



RULES FOR IARU REGION 3 CHAMPIONSHIPS
IN
AMATEUR RADIO DIRECTION FINDING



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A. INTRODUCTION

A1. These Rules are valid for and should be used in connection with IARU Region 3 ARDF Championships in amateur radio direction finding.

A2. It is recommended that these Rules shall be the basis for national championships and competitions organised by IARU Region 3 member societies.

B. ORGANIZATION, REGULATORY & FINANCIAL

B1. Preliminary preparations

B1.1 The Region 3 ARDF Committee (ARDF Committee herein after) will decide what procedures should be taken and, at the same time, undertake all relevant preparations, seeing to it that procedures are made as simple as possible.

B1.2 (Reserved)

B1.3 (Reserved)

B1.4 (Reserved)

B2. Participation, Finance and Organisation

B2.1 In each national team no more than three competitors in each category for both competitions (3.5 and 144 MHz) are allowed. The composition of the teams shall be defined and limited as follows:

- a) not more than THREE Seniors. The age of competitors starting in the SENIORS category shall not be taken into account,
- b) not more than THREE Women. The age of competitors starting in the WOMEN category shall not be taken into account,
- c) not more than THREE Juniors. Competitors starting in JUNIORS category shall be born on or after January 1st of the year defined as the year in which the Championships takes place minus nineteen,
- d) not more than THREE Old Timers. Competitors starting in the OLD TIMERS category shall be born before the January 1st of the year defined as the year in which the Championships takes place minus forty,

shall be present in any team.

Each team shall have a designated Team Leader who shall be at least 18 years of age. One of the competitors may serve as a team leader. A Trainer may accompany each team.

B2.2 For training and promotional purposes, one additional team may be fielded by the organising society. This team shall participate unofficially, and its members shall not commence operation until 15 minutes after the last official competitor has started.

B2.3 For ARDF competitions at national level, the ARDF Committee recommends that two additional teams defined by age category are allowed to take part. These are:

- a) "Youngsters"(i.e. members of fifteen years of age or less as of 1 January in the year in which the competition takes place),
- b) which the competition takes place) ???.

Additional categories may be introduced at the discretion of the Organising Society.

B2.4 The Organising Society shall send by E-Mail or registered mail invitations to participate in the Championships. These shall be sent not later than EIGHT MONTHS prior to the commencement of the Championships and shall be sent to the IARU International Secretariat and to the Secretariats of IARU Regions 1 and 2. At the same time the Organising Society shall send direct invitations to other Societies selected with assistance of the relevant ARDF Committee Chairman.

B2.5 Societies which intend to take part in the Championships shall send by E-Mail or a registered letter of intent to participate to the Organising Society not later than SIX MONTHS prior to the date of commencement of the Championships. This letter shall indicate the number of participants and others who will be attending. No other information needs to be provided at this time.

B2.6 Not later than FIVE MONTHS prior to the date of commencement of the Championships, the Organising Society shall send the following information by E-Mail or registered mail to those societies who submitted letters of intent to participate as per B2.5. above:

- a) the full Programme of the Championships, showing the times and locations of all events, information regarding travel facilities, e.g. from the airport to the location of the Championships, from the hotel to the site of the Championships, etc.
- b) radio direction finding equipment, visa requirements, currency regulations, requirements relating to applications for amateur radio licenses for the visitors to the host country, etc.

At the same time, invitations to international referees required at the Championships (see B3.2) shall be sent out by the Organising Society.

B2.7 (Reserved)

B2.8 Societies participating in the IARU Region 3 ARDF Championships shall submit to the Organising Society the participation fee for each competitor. The amount of the participation fee will be defined for each championship by the ARDF Committee in co-operation with the Organising Society. Fees for all Societies - whether members of the IARU or not - will be the same.

B2.9 Participating societies shall bear the travel expenses of their teams to and from the place of the Championships and the costs of accommodation and board during the Championships.

B2.10 Administrative and technical expenses connected with the Championships shall be borne by the Organising Society.

B2.11 (Reserved)

B2.12 The Organising Society shall arrange suitable hotel reservations for various types of accommodation. Participating societies are free to arrange their own accommodation and the Organising Society should be prepared to assist if required. The Organising Society should also be prepared to advise on travel facilities.

