

**International Amateur Radio Union Region 3
Radio Amateur Society of Thailand
Under The Royal Patronage of His Majesty The King**

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**RULES
FOR CHAMPIONSHIPS**

IN AMATEUR RADIO DIRECTION FINDING

Complimentary from

**8th IARU Region 3 Amateur Radio
Direction Finding Championships**

Thailand

**29th October - 3rd November 2009,
Nakhon Nayok, Thailand**

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INTERNATIONAL AMATEUR RADIO UNION

REGION 3



RULES FOR CHAMPIONSHIPS

IN AMATEUR RADIO DIRECTION FINDING

Adopted at the 9th Regional Conference in 1994



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IARU REGION 1 RULES FOR CHAMPIONSHIPS



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 simply 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 SENIORS category shall not be taken into account,

b) not more than THREE women. The age of competitors starting in 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 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.

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B2.3 For ARDF competitions at national level, 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 places),
- b) which the competition takes places).

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

B2.4 The Organising Society shall send by 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 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 need 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 registered mail to those societies who submitted letters of intent to participate as per B2.5. above:

- a) the full program of the Championships, showing the times and locations of all events,
- b) 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.
- c) radio direction finding equipment, visa requirements, currency regulations, requirements relating to applications for amateur radio licenses for visitors to the host country, etc.

At the same time, invitations to international referees requires 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 championships by the ARDF Committee in cooperation with the Organising Society. Fees for all Societies - whether member 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 travelling facilities.

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

B2.14 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 Championships, at least FOUR societies in addition to the Organising Society can apply for participation. In other words, a 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 be International Class Referees.

The members of the Jury shall be selected and proposed by the Chairman of the ARDF

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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,

which 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 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 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 color 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.

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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.

3.5 MHz transmitters shall use A1A emission. 144 MHz transmitters shall use A2A emission.

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.

3.5 MHz transmitters output 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 watt and not higher than 1.5 watt 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 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.



ARDF Committee recommends that transmitters shall be sequentially switched and keyed fully automatically, i.e. without the assistance of an operator. 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 longer 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 an 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 commence-

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ment 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,
- “woman” 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,
- “woman” 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.

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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 maximum 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 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.

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Appendix : Rules For Appointment Of IARU ARDF Region 3 International Class Referees In Amateur Radio Direction Finding



Adopted at the 9th Regional Conference in 1994



1. The following two classes of the IARU Region 3 International Referees in ARDF are introduced:
 - a) Active Referee
 - b) Honorary Referee
2. The candidates for nomination as the Active Referee shall fulfil the following conditions:
 - a) being a holder of a valid amateur transmitting license,
 - b) serving at least 3 years as the national ARDF referee,
 - c) being a member of IARU Member Society,
 - d) being capable to communicate in English,
 - e) knowing the IARU Region 3 ARDF Rules.
3. The candidate for nomination as the IARU Region 3 International Active Referee is to be submitted by his/her national member society to the Chairman of the ARDF Committee, with the written proof (signed by the President, Vice President or Secretary of the Society), that the candidate fulfils the conditions listed in point 2. After the careful study by the members of ARDF Committee, the Chairman of the ARDF Committee shall make the final approval and issue a written certificate to the newly appointed referee. At the same time, the Chairman of ARDF Committee shall submit a report to the Secretary of Region 3 for the announcement on the Regional News Publication.
4. The number of IARU Region 3 International Active Referees in ARDF shall not exceed five per one member society.
5. The IARU Region 3 International Active Referee who has not participate as the

Jury member at the national or international ARDF event organised by the IARU or IARU Member Society for the consecutive five years, is automatically deleted from the list of Active Referees and became the Honorary Referee. The IARU Region 3 ARDF Committee will update at the beginning of every year the list of International ARDF Referees, moving - if the case appears - the inactive referees from the list of Active Referees to the Honorary Roster. The place of the referee who became the Honorary ARDF Referee may be replaced (on request of the member society involved) by the another amateur fulfilling the conditions as in point 2. The Honorary Referee may be turned back to the Active list on the written request of his society, but only when the number of Active Referees representing this Society is less than five.

6. Only IARU International Active ARDF Referees are entitled to serve as the member of Jury at the IARU International ARDF events.

7. The member societies having an international class referees in ARDF shall send to the Chairman of ARDF Committee once a year (as per December 31st) a list showing the participation of their referees in national and international ARDF events in the year ended.

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INTERNATIONAL AMATEUR RADIO UNION

REGION 1



RULES FOR CHAMPIONSHIPS

IN AMATEUR RADIO DIRECTION FINDING

PART A - ORGANISATION

version 2.7 (April, 2006)

by SP5HS - KRZYSZTOF SLOMCZYNSKI



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1. Definitions

1.1 Amateur Radio Direction Finding (ARDF) is an amateur radio sport in which competitors by means of a direction finding receiver are to find a number of transmitters hidden in the competition area in the shortest possible time .

1.2 Competitors are individuals of either sex or a team.

1.3 Single competitors or teams are delegated by amateur radio societies being full members of a regional IARU Organization. Teams from countries, which have no IARU member society, can be accepted by the ARDF WG.

1.4 The term event embraces all aspects of an ARDF competition, including organizational matters, e.g. start draws, team official meetings, ceremonies etc. and the competitions, usually on the 3,5 and 144 MHz amateur radio bands.

1.5 An ARDF World Championship is the event to award the title of World Champion in ARDF. A World Championship is organized by an amateur radio society authorized by its corresponding IARU Organization.

1.6 A Regional ARDF Championship is the event to award the title of Regional Champion in ARDF. A Regional Championship is organized by an amateur radio society authorized by its corresponding IARU Organization.

1.7 An IARU Regional Amateur Radio Direction Finding Working Group (hereinafter known as ARDF WG) is a permanent specialized body of the IARU Regional Organization, set up by the Regional General Conference. Its aims are:

- to exchange information related to ARDF
- to develop ARDF materials and to provide ARDF advice to national societies
- to submit ARDF advice, proposals and recommendations to the Regional Executive Committee
- to participate in the organization of IARU ARDF events within its region
- to undertake ARDF activities on behalf of its IARU Regional Organization.

2. General provisions

2.1 These rules are valid for and shall be used in connection with IARU World and Regional Championships in Amateur Radio Direction Finding.

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2.2 These rules are recommended as a basis for any international ARDF event and national championships.



2.3 These rules are binding for all persons engaged in ARDF Championships organized under these rules.

2.4 The guiding principle in the interpretation of these rules shall be fairness.



2.5 Any ARDF event shall equally challenge the technical (direction finding), orienteering and physical skills of a competitor.

2.6 All technical (direction finding) and orienteering tasks must be solvable by means of the direction finding receiver and an appropriate map of the competition area.



2.7 Changes to part A of these Rules are subject to approval by the IARU Regional Conference or during the period between Conferences by the Executive Committee (EC). Proposed changes are to be presented to the EC by the ARDF WG Chairman.

