 | 27.81150 |

(5) 3G ALE Teams

3G ALE Net Call Sign – 3GNS1

| Dial freq (mhz) 3G 3GNS1 |
|---|
| 2.35150 |
| 3.32150 |
| 4.86650 |
| 5.03650 |
| 6.81150 |
| 7.31150 |
| 7.70150 |
| 10.19650 |
| 11.5395 |
| 13.58550 |
| 14.96250 |
| 18.20550 |
| 23.00150 |

| |
|----------|
| 25.26550 |
| 26.90150 |

(6) SSB Only Teams

(a) SSB-only Frequencies:

| Dial freq (mhz) SSB |
|------------------------|
| 2.01650 |
| 2.53550 |
| 3.28150 |
| 4.60650 |
| 4.92000 |
| 5.15650 |
| 7.90150 |
| 10.2915 |
| 12.11650 |
| 13.95450 |
| 14.84250 |
| 20.01950 |
| 23.10150 |
| 25.40150 |
| 26.50150 |

d. Phase 2.4 – Back to the future challenge

(1) Timings: 291400 – 291800Z Oct 20.

(2) Activity: Each team will utilize SSB to attempt to make contact with as many teams as possible using all available frequencies IAW section 3.e.3

(a) The greater the distance between the two teams or the more time zones the signal crossed before being received, the more points that will be awarded whichever the higher.

(b) Use of WA chat room or email to contacts to directly coordinate attempts with the other teams POCs is highly encouraged.

(3) Scoring

(a) One Point: per team contacted.

(b) Multipliers

- i. 1X: For each successful contact being less than 500 Km;
 - ii. 2X: For each successful contact more than 500 km but less than 2000 Km;
 - iii. 3X: For each successful contact more than 2000 Km but less than 3000 Km;
 - iv. 4X: For each successful of more than 3000 Km; or
 - v. 1 point allocated per time zone difference between contacted teams whichever the higher.
 - (c) Teams are responsible to report scores via email to the NCS on WA as soon as possible. Ships that do not have access to internet may call the NCS to report their contacts.
 - (d) Upon reaching all stations, teams are still highly encouraged to continue to participate IOT develop HF operator skills and capabilities.
- e. Phase 2.5 – End Ex
 - (1) Timings: 291900Z Oct 20.
 - (2) Activity: Announce the winner.
 - (a) The winner will be announced to all via HF on the Loss of Contact frequencies and Home - Noble Skywave chat room as per section 1.a.1.d
 - (b) Winner will be announced as per the following categories:
 - i. 1 to 150W: Free Play, Team Challenge and Back to the future;
 - ii. 150 to 400W: Free Play, Team Challenge and Back to the future;
 - iii. More than 400W: Free Play, Team Challenge and Back to the future; and
 - iv. Overall winner based on highest score all challenges combined no power category.
 - (3) All Available Ex NS 20 frequencies:

| Back to the future dial freq (mhz) | | | |
|---|--------|--------|--------|
| 2.0115 | 2.0165 | 2.0365 | 2.2735 |

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|---------|---------|---------|---------|
| 2.3515 | 2.4275 | 2.4475 | 2.4555 |
| 2.4755 | 2.5355 | 2.7015 | 3.2815 |
| 3.3215 | 3.3905 | 4.0235 | 4.6065 |
| 4.6415 | 4.815 | 4.8175 | 4.8665 |
| 4.8715 | 4.92 | 4.9515 | 5.0365 |
| 5.1565 | 5.2105 | 5.3015 | 5.4015 |
| 5.8015 | 5.845 | 5.9005 | 6.7855 |
| 6.8015 | 6.8115 | 6.8445 | 6.9815 |
| 7.3115 | 7.3515 | 7.52 | 7.7015 |
| 7.9015 | 7.9765 | 9.9425 | 10.1965 |
| 10.2840 | 10.2915 | 10.5625 | 10.9325 |
| 11.5395 | 12.1165 | 13.4165 | 13.5685 |
| 13.5855 | 13.8815 | 13.9545 | 14.3745 |
| 14.3860 | 14.8425 | 14.9625 | 15.7345 |
| 16.0355 | 18.2055 | 18.7275 | 18.915 |
| 20.0195 | 20.2695 | 20.3015 | 20.9015 |
| 20.9775 | 23.0015 | 23.1015 | 24.5015 |
| 24.7015 | 25.2655 | 25.4015 | 26.5015 |
| 26.9015 | 27.7315 | 27.8115 | 27.9115 |