B2.13 IARU member societies outside the relevant Region may take part; however, their teams will be classified as unofficial.

B2.14 The ARDF Committee recommends that IARU Region 3 Championships should, in principle, be held once in every three years.

B2.15 To qualify as an IARU ARDF World or Regional Championship, at least FOUR societies in addition to the Organising Society **must** apply for participation. In other words; a **minimum** total of FIVE societies.

B2.16 (Reserved)

B3. The International Jury

B3.1 The International Jury for IARU Region 3 ARDF Championships shall consist of the following members:

- a) Chairman of the Jury
- b) Secretary of the Jury
- c) Referee at the Start
- d) Referee at the Finish
- e) Referee in Chief at hidden transmitters
- f) Referees at hidden transmitters
- g) Siting referee
- h) Technical referee

B3.2 The Chairman of the Jury shall be a member of the ARDF Committee or an ARDF International Class Referee designated by the ARDF Committee. The Referee in Chief at hidden transmitters, at Start and Finish and the Siting referee shall be International Class Referees. The Siting referee shall be provided by the Organising Society. The Secretary of the Jury and the Technical referee shall both be provided by the Organising Society and neither need to be International Class Referees.

The members of the Jury shall be selected and proposed by the Chairman of the ARDF Committee in co-operation with the Organising Society, from the list of approved IARU International ARDF Referees. They shall be drawn from as many member societies as possible, but in any event must have been drawn from at least FOUR.

B3.3 Members of a national team who are not competitors in the Championships and who are International Class Referees may be invited to serve as full members of the International Jury. Team leaders and trainers who are not members of the International Jury may take part in International Jury Meetings, although they shall have NO voting rights.

B3.4 The International Jury must meet a day prior to each competition to approve the following:

- a) the time limit,
- b) the starting sequence,

that has been determined by the Organising Society.

At the end of each competition the International Jury shall meet to discuss and approve the results. The time limit shall be related to the difficulty of the terrain over which the competition is taking place, but in any event it shall lie in the range between 100 and 140 MINUTES.

B3.5 In cases of dispute, a solution shall be reached by means of a vote. In the event of an equal number of "aye" and "no" votes, the Chairman of the International Jury shall have the casting vote and shall decide.

B3.6 During all competitions, all Jury members shall have "JURY" emblems or badges clearly visible.

B3.7 Decisions of the International Jury are final and cannot be challenged.

C. TECHNICAL

C1. General

C1.1 IARU Region 3 ARDF Championships shall take place on two amateur bands, namely 3.5 MHz and 144 MHz. Separate competitions shall take place on each band on different days. The Organising Society may, however, hold simultaneous runs or heats on two bands and over different courses for different categories of competitors. In this case, one band shall be used for Seniors and Women, the other by Juniors and Old Timers.

C1.2 Each participant may take part in competitions on both 3.5 and 144 MHz bands, or in competition on only one band.

C1.3 It is absolutely forbidden to give or take any assistance from or to any person, including competitors, and also to utilise any means or method of transport. The penalty for both shall be disqualification.

C1.4 Competitors shall not inflict loss or damage on or to the property of any other person.

C1.5 Competitors take part in all competitions at their own risk.

C1.6 In the event of a thunderstorm, the Chairman of the International Jury shall be entitled to recall the competition immediately.

C2. Technical

C2.1 The area and terrain over which the competition takes place shall be predominantly wooded. Differences in level over the terrain shall not exceed 200 meters. The Organising Society shall exercise prudence in the choice of terrain taking into account any hazards that might be harmful to the health of competitors. An area used in the past 12 months for any ARDF event should not be used.

C2.2 Transmitters shall be located not less than 400 meters apart. The transmitters nearest to the start of the competition shall be located not less than 750 meters from the start. The total distance between start and finish, taking into account the locations of all transmitters, shall lie in the range between FOUR and SEVEN kilometres.

No operators shall be present at the transmitters themselves; the transmitter operator and the associated referee shall be well concealed at an appropriate distance from the transmitter.

