



# International Amateur Radio Union Region 1

Europe, Middle East, Africa and Northern Asia

Founded 1950



## General Conference, Davos, 11 to 16 September 2005

<b>SUBJECT</b>	<b>ARDF WG Report</b>		
<b>Society</b>	<b>ARDF WG</b>	<b>Country:</b>	<b>Region 1</b>
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The General Conference 2002 in San Marino was a milestone in the development of ARDF in Region 1.

The Final Plenary approved the new Rule for Championships in ARDF which gives more fairness to the competitors and more flexibility to the Working Group.

### 2003

In 2003 the 4th IARU Region 1 Youth Championships were hosted by the German Society DARC in Bastheim in northern Bavaria. Six member societies from Region 1 took part in this championships Czech Republic (CRC), Hungary (MRSAz), Russia (SRR), Slovakia (SARA), Serbia (Yugoslavia SRJ) and Germany (DARC). In total 42 youngsters up to 15 years of age competed in this event.

The Polish Society PZK (SP ARDF Klub) hosted the 14th IARU Region 1 Championships. The venue was Cetniewo at the Baltic Sea coast which was also the venue of the first ARDF World Championships in 1980.

21 Societies from Region 1 sent their delegations to this event. In total there were more than 360 participants, 294 of them competitors. These figures are proving the very positive development of ARDF in Region 1.

Regional Championships nowadays are not only a challenge for the competitors but also for the organizing society. The organizing team from PZK did a very good job managing the event.

The 24th Plenary Meeting of the IARU Region 1 ARDF Working Group was held during the Regional Championships. The Minutes are attached to this report.

## **2004**

The 5th IARU Region 1 Youth ARDF Championships were held in Chisinau, Moldova from 16 to 20 June 2004. Regrettably, due to different circumstances, only 5 Region 1 societies took part - CRC (Czech Republic), ARDM (Moldova), PZK (Poland), SRR (Russia) and UARL (Ukraine). But the number of competitors was biggest ever - 40 boys and 33 girls up to 15 years old.

At the 24th Plenary Meeting of the ARDF WG in Cetniewo/Poland no society applied for hosting this Youth Championships. In November 2003 the Moldovian society ARM/FRRM applied for an official membership in the WG. Fortunately Moldovian society took also the responsibility for hosting the 5th IARU Region 1 Youth Championships. Furthermore, the organizers, headed by Mrs. Ludmila Hudeaeva, R1 ARDF WG member, run a perfect competition .

The 12th ARDF World Championships were held in Brno/CZ hosted by the Czech society CRC/AROB.

Again there was a new record in the number of participants. 31 societies from all three Regions of IARU entered 445 participants, 345 of them were competitors.

These World Championships were not only an outstanding competition but also a big media event. Professional video equipment and radio links from the transmitters in the competition area to finish and two big video walls at the finish made unforgettable impressions. All ceremonies and competitions were live streamed in the internet. After the event there was a 20 minute report on Czech Television CT2.

During the 12th ARDF World Championships the 25th Plenary Meeting of the IARU Region 1 ARDF WG was held. At this meeting guests and officials from the ARDF bodies of Region 2 and 3 were present. The minutes of the 25th Plenary Meeting of the IARU Region 1 ARDF WG are circulated as paper 31a.

## **2005**

The 6th IARU Region 1 Youth ARDF Championships will be held in Karlovy Vary/ CZ (June 27th to July 1st) hosted by the Czech society CRC/AROB.

The 15th IARU Region 1 ARDF Championships will be held in Zlatibor/CRG hosted by Serbian&Montenegrin society SRSCG (September 3rd to September 8th). The ARDF WG agreed to have an informal meeting during this Championships preparing the 26th Plenary Meeting of the ARDF WG to be held during the General Conference in Davos.

## **Conclusion**

- ARDF is developing very well in Region 1. This is proved by the increasing number of participating societies and competitors in Regional and World Championships.
- The IARU Region 1 Youth Championships is now an accepted event within the Region 1.

- ARDF WG is working within the given budget.

In the last years the Working Group was working very hard in attracting more societies in ARDF. The future challenge will be to handle the big amount of competitors at international competitions.

Again changes in rules will be necessary and maybe a change in structure of the WG must be made to be prepared for a further increase of active societies. ARDF WG and their sub group rules is working already working on this.

### **Thanks**

I like to thank all societies, referees, members of the Working Group and colleagues in Region 2 and 3 for their good cooperation and making big events a success.