2.8 Changes to part B of these rules are subject to approval by the ARDF WG. At least two thirds of ARDF WG members present at the meeting or at least 50% of the total number of ARDF WG members must vote "In favor" in order to take a valid decision.



2.9 The English text of these rules shall be taken as decisive in any dispute arising from a translation into any other language.

3. Event program

3.1 ARDF World Championships should be organized every even year and Regional Championships every odd year. Deviations from this rhythm require approval by all (three) regional ARDF WG at least two years before such changes can become effective.

3.2 The event dates and the program are proposed by the organizer. They require approval by the relevant ARDF WG.

3.3 ARDF Championships shall take place on two amateur radio bands: 3.5 MHz and 144 MHz. Separate competitions shall take place on each band on different days.

4. Event preparations

4.1 Any IARU society may apply to organize an ARDF event of world or regional level.

4.2 Applications of interested societies are to be presented to the ARDF WG on official application sheets provided by the WG.

4.3 Application sheets are to be received by the Chairman of the ARDF WG not later than January 31st three years prior to the year of the Championships .

4.4 ARDF WG shall propose the organizing society to the EC the same year.

5. Participation

5.1 Competitors shall have full passport-holding citizenship of the country of the society they represent. Other nationals living at least for one year in the country in question may also participate for the society of said country; the legitimacy of the residence shall be proven by an official document. Exceptions from this requires the approval of the ARDF WG and the societies involved.

5.2 Each participating society shall appoint a team manager to act as a contact person between the team and the organizer. It is the team manager's duty to see that the team receives all necessary information.

5.3 Competitors participate at their own risk. Insurance against accidents shall be the responsibility of their society or themselves, according to national regulations.

5.4 Each society may enter a team in each category and a number of team officials. The organizer shall fix the maximum number of officials per team, in accordance with the available facilities. This maximum number shall be the same for each team and shall be at least 5.

5.5 One additional team may be entered by the organizing society. This team shall participate unofficially.

5.6 Competitors from outside the relevant Region may take part in IARU ARDF Regional Championships. However, they shall be classified unofficially.

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6. Costs

6.1 The costs of organizing an event shall be borne by the organizing society and to cover these costs an entry fee may be charged. Such entry fee shall be kept as low as possible and shall be approved by the ARDF WG.



6.2 In order for IARU Region 1 Member Societies to be allowed to start as official competitors in an international IARU ARDF championship, they must have fulfilled all their financial obligations to Region 1 by the end of the month prior to the month in which the Championships take place. If requested, facilities will be provided to accept outstanding fees together with payment of the championship fee and expenses.



6.3 The organizing society may allow Member Societies with outstanding fees to Region 1 to take part in such a Championships outside of competition (i.e. not to be ranked and not to be awarded medals)



6.4 The IARU Region 1 Executive Committee may allow Radio Amateur Societies in countries within Region 1, which are not members of IARU Region 1, to officially participate as full competitors in International ARDF championships. Such permission will normally only be give for one year as an introduction to this IARU activity.



6.5 All entry fees have to reach the organizing society not later than six weeks before the event. If approved by the ARDF WG an additional fee can be charged for late payments.

6.6 Participating societies or the participants themselves shall bear the traveling costs to and from the place of the Championship and the costs of accommodation and board during the event.

6.7 The relevant IARU Regional Organization shall bear travel expenses to and from the place of the Championship, together with the costs of accommodation and board, of the Chairman of the International Jury. The organizer shall bear accommodation and board of the members of the International Jury. Their travel costs shall be borne by the societies to which they belong.

7. Event information

7.1 The official language during the entire event shall be English. Official information shall be given in writing. It may be given orally only in urgent cases and in response to

questions at team officials' meetings.

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7.2 Information from the organizer and / or the ARDF WG shall be given in the form of bulletins. Bulletin 1 shall be sent to all societies being known as interested in ARDF and the Chairmen of the other two Regional WG's. Bulletins 2 and 3 shall be sent to the societies having declared their intention to participate. A copy of each bulletin shall be sent to each member of the ARDF WG.



7.3 Bulletin 1 (invitation) shall include the following information:

- Organizing Society with address, telephone/fax number and e-mail address
- venue
- dates and types of competitions
- any participation restrictions
- expected starting fee and costs of accommodation and board
- any peculiarities of the event
- latest date to reach the organizer and address for Letters of intent.



7.4 Bulletin 2 (event information) shall include the following information:

- all information given in Bulletin 1
- entry fee for competitors and team officials
- types and cost of accommodation and board
- bank / account details for payments and latest date for funds to be received to avoid late payment fees
- latest date for acceptance of entries
- description and type of any transport offered
- event program
- maximum number of officials per team
- any permitted deviations from the rules
- directions for the registration of media representatives and any extra representatives of the societies
- directions for obtaining entry permits (visas)
- description of terrain, climate and any hazards
- opportunities for training
- embargoed areas
- description of the marking devices
- technical parameters of used transmitters



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- the frequencies and output RF power/ERP of transmitters on both bands
- description (type, gain, height above the terrain) of the 144 MHz antennas
- description (length, grounding system) of the 3.5 MHz antennas
- notes on competition clothing, if necessary
- a recent sample map showing the type of terrain, if available.

7.5 Bulletin 3 (Additional event information) shall include the following information:
detailed program of the event



- details of the terrain
- sample or 100% size picture of the starting ticket, if used
- electronic marking system description, if used
- map sizes, if exceeding 210 x 297 mm
- scales and vertical contour intervals of the maps
- address and telephone/fax number of the competition office
- details of accommodation and food
- transport schedule
- team officials' meetings.



7.6 Bulletin 4 shall be handed over on arrival of the competitors and shall include final details of the event .



7.7 Bulletin 1 shall be dispatched TEN MONTHS before the event, Bulletin 2 FIVE MONTHS and Bulletin 3 ONE MONTH before the event.

8. Entries

8.1 Societies intending to participate in the Championship shall send a Letter of Intent to participate to the organizer not later than SIX MONTHS before the event.

8.2 Entries giving the expected number of competitors of each category, the number of team officials and the team manager's name, address, phone/fax numbers and e-mail address shall reach the organizer not later than TWO MONTHS before the event.

8.3 Each competitor's name, date of birth and category and the names of the team officials shall reach the organizer as early as possible but not later than 24 hours before the first meeting of the International Jury. Later entries or changes may be made only with permission of both organizer and International Jury.

8.4 The organizer may exclude competitors or teams from starting if their entry fee is not paid and no agreement has been reached about payment.

8.5 Competitors may be entered by their society only.

9. Jury

9.1 The International Jury for IARU ARDF Championships shall consist of the following members:

- Chairman of the Jury
- Secretary of the Jury
- Referee at the start
- Referee at the finish
- Referees in the competition area
- Siting referee
- Technical Director

9.2 The Chairman of the Jury at an IARU World Championship shall be a member of the Regional Executive Committee or an ARDF International Class Referee designated by the Regional EC. The Chairman of the Jury at an IARU Regional Championship shall be an ARDF International Class Referee authorized by the relevant regional IARU organization.