C2.3 A three-sided prism made from cardboard, plastic etc. and RED and WHITE in colour shall be placed at a distance not more than TWO meters from each transmitter. Attached to this prism shall be a registering device. The prism shall carry the number of the associated transmitter and its operating band.

C2.4 FIVE hidden transmitters shall operate on each band (i.e. 3.5 and 144 MHz) in the following sequence:

- In the first minute: transmitter no. 1,
radiating the characters MOE
- In the second minute: transmitter no. 2,
radiating the characters MOI
- In the third minute: transmitter no. 3,
radiating the characters MOS
- In the fourth minute: transmitter no. 4,
radiating the characters MOH
- In the fifth minute: transmitter no. 5,
radiating the characters MO5

This sequence shall repeat after the fifth minute with transmitter no. 1 operating in the sixth minute, etc.

A sixth transmitter, acting as a beacon, shall be placed at the entrance to the "finishing corridor" (see D2.10). This transmitter shall transmit the characters MO continuously.

The 3.5 MHz transmitters shall use A1A emissions. The 144 MHz transmitters shall use A2A emissions.

Keying speeds shall lie in the range between 8 and 12 words per minute.

C2.5 All 3.5 MHz and 144 MHz transmitters shall operate in the frequency range in accordance with the band plan of the Organising Society. All transmitters apart from the sixth (beacon) transmitter shall operate on the same frequency. The beacon transmitter shall operate on a frequency which is significantly different from that of the other five transmitters. Frequency stability shall be 0.05% or better.

The 3.5 MHz transmitter outputs shall lie in the range between 3 and 5 watts.

The transmitters for 144 MHz shall have an Effective Radiated Power (ERP) not lower than 0.25 watts and not higher than 1.5 watts measured with an accuracy of 1.5 dB; and a modulation degree not lower than 60% and not higher than 90% measured with an accuracy of 5%. All transmitters used in the same competition shall have the same ERP within 3 dB and the degree of modulation between any of the A2A modulated transmitters shall be within 10% of one another.

The ARDF Committee recommends that transmitters shall be sequentially switched and keyed fully automatically, i.e. without the assistance of an operator. The ARDF Committee also recommends that one standby transmitter shall be provided at each transmitter location, which shall be kept switched on and which can be brought into service immediately in the event of failure of the main transmitter.

If all transmitters are to be sequentially switched by means of clocks, there shall be no time difference with more than FIVE SECONDS between transmitting periods.

Aerials associated with each transmitter shall provide omnidirectional horizontal radiation patterns. Vertical polarisation shall be used in the 3.5 MHz band and horizontal polarisation in the 144 MHz band.

C2.6 Transmission shall begin after all receivers have been collected at the starting point. Transmission from transmitters apart from the Beacon transmitter shall stop when the time limit for the last group of competitors has ended. The Beacon transmitter shall remain operating until all competitors have returned. For control and logging purposes, all transmissions shall be monitored and registered by the Organising Society.

C2.7 The operation and audibility of all transmitters shall be checked at the start of each competition by the receiver using a non-directional antenna. The signals from the hidden transmitters should be made audible to the competitors at the starting point only.

C2.8 The following information shall be clearly shown on a special panel or board at the start of each competition:

- a) the time limit,
- b) the transmitter frequencies,
- c) legend of map symbols,
- d) starting list, showing start time of each competitor,
- e) a sample of the prism and registering device.

C2.9 Only competitors and authorised officials may enter the competition area, except that there shall be designated waiting and gathering areas for those whose duties so require.

C2.10 A "service net" using radiotelephony shall be provided by the Organising Society for the purpose of maintaining contact between the starting point, the finishing line and the referees at hidden transmitters. The "service net" shall not cause harmful interference to competitor's receivers.

C2.11 Time measurement to accuracy of ONE SECOND or better shall be provided by means of mechanical or electronic chronometers at the start and finish line. Each competitor shall be permitted to check his or her recorded times with a referee.

C2.12 A continuous medical service shall be provided by the Organising Society for the duration of each competition. A medical first-aid point shall be located near the finishing line.

C2.13 Competitors shall not take drugs which could alter their performance at any time during the competition and during the 24 hours prior to the commencement of any competition. The International Jury shall be entitled to arrange random medical checks before or after competition.