Rainer Floesser, DL5NBZ

Chairman

IARU Region 1 ARDF WG

Appendix A: Status of International Class Referees in ARDF of IARU Region 1

Appendix B: Rules for Championships in ARDF

Attachment 1: Minutes of the 24th Plenary Meeting of IARU Region 1 ARDF WG

Separate paper DV05\_C3\_C31a: Minutes of the 25th Plenary Meeting of IARU Region 1 ARDF WG







## APPENDIX A: Status of IARU Region 1 International Class Referees in ARDF

**Colour Code:**

Nomination Year	Category	Winner
1997	Best Actor	Al Pacino
1998	Best Actor	Al Pacino
1999	Best Actor	Al Pacino
2000	Best Actor	Al Pacino
2001	Best Actor	Al Pacino
2002	Best Actor	Al Pacino
2003	Best Actor	Al Pacino
2004	Best Actor	Al Pacino
2005	Best Actor	Al Pacino
2006	Best Actor	Al Pacino
2007	Best Actor	Al Pacino
2008	Best Actor	Al Pacino
2009	Best Actor	Al Pacino
2010	Best Actor	Al Pacino
2011	Best Actor	Al Pacino
2012	Best Actor	Al Pacino
2013	Best Actor	Al Pacino
2014	Best Actor	Al Pacino
2015	Best Actor	Al Pacino
2016	Best Actor	Al Pacino
2017	Best Actor	Al Pacino
2018	Best Actor	Al Pacino
2019	Best Actor	Al Pacino
2020	Best Actor	Al Pacino
2021	Best Actor	Al Pacino
2022	Best Actor	Al Pacino
2023	Best Actor	Al Pacino
2024	Best Actor	Al Pacino
2025	Best Actor	Al Pacino
2026	Best Actor	Al Pacino
2027	Best Actor	Al Pacino
2028	Best Actor	Al Pacino
2029	Best Actor	Al Pacino
2030	Best Actor	Al Pacino
2031	Best Actor	Al Pacino
2032	Best Actor	Al Pacino
2033	Best Actor	Al Pacino
2034	Best Actor	Al Pacino
2035	Best Actor	Al Pacino
2036	Best Actor	Al Pacino
2037	Best Actor	Al Pacino
2038	Best Actor	Al Pacino
2039	Best Actor	Al Pacino
2040	Best Actor	Al Pacino
2041	Best Actor	Al Pacino
2042	Best Actor	Al Pacino
2043	Best Actor	Al Pacino
2044	Best Actor	Al Pacino
2045	Best Actor	Al Pacino
2046	Best Actor	Al Pacino
2047	Best Actor	Al Pacino
2048	Best Actor	Al Pacino
2049	Best Actor	Al Pacino
2050	Best Actor	Al Pacino
2051	Best Actor	Al Pacino
2052	Best Actor	Al Pacino
2053	Best Actor	Al Pacino
2054	Best Actor	Al Pacino
2055	Best Actor	Al Pacino
2056	Best Actor	Al Pacino
2057	Best Actor	Al Pacino
2058	Best Actor	Al Pacino
2059	Best Actor	Al Pacino
2060	Best Actor	Al Pacino
2061	Best Actor	Al Pacino
2062	Best Actor	Al Pacino
2063	Best Actor	Al Pacino
2064	Best Actor	Al Pacino
2065	Best Actor	Al Pacino
2066	Best Actor	Al Pacino
2067	Best Actor	Al Pacino
2068	Best Actor	Al Pacino
2069	Best Actor	Al Pacino
2070	Best Actor	Al Pacino
2071	Best Actor	Al Pacino
2072	Best Actor	Al Pacino
2073	Best Actor	Al Pacino
2074	Best Actor	Al Pacino
2075	Best Actor	Al Pacino
2076	Best Actor	Al Pacino
2077	Best Actor	Al Pacino
2078	Best Actor	Al Pacino
2079	Best Actor	Al Pacino
2080	Best Actor	Al Pacino
2081	Best Actor	Al Pacino
2082	Best Actor	Al Pacino
2083	Best Actor	Al Pacino
2084	Best Actor	Al Pacino
2085	Best Actor	Al Pacino
2086	Best Actor	Al Pacino
2087	Best Actor	Al Pacino
2088	Best Actor	Al Pacino
2089	Best Actor	Al Pacino
2090	Best Actor	Al Pacino
2091	Best Actor	Al Pacino
2092	Best Actor	Al Pacino
2093	Best Actor	Al Pacino
2094	Best Actor	Al Pacino
2095	Best Actor	Al Pacino
2096	Best Actor	Al Pacino
2097	Best Actor	Al Pacino
2098	Best Actor	Al Pacino
2099	Best Actor	Al Pacino
2100	Best Actor	Al Pacino

No data available

No activity reported

Activity confirmed

5 years  
activity roster[illegible]

5 years  
activity roster[illegible]



5 years  
activity roster[illegible]