9.3 The referees in the competition area, at start and finish and the siting referee shall be International Class Referees. The siting referee shall be provided by the organizing society. The Secretary of the Jury and the Technical Director shall both be provided by the organizing society and neither need be an International Class Referee.

9.4 The members of the Jury shall be selected and proposed by the Chairman of the ARDF WG, in cooperation with the organizing society, from the list of approved IARU International Class Referees. They shall be drawn from as many societies as possible. The names of the members of the International Jury shall be recorded and announced as early as possible before the beginning of the event.

9.5 The members of the International Jury shall ensure that rules are followed, mistakes are avoided and that fairness is paramount. They have the authority to require adjustments to be made if deemed necessary to satisfy the requirements of the event.

9.6 The International Jury shall meet a day before the competition to approve the

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time limit and starting sequence, which is determined by the organizer.



9.7 At the end of each competition the International Jury shall meet to discuss and approve the results and shall decide upon possible protests.

9.8 Any decision of the Jury will be final only if all Jury members are present. In urgent cases preliminary decisions may be taken if a majority of the Jury members agree on the decision. These decisions are clearly to be marked "preliminary".



9.9 If a Jury member declares himself to be prejudiced or unable, the Chairman of the Jury shall nominate a substitute.

9.10 In cases of dispute, a solution shall be reached by means of a vote. In case of an equal number of "yes" and "no" votes, the Chairman of the Jury shall have the casting vote and shall decide. The Secretary of the Jury and the Technical Director both have no votes.



9.11 Decisions of the Jury are final and cannot be challenged.

10. Complaints



10.1 A complaint can be made about violation of these rules, mistakes in the results or the organizer's directions.

10.2 Complaints can be made by event or team officials, competitors or anybody else connected with the event.

10.3 Any complaint shall be made orally or in writing to the organizer as soon as possible. A complaint is adjudicated by the organizer. The complainant shall be informed about the decision immediately.

10.4 There is no fee for a complaint.

11. Protests

11.1 A protest can be entered against the organizer's decision about a complaint or against major infringements of these rules.

11.2 Protests can be entered by team or event officials only and must be presented to a Jury member for further action by the Jury.

11.3 The Jury shall decide upon the protest and present a decision as soon as possible. It is up to the Jury to make its decision public or inform the protestant only. The decision of the Jury is final and cannot be appealed.

11.4 There is no fee for a protest.

12. Media service

12.1 The organizer shall offer media representatives attractive working conditions to observe and report on the event.

12.2 As a minimum, the organizer shall make available to media representatives the following:

- hotel accommodation to be paid for by the users
- start lists, program booklets and other information on the day prior to the competition
- opportunity to take part in the model event
- weather-protected working space for media representatives' typewriters or computers in the finish area
- result lists and maps with courses immediately after the competition
- telephone and fax for international connections, preferably in the finish area, to be paid for by the users.

12.3 The organizer shall make every effort to maximize media coverage as long as this does not jeopardize the fairness of the event.

13. Event reports

13.1 Not more than ONE MONTH after the event, the organizer shall submit a report to the ARDF WG Chairman containing:

- complete result lists
- three copies of each map with course details
- comments about the event.

13.2 One copy of every bulletin, the final program including start lists and a plan of the organization shall be sent to the ARDF WG Chairman for the archives not more than ~~SIX MONTHS~~ after the event.

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14. Categories

14.1. Competitors are divided into the categories according to their sex and age.

14.2. Categories:

Women (W)	Men (M)	Age
W 19	M 19	19 and younger
W 21	M 21	regardless of age
W 35	M 40	35/40 and older
W 50	M 50	50 and older
	M 60	60 and older

14.3 Competitors belong to the M19 or W19 category up to the end of the calendar year in which they reach the age of 19.

14.4 Men competitors aged 40 or older or women competitors aged 35 or older belong to each category from the beginning of the calendar year in which they reach the given age.

14.5 To qualify as an IARU World Championship, a minimum of six societies must have applied to participate.

14.6 Each society may enter a team of up to three competitors per each category.

15. Training and model event

15.1 For training purposes the organizing society shall offer a model event on both bands on the day prior to the first competition to demonstrate the transmitter features, the set-up of transmitters and antennas, the marking devices etc., which will be used in the competitions. If possible, also the terrain type and map quality shall be shown.

15.2 Competitors, Jury members, team officials, IARU officials and media representatives shall be invited to participate in the model event.

15.3 Equal opportunities for training in the model event shall be offered to all societies.

16. Starting order

16.1 The start draw shall be supervised by an ARDF International Class Referee being



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the member of the Jury. The start draw may be public or private. It may be made by hand or by computer. The starting draw shall be done separately for each band.



16.2 The start list shall be published on or before the day prior to the competition and before the team officials' meeting.

16.3 All competitors and teams correctly entered shall be drawn, even including competitors who might not have arrived at that time.



16.4 Competitors from the same society and category may not start at the same time or consecutively. If they are drawn to start consecutively, the next competitor shall be inserted between them. If this happens at the end of the drawing list, the competitor before them shall be inserted between them.



16.5 The competitors start at equal start intervals. The normal start interval is 5 minutes.

16.6 All competitors of a particular category shall start into the same starting corridor and at the beginning of the same minute of the 5-minute cycle.



16.7 Competitors participating unofficially shall not start until 15 minutes after the last official competitor has started.

17. Team officials' meeting

17.1 A team officials' meeting shall be organized on the day prior to each competition. This meeting shall start not later than 19.00 hours. The Chairman of the International Jury shall lead or supervise the meeting.

17.2 All competition material (start number bibs, start lists, transport schedules, latest information, etc) shall be handed out well before the meeting starts.

17.3 Team officials shall have the opportunity to ask questions during the meeting.

18. Terrain

18.1 The terrain shall be suitable for setting competitive ARDF courses without any serious hazards to competitors and avoiding man-made objects which could interfere

with direction finding activities.

18.2 The competition area shall not have been used for ARDF for as long as possible prior to the championship - at least not for the last two years - to guarantee fair play.

18.3 The competition area shall be embargoed as soon as it has been selected. All corresponding information published in the country of the championship should be handed over to the ARDF-WG Chairman for further dissemination.

18.4 Any rights of nature conservation, forestry, hunting, etc in the area shall be respected.

9. Courses

19.1 The Principles for ARDF Course Planning (see Appendix 2) shall be followed.

19.2 The standard of the courses shall be worthy of international ARDF events. The technical and navigational skill, concentration and running ability of the competitors shall be tested. All courses shall call upon a range of different ARDF techniques.

19.3 Transmitters including the finish beacon shall be located not less than 400 meters apart. The transmitter nearest to the start shall be located not less than 750 meters from the start.

19.4 Course lengths shall be given as the length of a straight line from the start line via the transmitters in optimum order to the finish line. They should range from SIX to TEN kilometers.

19.5 Total difference in level of the points of the course (start, transmitters and finish) shall not exceed 200 meters.

19.6 In the event of a thunderstorm, the Chairman of the International Jury is entitled to recall the competition immediately.

