

Es'hail-2 / QO-100 CW/SSB Challenge *(v0.5 PA3FYM c.s.)*

I. OBJECTIVE: For radio amateurs within the QO-100 footprint to contact as many other radio amateurs within the same footprint using the QO-100 satellite transponder for **two way** contacts and to promote radio amateur activity on microwave bands. CW and SSB challenges are considered as separate challenges and will be planned in different time and/or date frames. Activity lasts 12 hours, starting at 1800 UTC, ending 0600 UTC. Initially, challenge dates will be announced through/via the internet/social media. Later on, schedules may/will be fixed, depending on feedback and participation of radio amateurs.

II. FREQUENCIES: Radio amateurs uplink towards the QO-100 satellite transponder between 2400.**370** and 2400.**490** MHz. Downlink is 8089.5 MHz higher, i.e. 10489.**870** and 10489.**990** MHz.

III. QSO EXCHANGE: CW contacts: RST report, serial number (starting with 1), followed by the first four digits of the Maidenhead QRA locator of the participants station location, e.g. 579128 MN83. **SSB contacts:** RS report, serial number (starting with 1), followed by the first four digits of the Maidenhead QRA locator of the participants station location, e.g. 55014 JP85. CW stations may respond in SSB challenges and transmit the report (RS) format for the SSB participant, however, receive a report in RST format from the SSB participant.

IV. SCORING:

A. Score: The final score is calculated as follows:

Final score = [unique contacts/2 + unique locators/4 + unique prefixes/4] * 100

E.g. 245 unique contacts with 85 unique locators and 167 unique prefixes yields 18550 points

B. Mobile stations: A contact with an already contacted callsign/station, but located in another/new Maidenhead QRA locator counts as new/unique contact. E.g. if PY2XY gave you 57(9)128 GG66 as exchange earlier and you contact PY2XY again and he exchanges 57(9)230 GG67, the latter contact is considered as a new contact for you (and not for PY2XY).

C. Multiplier: Participants situated at geographical locations demanding <3° elevation angles (see Appendix 1) are allowed to multiply their final score with a factor of 1.1.

D. ENTRY CATEGORIES: The QO-100 CW/SSB challenge is aimed for single operators. Only one transmitted signal is permitted.

1. Normal: Participants able to produce single carrier downlink signal strength equal to the CW-beacon

2. QRP: Participants with max. 10 dBW **EIRP** @2400 MHz measured as single carrier ('key down')

Note: Participants who cheat, lie to others and especially lie to themselves!

For both categories QSO finding assistance is allowed (see V.4).

V. DEFINITIONS OF TERMS:

- 1. Station location:** The physical and/or geographical location where the transmitter, receiver(s) and antenna(s) are located. Antenna(s) must be connected by RF transmission lines and/or waveguides to the transmitter and receiver(s) within a distance less than 50 meters from the operating position. If the distance between the station location and operating position is 50 meters or more, the radio equipment is considered as remote equipment and excluded from participation.
- 2. Operating position:** Location where the single operator performs all operating and logging functions.
- 3. Single operator:** One person (the operator) performs all operating and logging functions.
- 4. QSO finding assistance:** The use of technology that provides identification of a signal to the operator during the Challenge as long it is not social media, messenger apps (e.g. SMS, WhatsApp, Telegram, telephone, etc), and station/signal information is transmitted and/or shared through QO-100 during a two way QSO. Examples of allowed information sources are e.g. DX-Clusters or (CW) skimmers, thus 'non bidirectional' communication methods.

VI. GENERAL RULES FOR ALL PARTICIPANTS:

1. Participants must operate within the limits of their radio license and chosen category when performing any activity that could impact their submitted score.
2. Participants use one callsign during the challenge. This callsign must be one issued and permitted by the Regulatory Authority of the station location.
3. Participants do not exceed the output power / EIRP limitation of the chosen entry category.
4. Participants prevent activation of LEILA-2. In cases LEILA-2 is activated and activation is within reasonable arguments related to transmissions of the participant itself, this participant must reduce its uplink ERP (effective radiated power) to prevent re-activation of LEILA-2.
5. Self-spotting or asking to be spotted is not permitted.
6. Remote operation and/or equipment are not permitted.
7. Remote receivers outside the station location (e.g. WebSDRs) are not permitted.
8. Only one transmitted signal is allowed at any time. When two or more transmitters are present, a (hardware) device **must** be used to prevent more than one signal at any time.
9. All requests for contacts, responses to calls, and copying of callsigns and challenge exchanges must be accomplished during the challenge period using the mode and frequencies of the challenge.
10. Correction of logged callsigns and exchanges after the challenge, by use of any database, recordings, email or other methods, is not allowed.
11. Callsigns logged must be the same as those exchanged over the air by the participants during the QSO.