C2.14 Within 5 months prior to the competition, the Organising Society shall send the following information to the appointed Chairman of the International Jury:

- a) the measured output power and the calculated ERP of the 144 MHz transmitters,
- b) what kind of antenna to be used on 144 MHz,
- c) a picture from a spectrum analyser verifying that the 144 MHz transmitters are transmitting a true AM signal with no FM components.

C3. Determination of Start Sequence

C3.1 The starting sequence associated with a particular team shall be decided by the team leader and announced to the International Jury 24 HOURS prior to the commencement of the competition. The Organising Society shall prepare the starting list and assign starting numbers to the competitors.

The first group shall consist of:

- "Senior" from the team drawn as first,
- "Junior" from the team drawn as second,
- "Women" from the team drawn as third,
- "Old Timer" from the team drawn as fourth.

The second starting group consist of:

- "Senior" from the team drawn as fifth,
- "Junior" from the team drawn as sixth,
- "Women" from the team drawn as seventh,
- "Old Timer" from the team drawn as eighth.

The start of competitors from the same team in two consecutive starting groups shall be avoided.

C3.2 In the event of there being an unequal number of competitors in each category, further groups shall be permitted to consist of one, two or three competitors.

C3.3 The starting numbers assigned to competitors by the International Jury shall be valid during both competitions, i.e. those relating to both 3.5 MHz and 144 MHz.

C4. Classification of Awards

C4.1 Classification shall be provided in the following individual categories:

- | | |
|---------------------------|---------------------------|
| 3.5 MHz band - Seniors | 144 MHz band - Seniors |
| 3.5 MHz band - Juniors | 144 MHz band - Juniors |
| 3.5 MHz band - Women | 144 MHz band - Women |
| 3.5 MHz band - Old Timers | 144 MHz band - Old Timers |

For teams, the same categories shall apply. Teams will be classified only if there are at least THREE teams in a particular category in an individual competition.

C4.2 The place of an individual competitor in a category depends on the time he or she takes to complete a heat or run. The shortest times shall correspond to the highest place. Competitors finding all transmitters shall be scheduled as "First", those who fail to find one transmitter as "Seconds", etc. Competitors who either fail to find all hidden transmitters or who exceeded the time limit shall not be classified.

The awards for Member Societies and Non-Member Societies should be different. That is, two separate kind of awards shall be set, one for member societies only and the other for member societies and non-member societies.

C4.3 The place of a particular team in each category shall depend on the sum of the times taken for a particular run or heat by the two classified team members possessing the best scores. The shortest sum of timings shall correspond to the highest place. Teams whose two best competitors discover all hidden transmitters shall be classified as "Firsts", those who fail to discover one transmitter as "Seconds", etc.

C4.4 In the event of the results for two or more individual competitors or team being equal, each shall share the appropriate placing.

C4.5 Competitors gaining first places in their categories in IARU Region 3 ARDF Championships shall win the title "Regional Champion". They shall be awarded gold medals and certificates. Competitors gaining second and third places shall be awarded silver and bronze medals respectively, together with certificates.

C4.6 Teams gaining first places in their categories in IARU Region 3 ARDF Championships shall be awarded the title "Regional Team Champions". They shall be awarded prizes and certificates. All classified members of the team shall be awarded gold medals and certificates. Teams gaining second and third places shall be awarded certificates. All classified members of the team shall be awarded silver and bronze medals respectively, together with certificates.

C4.7 (Reserved)

C4.8 (Reserved)

C4.9 The Organising Society is authorised to present all competitors with diplomas of participation.

C4.10 Participants in competitions may also be awarded additional prizes and/or souvenirs presented by the Organising Society or other sponsors.

C5. Protests

C5.1 Any protest or protests concerning competition results shall be submitted by team leaders IN WRITING to the Chairman of the International Jury. Such protest or protests shall be submitted within ONE HOUR after the announcement of the results of the competition. The protest or protests shall be examined by the International Jury and their ruling and reply made known to the competitors on the SAME DAY.