20. Restricted areas and routes

20.1 Rules set by the organizing society to protect the environment and any related instructions from the organizer shall be strictly observed by all persons connected with the event.

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20.2 Out-of-bounds or dangerous areas, forbidden routes, line features that shall not be crossed etc. shall be described in the information and marked on the map. If necessary, they shall also be marked on the ground. Competitors may not enter, follow or cross such areas, routes or features.



20.3 Compulsory routes, crossing points and passages shall be marked clearly on the map and on the ground. Competitors shall follow the entire length of any marked section of their course.

20.4 The use of official transport during the Championship may be declared mandatory by the organizer.

21. Maps



21.1 Maps and additional overprinting shall be drawn and printed according to the IOF International Specification for IOF Maps. The map scale shall be 1:15000 or 1:10000. Deviations need approval by the ARDF WG.

21.2 Errors on the map and changes which have occurred in the terrain since the map was printed shall be overprinted on the map if they have a bearing on the event.



21.3 On the day of the competition, the use of any map of the competition area by competitors or team officials is not allowed until permitted by the organizer.

21.4 The competition map shall cover the whole competition area including start, finish beacon and all transmitters. The starting point and the point of the finish beacon shall be clearly marked on the map.

21.5 Unless otherwise noted, the area covered by the map issued by the organizer shall be considered as the competition area.

21.6 The IARU and its member societies shall have the right of free reproduction of the event maps with courses in their official magazines.

22. Equipment used by competitors

22.1 Every competitor shall have a direction finding receiver for the relevant band.

The receivers shall meet the Technical Specifications for ARDF Equipment (see Appendix 1, section 1).

22.2 Start number bibs shall be clearly visible and be worn on the upper part of the body and on back and front of the competitors. The bibs shall not be larger than 25 x 25 cm with figures at least 14 cm high. The number bibs may not be folded or cut.

22.3 As long as the rules of the organizer do not specify otherwise, the choice of clothing and footwear shall be free.

22.4 On the day of the competition, the use of any telecommunication device by competitors or team officials is prohibited until permitted by the organizer. The penalty for this shall be disqualification. If the team official breaks this rule, the whole team shall be disqualified.

23. Starting tickets and marking devices

23.1 Only ARDF WG approved starting tickets and marking devices may be used - see Appendix 3.

23.2 The starting ticket together with the competition map shall be handed out to the competitor 10 minutes prior to his/her start at the latest.

23.3 When non-electronic or combined systems are used, competitors are allowed to prepare the starting ticket, eg. by writing on it, by reinforcing it or by putting it into a bag, but not by cutting-off parts of the starting ticket.

23.4 When electronic systems are used, competitors must have the opportunity to practice them at the model event.

23.5 Competitors shall be responsible for marking their starting ticket at each transmitter using the marking device provided. They are responsible for correct markings which must be clearly identifiable.

23.6 Missing or unidentifiable control marks shall not be considered, unless it can be established with certainty that the competitor visited the transmitter and that the mark missing or unidentifiable is not the competitor's fault.

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23.7 When systems with visible punch marks are used, at least a part of the marking must be in the appropriate box for this transmitter or in an empty reserve box. One mistake per competitor is acceptable, e.g. marking outside the correct box or jumping one box, provided all markings can be identified clearly.

A competitor who attempts to gain advantage by inaccurate marking may be disqualified.

23.8 Competitors who lose their starting tickets shall be disqualified.



24. Start

24.1 On arrival at the competition area, competitors shall place their receivers at the point indicated to them by the referee. Spare receivers and components, clearly marked as property of a particular team or competitor, shall be placed at an indicated point just beyond the starting line beside the starting corridor. All transmitters shall remain silent until collection of the receivers is completed.



24.2 All competitors shall have at least 45 minutes for undisturbed preparation and warm-up at the start area. Only competitors who have not started and team officials shall be allowed to enter the warm-up area.



24.3 The following information shall be shown on a special board at the start area:

- time limit transmitter frequencies
- starting list
- first start time (in local time)
- sample of the flag and marking device
- clock showing the official time of the competition

24.4 The start shall be organized with a pre-start before the time start, situated at one edge of the warm-up area. The competitors' names shall be called or displayed. Beyond the pre-start, only starting competitors and media representatives guided by the organizer are allowed.

24.5 Competitors shall enter the pre-start area TEN MINUTES before their own start. At the same time, they shall be given their receivers, maps and starting tickets (see 23.2).

24.6 The start shall be organized so that later competitors and other persons cannot

see the maps and the route choices of the starters.

24.7 When the starting signal is given, competitors may switch on their receivers and shall run along the starting corridor. Reaching the end, they shall start searching for the hidden transmitters. Competitors shall not stop in the starting corridor except for a receiver malfunction.

24.8 Competitors, who find out a failure of their receiver, may return within their own running time to the starting line and take their spare receiver or parts from the referee. It is strictly forbidden to give or take any assistance to or from any person except referees.

24.9 At least two starting corridors shall be provided by the organizer. They shall not be longer than 250 meters. The end of each corridor shall not be visible neither from the start area nor from any part of the other corridor(s). The terrain at the end of the starting corridors should offer normal run ability. The end of the starting corridor shall be clearly marked.

24.10 Competitors who are late for their start time through their own fault shall be permitted to start. The starting referee shall determine at which time they may start which shall be as soon as possible but under consideration of the possible influence on other competitors. These late competitors shall be timed, however, as if they had started at their original start time.

24.11 Competitors being late for their start time because of a fault of the organizer shall be given a new start time.

25. Transmitters

25.1 Transmitters used at IARU ARDF Championships shall meet the Technical Specifications for ARDF Equipment (see Appendix 1, section 2).

25.2 The antenna installation shall not be changed during the competition.

25.3 All transmitters including the beacon shall be well audible during the whole competition from the starting point, using a receiver of average sensitivity. All transmissions shall be monitored and recorded by the organizer.

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25.4 Transmitters begin to operate after all receivers have been collected at the start. Transmitters shall remain operating until the end of the time limit of the last competitor. The beacon transmitter shall remain operating until all competitors have finished.



25.5 Transmitters shall operate on each band in the following sequence:

- finish beacon sending code MO continuously
- transmitter No.1 sending code MOE in the first minute
- transmitter No.2 sending code MOI in the second minute
- transmitter No.3 sending code MOS in the third minute
- transmitter No.4 sending code MOH in the fourth minute
- transmitter No.5 sending code MO5 in the fifth minute

- of the 5-minute cycle, starting at 0:00.

If the authorities of the organizing society make any transmitter identification compulsory such identification can only be transmitted during the active minute.