VII. LOG INSTRUCTIONS:

Electronic submission of logs is mandatory for all entrants.

1. **The log MUST show the following for each contact:** correct date and UTC time, callsign of the station worked, exchange sent, exchange received, and first four digits of the locator of the worked station. A log without all required information may be reclassified to a Checklog. Contacts should be logged **at the time they are completed**.
2. **The CABRILLO file format is mandatory for logs.** See <www.wwrof.org/cabrillo> for detailed instructions on filling out the CABRILLO file header. Failure to fill out the header correctly may result in the entry being placed in the wrong category or reclassified as a Checklog. Web upload of logs is possible at <<https://contestrobot.pelitr.com/qo100-challenge>>. Email submission is also available. SSB logs in CABRILLO format should be sent to ssb_qo100@pelitr.com. CW logs in CABRILLO format should be sent to cw_qo100@pelitr.com. Include **only** the entry call sign in the "Subject:" line of the e-mail.
3. **Entry Confirmation:** Correct received logs are listed at <<https://contestrobot.pelitr.com/qo100-challenge>>.
4. **Log withdrawal:** An entrant may withdraw the submitted log for any reason **before** the log deadline. Contact the Challenge Organization for instructions.

VIII. LOG DEADLINE:

1. All entries must be sent WITHIN FIVE (5) DAYS after the end of the challenge.
2. Logs submitted after the deadline may be listed in the results, but are considered as Check logs

IX. JUDGING:

The QO-100 Challenge Organization is responsible for checking and adjudicating the challenge entries. Entrants are expected to follow the rules and best amateur radio practices. Violation of the rules of the challenge or unsportsmanlike conduct may lead to disciplinary action (e.g. disqualification) by the Organization.

A. Unsportsmanlike Conduct: Examples of unsportsmanlike conduct include, but are not limited to:

1. Arranging or confirming any contacts during or after the challenge by use of ANY non-amateur radio means such as telephones, Internet, instant messaging, chat rooms, VoIP, email, social media, etc.
2. Transmissions by the participant outside its radio license limitations.
3. Changing log entries after the challenge is ended ('log cleaning')
4. Excessive unverifiable QSOs, unverifiable locators and/or unverifiable callsigns.
5. Signals with excessive bandwidth or excessively activating LEILA-2.
6. Running participants not identifying in a timely manner (i.e., at least once per minute).

B. Observers: The Organization may request of any entrant to accept a visit by an observer during the challenge. Failure to allow an appointed observer full access to the station during the challenge period may result in the corresponding entry being a Checklog.

C. Disciplinary Actions: In the event of a violation, the entrant is subject to disqualification at the discretion of the Organization.

1. Disqualified entries will be listed at the end of the published results.
2. Notification of Organization actions will be sent by email to the address provided with the log submission. The entrant has five days to appeal the decision to the Organization. After that time the decision is final.
3. The Organization reserves the right to change the category of any entry based on its examination of the log or other information.

E. Log Checking: All logs are checked using custom software and (if necessary) human judgement.

1. Duplicate contacts are removed.
2. Contacts with incorrect (received) exchange parameters are removed.
3. Callsign errors ('bust') or callsigns not in the other log (NIL) are removed.

X. DECLARATION:

By submitting a QO-100 Challenge log, and in consideration of the efforts of the Es'hail-2/QO-100 Challenge Organization to review and evaluate that log, an entrant unconditionally and irrevocably agrees that he/she has: 1) read and understood the rules of the challenge and agrees to be bound by them, 2) operated according to all rules and regulations that pertain to amateur radio for the station location, 3) agreed the log entry may be made open to the public, and 4) accepted that the issuing of disqualifications and other decisions of the Committee are official and final. If an entrant is unwilling or unable to agree to all of the foregoing, the entrant should not submit the entry or submit the entry as a Checklog only.

Appendix 1 Footprint of Es'Hail-2 / QO-100, Geo slot 25.9° East