D. RULES FOR COMPETITORS

D1. Equipment of Competitors

D1.1 Each competitor shall arrive with his or her own equipment as follows:

- a) one or more receivers,
- b) suitable antenna or antennas,
- c) suitable battery or batteries.

Each competitor shall also have available a personal identification document showing his or her date of birth.

D1.2 Receivers and antennas of any type may be used by competitors. However, the use of receivers radiating harmful interference in the 3.5 and/or 144 MHz bands is prohibited. Any competitor's receiver producing audible interference in the 3.5 and/or 144 MHz bands at a distance of 10 METERS or greater from itself or its antenna shall be prohibited from use by a competitor. The International Jury shall have the right to request tests on any competitor's receiver prior to its use in the competition.

- D1.3 The Organising society shall supply each competitor with the following items:
- a) a "starting ticket", which shall be used as an identification card during the course of the competition,
 - b) a map covering the area associated with the competition. ARDF Committee recommends that the standard orienteering map of a scale at least 1:20,000 shall be used. The starting point and finish beacon shall be clearly marked on the map. Unless otherwise noted, the area covered by the map issued by the organiser shall be considered as the competition area.
 - c) "starting numbers", which shall be affixed to the front and rear of the competitor's garments.

D2. Competition Procedure

D2.1 On arrival at the competition area, competitors shall place their receivers at the point indicated to them by the referee. The hidden transmitters shall remain silent until collection of the receivers is completed.

D2.2 Competitors shall be given their receivers, together with their maps and starting tickets, TEN MINUTES prior to their own start.

D2.3 Competitors shall commence to search for the hidden transmitters in groups of a maximum of FOUR. These groups shall commence searching at intervals of FIVE MINUTES. Each group shall start at the time the TRANSMITTER No.1 begins operation.

D2.4 Each group shall consist of one Senior, one Junior, one Old Timer and one Woman. Each person in a group shall be drawn from a different team.

D2.5 The ARDF Committee recommends that two "starting corridors" shall be provided by the Organising Society. Each starting corridor shall be between 50 and 250 METERS in length. The end of corridor shall neither be visible from the beginning of the same corridor nor from any part of the second corridor. One corridor shall be used as the starting point for Seniors and Women and the other corridor shall be used as the starting point for Juniors and Old Timers.

Notwithstanding the above, if the configuration of the competition terrain or area does not permit the establishment of two corridors, the Organising Society shall provide one corridor which shall be used for all starts.

D2.6 When the starting signal is given, competitors shall run along the starting corridor. When the competitor reaches the end, he or she shall switch on his or her receiver and shall commence searching for the hidden transmitters.

D2.7 Transmitters shall be searched for as follows:

- Senior competitors shall search for ALL FIVE TRANSMITTERS.
- Junior competitors shall NOT search for TRANSMITTER No. 3.
- Women competitors shall NOT search for TRANSMITTER No. 4.
- Old Timer competitors shall NOT search for TRANSMITTER No. 5.

The sequence in which competitors search for and discover transmitters is entirely at their discretion.

D2.8 The discovery of each hidden transmitter shall be registered on the starting ticket of the competitor by means of the registering device attached to the prism (see C2.3 above).

D2.9 When the competitor has found all hidden transmitters required for his or her category, he or she shall run to the finish using the map and the signals from the beacon transmitter. However, the beacon transmitter need not be discovered and its discovery is not required to be registered on the competitor's starting ticket.

D2.10 On reaching the beacon transmitter, the competitor shall run through the finishing corridor, which shall be between 50 and 100 METERS in length. The finishing time of the competitor shall be measured at the finishing line at the end of the finishing corridor, and this time shall be announced immediately. After crossing the finishing line, the competitor shall hand his or her starting ticket and start numbers to the referee. Loss of starting ticket and/or start number may result in the disqualification of the competitor. The starting and finishing corridors shall be appropriately marked.

E. FINAL STATEMENTS

E1. All matters concerning IARU Amateur Radio Direction-Finding Competitions and Championships which have not been covered or specified by or in these Rules shall be considered by the ARDF Committee. They may also be considered during the course of the Championships by the International Jury.

E2. Changes to these Rules can be introduced only by the IARU Region 3 Conference or during the period between Conferences by the IARU Region 3 ARDF Committee.