25.6 Transmitters shall be searched for by each category as follows:

- M21 category shall search all six transmitters including the finish beacon.
- M19 category shall not be scored for transmitter No. 3 (MOS)
- M40 category shall not be scored for transmitter No. 5 (MO5)
- M50 category shall not be scored for transmitter No. 2 (MOI)
- M60 category shall not be scored for two transmitters defined by the siting referee.
- W19 category shall not be scored for transmitter No. 2 (MOI)
- W21 category shall not be scored for transmitter No. 4 (MOH)
- W35 category shall not be scored for transmitter No. 1 (MOE)
- W50 category shall not be scored for two transmitters defined by the siting referee.

25.7 The order in which competitors search for and discover the transmitters is entirely at their discretion.

25.8 The finish beacon shall be placed at the entrance of the finish corridor.

25.9 Transmitters No.1 through 5 and the finish beacon shall be marked by a flag consisting of three squares 30 x 30 cm arranged in a triangular form. Each square shall be divided diagonally, one half being white and the other orange or red.



25.10 The flag shall be close to the transmitter antenna but not further away than 4 meters. The flag shall be visible to competitors when they reach the transmitter antenna.

25.11 To prove the passage of the competitors, there shall be at least two or more marking devices in the immediate vicinity of each flag.

25.13 Each transmitter must be easily recognizable by its code number (one to five), which shall be fixed to the flag for easy identification by the competitors. In case of competitions with transmitters working on two different frequency bands there must be another clear sign indicating the frequency band of the transmitter.

25.14 All transmitters shall be guarded. Normally each transmitter is attended by the transmitter operator and a member of the International Jury.

25.15 The time at which each competitor finds a transmitter shall be recorded.

26. Finish and time-keeping

26.1 The competition ends for a competitor when crossing the finishing line.

26.2 The finish corridor begins at the finish beacon and ends at the finish line. Its entrance shall not be wider than 10 m. It shall be clearly marked on both sides by uninterrupted tape. The last 20 m shall be straight. The length of the corridor shall be indicated by the siting referee at the team officials meeting a day prior to the competition.

26.3 The finish line shall be at least 3 m wide and shall be at right angles to the direction of the run-in. The exact position of the finish line shall be obvious to approaching competitors.

26.4 The finishing time shall be measured when the competitor's chest crosses the finish line. Times shall be rounded down to whole seconds. Times shall be given in either hours, minutes and seconds or in minutes and seconds only.

26.5 After a competitor has crossed the finish line, the starting ticket and, if so required, the competition map have to be handed over to the organizer.





26.6 Having crossed the finish line, a competitor may not re-enter the competition terrain without the permission of the organizer. A competitor who retires shall announce this at the finish immediately and hand in the map and starting ticket. That competitor shall in no way influence the competition nor help other competitors.

26.7 There shall be medical facilities and personnel at the finish, who are also equipped to work in the forest.



26.8 The time-keeping system shall meet the Technical Specifications for ARDF Equipment (see Appendix 1, section 3).

27. Results

27.1 The place of an individual competitor depends on (first) the number of transmitters found and (second) his or her running time. Only transmitters which are scored for the particular category are considered. Competitors who have failed either to find any transmitter or who have exceeded the time limit, shall not be classified.

27.2 The place of a team depends on (first) the sum of transmitters found and (second) the sum of times reached by the two classified team members possessing the best results.

27.3 Two or more competitors or teams having the same result shall be given the same placing in the results list. The position(s) following the tie shall remain vacant.

27.4 Provisional results shall be announced and displayed in the finish area during the competition. The official results shall be published not more than 2 hours after final approval of the provisional results by the Jury. They shall be handed out on the day of the competition to each team manager and to accredited media representatives and presented openly at three different places for general information at least.

27.5 The official results shall include all participating competitors and teams.

27.6 At the end of the championship every competitor, Jury member, team official and accredited media representative shall receive an official results list and the competition maps. Further result lists and maps may be sold at a small charge to all interested.



28. Prizes

28.1 The title of World Champion or Regional/Continental Champion shall be awarded for the 3,5 and 144 MHz competitions and for each official category separately.

28.2 The following prizes shall be awarded in all competitions:

- 1st place Gold medal and certificate
- 2nd place Silver medal and certificate
- 3rd place Bronze medal and certificate
- 4th-6th place Certificate

28.3 If two or more competitors or teams have the same placing, they shall each receive the appropriate medal and/or certificate.

28.4 In the team classification, each classified member of the team shall receive the appropriate medal and/or certificate.

28.5 The organizer shall arrange a dignified prize-giving ceremony.

28.6 The prize-giving ceremonies shall be performed by the representatives of the organizing society and the IARU Regional Organization.

28.7 During the prize-giving ceremony, the national flags of the first three competitors/teams should be flown and the national anthem of the winner may be played.

29. Fair play

29.1 All persons taking part in an ARDF event shall behave with fairness and honesty. They shall have a sporting attitude and a spirit of friendship. Competitors shall show respect for each other, for officials, journalists, spectators and the inhabitants of the competition area. The competitors shall be as quiet as possible in the terrain.

29.2 It is absolutely forbidden to give or take any assistance to or from any person, including competitors, or to utilize any means of transport, except:

- assistance provided by referees within the scope of their defined duties, as long as that assistance is equally available to all competitors;
- it is the duty of all competitors to help injured runners. No competitor will be disqualified for giving or receiving such an assistance, as long as he or she does not

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gain competitive advantage by doing so.



29.3 Doping is forbidden. The ARDF WG or during a championship the Jury may require doping control procedures to be conducted.



29.4 The organizer, with the consent of the ARDF WG, may decide to publish the venue of the competition in advance. If the venue is not made public, all officials shall maintain strict secrecy about the competition area and terrain. In any case, strict secrecy shall be kept about the courses.



29.5 Any attempt to survey or train in the area embargoed by the organizer is not allowed. Attempts to gain any information related to the courses, beyond that provided by the organizer, are not permitted before and during the competition.



29.6 Team officials, competitors, media representatives and spectators shall remain in the areas assigned to them.

29.7 Members of the international Jury and transmitter operators shall neither disturb nor detain any competitor, nor supply any information whatsoever. They shall remain quiet, wear inconspicuous clothing and shall not help competitors approaching transmitters. This also applies to all other persons in the terrain.

29.8 A competitor who breaks any rule, or who benefits from the breaking of any rule, shall be disqualified.

Appendix 1: Technical Specifications for Amateur Radio Direction Finding Equipment

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1. Receivers

- 1.1 Receivers and antennas of any type may be used by the competitors.
- 1.2 Any receiver producing audible interference in the 3,5 MHz or 144 MHz band at a distance of 10 meters or more shall not be used in the competitions.
- 1.3 The International Jury may require tests on any competitor's receiver prior to its use in the competitions.