**IARU REGION 1 INTERNATIONAL CLASS ARDF REFEREES (by Societies)**

Society	N a m e	Call sign	Nom. Nr.	Nom. Yr.	Status
BFRA	Vladimir Vladow	LZ1ZB	8	1980	Honorary
BFRA	Angel Nestorov	LZ1AG	14	1984	Active
BFRA	Koljo Kolev	LZ2OB	15	1984	Honorary
BFRA	Panayot Danev	LZ1US	45	1994	Active
BFRA	Roussko Roussev	LZ1RT	46	1994	Active
BFRA	Georgi Vodenicharov	LZ1ZF	79	2005	Active
BFRA	Victor Tzenkov	LZ3NN	80	2005	Active
CRC	Karel Soucek	OK2VH	27	1987	Honorary
CRC	Boris Magnusek	OK2BFQ	28	1987	Honorary
CRC	Miroslav Popelik	OK1DTW	29	1987	Honorary
CRC	Jiri Marecek	OK2BWN	34	1993	Active
CRC	Radek Teringl	OK1DRT	64	2001	Active
CRC	Bohuslav Koutek	OK1FJW	72	2003	Active
CRC	Jiri Pavlu	OK1CHE	73	2003	Active
DARC	Karl-Heinz Mols	DL9ME	5	1980	Active
DARC	Karl Taddey ( <i>Silent Key 1997</i> )	DL1PE	20	1984	-
DARC	Rainer Floesser	DL5NBZ	37	1993	Active
DARC	Peter Hanzl	DL1OHS	59	1999	Active
DARC	Kai Buchhold	DH0NAZ	71	2002	Active
FRR	Iosef Paolazzo	YO3JP	4	1980	Honorary
FRR	Silviu Marfievici	-	25	1987	Honorary
FRR	Vasile Ciobanita	YO3APG	26	1987	Honorary
FRR	Carol Szabo	YO3RU	36	1993	Honorary
HRS	Zelko Belaj	9A2QU	52	1997	Active
HRS	Drazen Nofta	9A3PF	53	1997	Honorary
HRS	Zeljko Ulip	9A2EY	54	1997	Active
HRS	Branimir Vinko	9A2UP	55	1997	Honorary
MRASz	Imre Gajarszki	HA4YD	6	1980	Active
MRASz	Miklos Venczel	HA0LZ	7	1980	Active
MRASz	Ferencz Orgovan ( <i>Silent Key 1995</i> )	HA2MO	35	1993	-
MRASz	Istvan Borcsok	HA8ZG	55	1999	Active
MRASz	Gyozo Macsuga	HA0MM	56	1999	Active
MRASz	Janos Orosi	HA0OJ	57	1999	Active
NRRL	Gudmund Bentsen	LA2DL	16	1984	Honorary
NRRL	Nicolai Holter	LA5CH	17	1984	Honorary
NRRL	Ole Garpestad	LA2RR	18	1984	Active
OeVSV	Josef Goschlberger	OE2JG	3	1980	Honorary
PZK	Zbigniew Klossowski	SP4BQW	9	1980	Honorary
PZK	Jerzy Klabon	SP3FFN	10	1980	Honorary
PZK	Krzysztof Slomczynski	SP5HS	11	1980	Active
PZK	Boleslaw Krzymin	SP2ESH	48	1996	Active
PZK	Zygmunt Jozef Bauke	SP9ALM	49	1996	Active
PZK	Stanislaw Wilczynski	SP2FLE	65	2001	Active
PZK	Adam Dyrka	SP2EDA	66	2001	Active
REF	Christian Martin	F6DDW	47	1995	Honorary
REF	Daniel Oulivet	F1EJS	63	2001	Active
RL	Robert Kratzenberg	LX1RK	32	1988	Honorary
SARA	Jozef Fekiac	OM3CCE	38	1993	Active
SARA	Julius Greksa	OM3CPN	39	1993	Honorary
SARA	Karol Pospichal	OM3CEC	40	1993	Active
SARA	Kurt Kawasch	OM8AA	67	2001	Active
SARA	Viktor Pavelek	OM1DX	68	2001	Active
SARA	Josef Simecek	OM3WSJ	69	2001	Active
SCG	Jozsef Ficza	YU7AA	24	1986	Active
SCG	Ivan Todorovic	YU1UA	75	2003	Active
SCG	Dusan Ceha	YU1EA	76	2003	Active
SCG	Dejan Grozdanovic	YZ1GD	77	2003	Active
SCG	Bozidar Zivanov	YT1ZB	81	2005	Active
SRJ	Ivo Sesartic	YU1BQ	2	1980	Honorary

(cont.)