2. Transmitters

- 2.1 It is the responsibility of the organizing society to ensure that all transmitters in use comply with the relevant radio regulations in force in the country of operation with regard to their electric parameters, identification and to their being operated only by duly authorized operators.
- 2.2 All transmitters within one competition shall have the same parameters and the same antenna installation.
- 2.3 The frequency of the beacon transmitter shall be significantly different from the frequency of the other five transmitters.
- 2.4 When not scheduled to be transmitting, neither transmitter nor its antenna may radiate any RF energy.
- 2.5 Antennas shall provide omnidirectional horizontal radiation patterns.
- 2.6 Specifications for the 3.5 MHz transmitters:
 - Carrier frequency * - 3510 ... 3600 KHz
 - Frequency stability - better than 50 ppm
 - Undesired products level - conforming to the national regulations
 - Output RF power - 1 - 5 W
 - Mode - A1A (keyed unmodulated carrier)
 - Keying speed- 8 ... 12 WPM
 - Antenna - vertical
- 2.7 Specifications for the 144 MHz transmitters:
 - Carrier frequency * - 144.5 ... 144.80 MHz
 - Frequency stability - better than 50 ppm
 - Undesired products level - conforming to the national regulations
 - Effective Radiated Power (ERP) - 0,25 - 1 W
 - Mode - A2A (keyed carrier modulated by AF tone or continuous carrier modulated by keyed AF tone)



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- Modulation depth 5% - 75
- Keying speed- 8 ... 12 WPM
- Antenna polarization - horizontal
- Antenna height - 2 ... 3 meters above ground level



*Note: (*) Carrier frequency ranges indicated in these Rules are those normally used by IARU Region I societies. Organizers in other Regions may employ different ranges to meet their band plan regulations. According to Part A 7.4 of these Rules transmitter frequencies are to be stated in bulletin 2, which is to be dispatched 5 months before the event.*



3. Time-keeping system

- 3.1 The official competition time shall correspond to the official local time.
- 3.2 Two independent time-keeping systems, a primary and a secondary, shall be used.
- 3.3 The maximum deviation of the clocks at the start and finish line is ONE SECOND against the official time during the whole competition.
- 3.4 The maximum deviation of the transmitting periods is FIVE SECONDS against the official time during the whole competition. The maximum transmitting overlap of two transmitters is FIVE SECONDS.



4. Other equipment

- 4.1 Any other equipment used by the organizer (service radio net, time-keeping system, computers, electronic marking devices etc.) shall not cause audible interference to competitors' receivers.



Appendix 2: Principles for course planning

1. Introduction

1.1 Purpose

These principles aim at establishing common standards for the planning of ARDF courses in order to ensure fair competitions and to safeguard the unique character of ARDF.

1.2 Application of these principles

Courses in all international ARDF events shall be planned in accordance with these principles. They should also serve as general guidelines for the planning of other competitive ARDF events.

2. Basic principles

2.1 Aim of good course planning

The aim of course planning is to offer competitors courses correctly designed for their expected abilities. Results shall reflect the competitors' technical and physical ability.

2.2 Siting referee's golden rules

The siting referee shall keep the following principles in mind:

- the unique character of ARDF: the combination of direction finding under time stress and the physical ability
- the fairness of the competition
- competitors enjoyment
- the protection of wildlife and the environment
- the needs of the media and spectators

2.2.1 Unique character

Every sport has its own character. The unique character of ARDF is to find a number of transmitters hidden in unknown terrain against the clock. This demands special skills: handling of the direction finding receiver and interpreting measurements, accurate map reading, route choice evaluation, concentration under stress, quick decision making, running in natural terrain, etc.

2.2.2 Fairness

Fairness is a basic requirement in competitive sport. Unless the greatest care is taken at each step of course planning and transmitter placing, luck can easily become significant in ARDF competitions. The siting referee shall consider all such factors to ensure that the contest is fair and that all competitors face the same conditions during every

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part of the course.



2.2.3 Competitors enjoyment

The popularity of ARDF can only be enhanced if competitors are satisfied with the courses they are given. Careful course planning is therefore necessary to ensure that courses are appropriate in terms of length, physical and technical difficulty, transmitters siting, etc. In this respect it is particularly important that each course is suitable for the competitors doing that course.



2.2.4 Wildlife and the environment

The environment is sensitive: wildlife may be disturbed and the ground as well as the vegetation may suffer from overuse. The environment also includes people living in the competition area, walls, fences, cultivated land, buildings and other constructions, etc. It is usually possible to find ways to avoid interference with the most sensitive areas without damage. Experience and research have shown that even large events can be organized in sensitive areas without permanent damage if the correct precautions are taken and the courses are well planned.



It is very important that the siting referee ensures that there is access to the chosen terrain and that any sensitive areas in the terrain are discovered in advance.



3. ARDF course

3.1 Terrain

The terrain shall be chosen so that a fair competition is being offered to all competitors. To safeguard the character of the sport, the terrain should be run able and suitable for testing the ARDF skills of the competitors. On a good ARDF course, competitors are forced to concentrate on navigation throughout the race. Sections requiring no attention to navigation should be avoided (if possible).

Alternative routes force competitors to use the map to assess the terrain and to draw conclusions from it. Route choices make competitors think independently and will split up the field, thus minimizing "following". A good course shall disperse the competitors throughout the competition area and not bring them together. The transmitters should be intentionally placed and numbered so that competitors of different categories have different "optimum first" transmitters. The direction of the starting corridor carries also a certain weight in these considerations.

Courses should not contain route or transmitter order choices resulting in any advantage or disadvantage which cannot be foreseen from the receiver or the map by a competitor under competitive conditions. Course sections which encourage competitors to cross the start or finish area or forbidden or dangerous areas must be avoided.

3.2 Start

The start area should be so situated and organized that:

- there is a warm up area and shelter sufficient for all competitors
- waiting competitors cannot see taking bearings or route choices made by those who have already started.

The starting point should not be located in the best part of the competition area - an area of 1.5 km in diameter around the start cannot be used for transmitters.

The starting corridors shall be easy-to-run and clearly marked, especially at their ends and the following terrain should be open for running.

All transportation from the start to the finish (garments of competitors, accompanying people) shall be well organized in order to prevent information transfer in reverse direction.

3.3 Transmitters

Transmitter sites are the most important element of an ARDF course and will largely determine its quality. It is particularly important that the map portrays the ground accurately in the vicinity of the transmitters. There shall be no objects disturbing the electromagnetic field and therefore obstructing correct measuring in the vicinity of the transmitters.

It is necessary to choose transmitter sites with greatest care. Especially the 'acute angle' effect must be avoided meaning that incoming competitors will be led into the transmitter site by outgoing runners.

The mechanical performance of the transmitter, antenna and registering device with a flag shall be rugged. The transmitter and its accessories shall continue operation for about eight hours under ANY circumstances. The antenna of the transmitter shall be properly installed and the transmitter final stage shall be well tuned into the antenna. The counterpoises shall be installed in a way that they do not offer any problems to competitors running over them.

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Flags should be positioned such that competitors may see them when they have reached an area about ten meters around the transmitter. For fairness, the visibility of the flag should be the same whether or not there is a competitor near it.



If transmitters used in competitions on two bands are being sited too close to each other they may mislead competitors having navigated correctly to the area of the wanted transmitter. In these cases, the flags of particular bands shall be of different colors (e.g. red/white flags for 3.5 MHz and orange/white flags for 144 MHz) and shall be clearly marked with regard to the transmitter number and the frequency band.



If transmitters on different bands have to be sited closer than 200 m, they shall be installed at the same place with the two flags about 5 m apart showing competitors that transmitters for both bands are being installed.



3.4 Finish

The arrangement of the finish beacon, finish corridor and the whole finish area shall be distinct, clear and not confusing.

The finish corridor shall be easy-to-run, as straight as possible and at least 3 m wide. Two protective zones along both sides of the finishing corridor are recommended for better visibility and to prevent spectators from getting into the competitors' way.



4. Siting referee

The siting referee should be fully acquainted with the terrain before he or she starts to plan the course. The siting referee should also be aware that on the day of the competition the conditions regarding map and terrain could be different from those which exist at the time the courses are planned. The person responsible for course planning shall have an understanding and appreciation of the qualities of a good course gained from personal experience. He or she shall also be familiar with the theory of course planning and appreciate the special requirements of different categories.

The siting referee shall be able to assess, on site, the various factors which can affect the competition, such as the conditions of the terrain, the conditions of radio wave propagation, the quality of the map, the presence of participants and spectators, etc.

The siting referee is responsible for the courses and the running of the competition between the start and the finish line. It is strongly recommended that the siting referee's work shall be checked by another qualified referee to avoid errors which might have serious consequences.

Appendix 3: Approved starting tickets and marking devices

1. The only automatically approved control registering systems is the traditional pin punch and starting ticket system.
2. The starting ticket shall satisfy the following specifications:
 - it shall be made of resistant material and not exceed 7cm x 16 cm in size,
 - each punch box shall have a minimum side length of 18 mm,
 - one box shall be clearly marked as reserve box,
 - the size of figures in punch boxes shall be at least 12 x 8 mm.
3. The use of any other control registering system requires prior approval of the ARDF WG.

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Appendix 4: IARU ARDF International Class Referees



1. An IARU ARDF International Class Referee is an experienced ARDF official supervising at ARDF events the strict observation of the Rules.

2. There are two classes of the IARU ARDF International Class Referees:

- Active Referees and
- Honorary Referees

Unless otherwise noted, only Active Referees are considered in the ARDF Rules.



3. Candidates for nomination as an IARU ARDF International Class Referees shall fulfill the following conditions:

- to be a holder of a valid amateur radio transmitting license
- to be a member of an IARU member society
- to be presented by the ARDF manager of his society
- to be familiar with ARDF Rules, guidelines and all ARDF WG documents concerned.
- to be able to communicate in English
- to be physically able to serve in the competition terrain



4. Candidates for nomination as an IARU ARDF International Class Referee shall be submitted by his or her national member society to the relevant regional ARDF WG confirming that the candidate fulfills the conditions listed in paragraph 3. The Chairman of the ARDF WG shall send the request for nomination (with his comment) to the relevant regional Executive Committee for final approval. After approval of the Executive Committee, a written certificate is issued to the newly appointed referee.



5. The number of IARU ARDF International Class Active Referees shall not exceed FIVE per one member society.

6. Any referee who has not served once as Jury member at national or international ARDF events organized by the IARU or one of its societies for five consecutive years, shall be moved automatically to a Honorary Referee. At the start of every year the ARDF WG shall update the list of IARU ARDF International Class Referees, moving - if the case appears - inactive referees from the list of Active Referees to the Honorary Roster. Honorary Referees may be turned back to the Active list by request of his or her society.

7. Societies having IARU ARDF International Class Referees shall send as per December 31st a list to the chairman of the ARDF WG showing the activities of their referees in the year ended.

Appendix 5 : Starting list preparation

At the evening of day one (arrival day) of a championship the nominations of all competitors shall be in the hands of the organizer.

To prepare the starting list all nominations are to be split up into their corresponding categories and these into one of the following two groups:

- categories with up to 40 competitors - in which competitors shall start as singles ;
- categories with more than 40 competitors - in which two competitors shall start together .

Note: When presenting the list of competitors to the organizing society (see part A - Organization, para.8.3.) team leaders are requested to indicate also the starting sequence of the competitors in the categories.

To guarantee fairness and to avoid any chances of manipulation it is obvious that the preparation of the starting list becomes of outstanding importance for any championship. The following balloting procedure has been designed to fulfill these requirements and organizers shall make themselves acquainted with the balloting method well in advance of the event. Although appearing rather complex - especially the following procedure in written form - organizers will soon gain experience how to handle the system. Furthermore it is to be expected that suitable computer software shall be offered shortly by the ARDF WG.

At larger competitions with many societies having nominated the maximal number of competitors in all or nearly all categories the manual procedure to set up the start-list cannot be carried out keeping all conditions that are essential. The manual procedure has then to be replaced by a computer program that fulfills all given conditions.

Balloting procedure to prepare the starting list for categories with up to 40 competitors:

Note: Categories might be merged during the balloting process if this does not increase the number of the starting groups.

Single competitors and those belonging to teams of two or three have to be spread equally over the three thirds of the starting period. This is easy for teams of three: every competitor shall be placed into a different starting third. Competitors of teams of two and single runners, however, are to be spread by the following balloting procedure:

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Balloting shall start by drawing lots for the two person teams (alphabetical order of the societies involved). For this procedure a balloting box has to be filled with three lots each marked with the number of the corresponding starting third. Two of these lots shall be drawn for the first two person team and the two runners shall start in the corresponding starting thirds. The lot which is still in the box shall be drawn for the next two person team. As there are no more lots in the box the three lots shall be replaced into the box and another lot shall be drawn for the second runner of the second two person team. The remaining two lots shall be drawn for the third team. The box shall then be refilled again and balloting continues until all two person teams have been distributed equally over the three starting thirds. The same procedure shall be applied to distribute the single runners.

Now follows the determination of the starting sequence of this category. Lots carrying the numbers of their starting thirds (as used before) have to be marked also with the name of the society they stand for (except all blanks, of course, which are to be employed in this process as well - see further below). Three balloting boxes are required - one for each start third. Into each of these boxes one lot for each runner of a three person team is to be placed. Also the lots of the balloting procedure of the teams of two and the single runners must be added to the corresponding boxes. Eventual unequal numbers of lots in any of the three boxes must be compensated by blanks. Further blanks are to be added to every box until the total of lots in each box corresponds to a third of the starting groups of the category having the highest number of starting groups in the championship. There must be a minimum of 27 lots spread over the three boxes, however, because a society can send up to 27 competitors (3 runners in 9 categories). For the final preparation of the starting list please see further below.

Balloting procedure to prepare the starting list for categories

with more than 40 competitors:

Competitors of these categories have to be split up into "top-runners" and "other-runners". To become being selected into the top-runners list the organizer shall consider the results lists of the last two ARDF Championships and doing so it will be irrelevant if the same or another sportsman has been nominated for the category concerned. Decisive is only the society to whom she or he belongs. It will be taken for granted that a new sportsman of a certain society will be as good as his previous colleague.

For ARDF World Championships top-runners shall be selected on basis of the last two

ARDF World Championships. For Regional Championships the results of the last two Regional Championships shall be considered.

Considering the results of the two 3,5 MHz and the two 144MHz competitions of the last two championships and starting with position no. 1 and working down from top to bottom the organizer shall note separately for every category all those societies which have had runners in top positions. All competitors (of a certain category) nominated by these societies shall then be listed as "top runners" until reaching at least 50% of the total number of competitors in this category. For this procedure it shall be irrelevant if these societies have nominated teams of three or two or single runners. The other competitors of this category shall be listed as "other runners".

If the results lists of the last two championships do not yield 50% "top-runners" competitors from the remaining societies should be considered. The sequence of the societies shall be in alphabetical order. The introduction of the new categories requires during a transition period the following adoption when selecting "top-runners":

WOM=>W19, W21, W35, W50

JUN => M19

SEN=> M21

OT => M40, M50

VET=> M60

As for categories with less than 40 participants follows now the preparation of the two independent balloting procedures for "top-runners" and "other-runners". First teams of two and single runners shall be distributed equally over the three start thirds. Then to each box of the three thirds an equal number of runners of the three person teams has to be added (not to forget eventual blanks) and finally the lots shall be drawn - as described below - to determine the starting sequence of the "top-runners" of this category. Nearly the same procedure shall be applied to establish the starting sequence of the "other-runners". However, before drawing, the blanks have to be placed into those start groups which are already filled with blanks of the top runners of the same category. Then the lots of the "other runners" are being drawn and distributed over the various start groups.

Final preparation of the starting list: lots resulting from the previous balloting procedures for each

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category and each starting third have been placed already into boxes - one for each starting third and category. Drawing one lot after the other and starting with box number 1 (and starting e.g. with the seniors category) the organizer sets up the starting list for this category. If the first third has been finished, starting thirds two and three shall follow. If by changing from one box to the next the last drawn society and the one drawn out of the new box are the same, the lot drawn last shall be placed one start group later and the empty space be filled by the following lot. A similar procedure applies if two runners of the same society should have been drawn for the same start group (within different categories, of course). If placing of such a lot into the next later start group should be impossible (because the following group(s) is/are being filled already with this very society for other categories) that lot shall be placed at the first possible location in exchange for a lot that might be in this position. If a replaced lot should also not fit the exchange process has to continue and in case this should occur at the end of a starting third, the exchange process has to return to the start of this third only.

After all lots of the first category have been drawn and their starting positions been marked balloting must continue for the other categories under the same conditions as mentioned before until the starting list is set up completely.

If arranged in a suitable way the drawing procedure as mentioned above offers excellent opportunity for media and public attention. The best time for drawing would be the morning of the day after arrival. Studying the results lists of the last two earlier championships well before this day the organizer has ample time to prepare all that is required to finish this spectacular procedure within a reasonable time. Supervised by one or several Jury members the lots being drawn - carrying so far only the names of the societies - could be fixed on a large board (or any other suitable display) visible to all present. As the inscription of all participants has been finished by now the organizer should have at his disposal a name-list of all competitors with indications of their team leaders in which sequence their runners should start. So each lot on the board shall be marked with the name of the corresponding competitor and the organizer can enter all details into his computer system to print the start list for immediate distribution.

Although spectacular, it is obvious that a manual balloting procedure will consume a certain time span (two to three hours should be considered). So if the organizer should prefer to employ an electronically balloting procedure he shall obtain permission by the

chairman of the ARDF Working Group as early as possible but not later than three months before the start of the championship indicating at the same time the software that is to be applied.

Any computer program must perform the same conditions as the manual balloting procedure. Improvements considering the balloting procedure as such are permitted.

The permission by the chairman shall be granted only if a) the organizer intends to use an approved software for the balloting process, or b) the organizer obtains approval for his own software. To obtain approval of any balloting software, this software together with description and documentation of the algorithms used has to be sent to the chairman of the ARDF WG at least six months before the championship. The software shall be tested and having been passed the software becomes "approved software for balloting in ARDF Championships". Such software shall be added to a software pool and becomes public domain for use at International Championships.

An electronically balloting procedure shall be carried out on a computer determined by the ARDF WG Chairman. The organizing society shall present the list of all participants. The result lists of the last two championships shall be supplied by the chairman.

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Appendix 6: Rules for Youth Regional ARDF Championships

These Rules are based on the Rules for Championships in Amateur Radio Direction Finding. The points as stated below replace equally numbered points of part A and B of the Rules.



Y1.6 A Youth Regional ARDF Championship is the event to award the title of Youth Regional Champion in ARDF. A Youth Regional ARDF Championship is organized by an amateur radio society authorized by its corresponding IARU Organization.



Y3.1 A Youth Regional ARDF Championship is an annual event.

Y4.3 Application sheets are to be received by the Chairman of the ARDF WG not later than January 31st two years prior to the year of the Championship.

Y5.4 Each society may enter two teams in each category and a number of team officials. The organizer shall fix the maximum number of officials per team, in accordance with the available facilities. This maximum number shall be the same for each team and shall be at least 5.



Y5.5 Not valid at Youth Regional ARDF Championships.

Y6.4 Not valid at Youth Regional ARDF Championships.

Y9.1 The International Jury for Youth Regional ARDF Championships shall consist of the following members:

- Chairman of the Jury
- Secretary of the Jury
- Siting referee
- representative of each participating society



Y9.2 The Chairman of the Jury at a Youth Regional ARDF Championship shall be an ARDF International Class Referee authorized by the relevant regional ARDF WG.

Y9.3 The referees in the competition area, at start and finish and the siting referee shall be experienced referees provided by the organizing society.

Y9.4 The names of the members of the International Jury shall be recorded and announced at the first Jury meeting at the Championship at the latest.

Y14.2 Categories:

Women (W)	Men (M)	Age
W 15	M 15	15 and younger

Y14.3 Competitors belong to the M15 or W15 category up to the end of the calendar year in which they reach the age of 15.

Y14.6 Each society may enter two teams of up to three competitors per each category.

Y19.3 Transmitters including the finish beacon shall be located not less than 400 meters apart. The transmitter nearest to the start shall be located not less than 500 meters from

the start.

Y19.4 Course lengths shall be given as the length of a straight line from the start line via the transmitters in optimum order to the finish line. They should range from THREE to FIVE kilometers for the D15 category and FOUR to SIX kilometers for the M15 category. The number of transmitters which are to be searched for shall not exceed the length of the course in kilometers.

Y25.6 Transmitters shall be searched for by each category as follows:

- M15 category shall search for three to all five transmitters.
- W15 category shall search for three to four transmitters.

The transmitters which are not to be searched for are determined by the siting referee.

Y24.3 The following information shall be shown on a special board at the start area:

- t - ime limit
- transmitter frequencies
- starting list
- first start time (in local time)
- sample of the flag and marking device
- clock showing the official time of the competition
- transmitters to be searched for by particular categories.

Y25.14 All transmitters shall be guarded.

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