**IARU REGION 1 INTERNATIONAL CLASS ARDF REFEREES (by Societies)**  
(cont.)

<b>Society</b>	<b>N a m e</b>	<b>Call sign</b>	<b>Nom. Nr.</b>	<b>Nom. Yr.</b>	<b>Status</b>
(ex FRS)	Nicolai Kazanski ( <i>Silent Key 2002</i> )	UA3AF	12	1980	-
(ex FRS)	Wasily Bondarenko	UV3BW	21	1985	Honorary
(ex FRS)	Aleksander Malkin	-	22	1985	Honorary
SRR	Igor Berezin	RW4IB	33	1993	Honorary
SRR	Alexander Koshkin	UA3FW	60	2000	Active
SRR	Eugene Sukhovverkhov	UA3AJT	61	2000	Active
SRR	Victor Mudrenko	UA0LDX	62	2000	Active
SSA	Per-Anders Kinnman ( <i>Silent Key 1995</i> )	SM5ZD	1	1980	-
SSA	Gunnar Ahl	SM5CWV	19	1984	Honorary
SSA	Sven-Ove Nilsson	SM4CGR	42	1994	Honorary
SSA	Lars Nordgren	SM0OY	43	1994	Active
SSA	PA Nordwaeger	SM0BGU	44	1994	Active
UARL	Victor Bobrov	UT3UV	70	2002	Active
UARL	George Chlijanc	UY5XE	41	1994	Honorary
UARL	Anatolij P. Petrovski	UT5AQ	78	2003	Active
UBA	Rik Strobbe	ON7YD	50	1996	Active
UBA	Benoit Deham	ON4KDX	51	1996	Honorary
UBA	Maurice Van de Keere	ON6VK	74	2003	Active
USKA	Hans Endras	HB9QH	30	1988	Honorary
USKA	Peter Erni	HB9BWN	31	1988	Honorary
ZRS	Tine Brajnik	S50A	23	1986	Honorary
ZRS	Franci Zankar	S57CT	58	1999	Active

(February 2005)

**INTERNATIONAL AMATEUR RADIO UNION**  
**Region 1**  
**RULES FOR CHAMPIONSHIPS**  
**IN AMATEUR RADIO DIRECTION FINDING**

**PART A - ORGANISATION**

**version 2.6 (November 10th, 2002)**

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## **1. Definitions**

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- 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 Organisation. 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 organisational 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 organised by an amateur radio society authorised by its corresponding IARU Organisation.
- 1.6 A Regional ARDF Championship is the event to award the title of Regional Champion in ARDF. A Regional Championship is organised by an amateur radio society authorised by its corresponding IARU Organisation.
- 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 Organisation, 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 organisation of IARU ARDF events within its region
  - to undertake ARDF activities on behalf of its IARU Regional Organisation

## **2. General provisions**

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

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- 3.1 ARDF World Championships should be organised 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 programme are proposed by the organiser. 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**

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- 4.1 Any IARU society may apply to organise 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 organising society to the EC the same year.

#### **5. Participation**

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- 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 organiser. 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 organiser 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.

#### **6. Costs**

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- 6.1 The costs of organising an event shall be borne by the organising 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. Societies being not a member of IARU shall pay twice (200%) the defined fee.
- 6.2 All entry fees have to reach the organising society not later than six weeks before the event. If approved by the ARDF WG an additional fee can be charged for late payments.
- 6.3 Participating societies or the participants themselves shall bear the travelling costs to and from the place of the Championship and the costs of accomodation and board during the event.
- 6.4 The relevant IARU Regional Organisation shall bear travel expenses to and from the place of the Championship, together with the costs of accomodation and board, of the Chairman of the International Jury. The organiser shall bear accomodation 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**

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- 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.
- 7.2 Information from the organiser 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:
  - Organising 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 accomodation and board
  - any peculiarities of the event
  - latest date to reach the organiser 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 programme
  - 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
    - 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 programme 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\*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**

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- 8.1 Societies intending to participate in the Championship shall send a Letter of Intent to participate to the organiser 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 organiser 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 organiser 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 organiser and International Jury.
- 8.4 The organiser 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**

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- 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 authorised by the relevant regional IARU organisation.
- 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 organising society. The Secretary of the Jury and the Technical Director shall both be provided by the organising 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 organising 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 time limit and starting sequence, which is determined by the organiser.
- 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 "aye" 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.

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## **10. Complaints**

- 10.1 A complaint can be made about violation of these rules, mistakes in the results or the organiser'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 organiser as soon as possible. A complaint is adjudicated by the organiser. The complainant shall be informed about the decision immediately.
- 10.4 There is no fee for a complaint.

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## **11. Protests**

- 11.1 A protest can be entered against the organiser'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.

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## **12. Media service**

- 12.1 The organiser shall offer media representatives attractive working conditions to observe and report on the event.
- 12.2 As a minimum, the organiser shall make available to media representatives the following:
- hotel accommodation to be paid for by the users
  - start lists, programme 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 organiser shall make every effort to maximise media coverage as long as this does not jeopardise the fairness of the event.



### **13. Event reports**

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- 13.1 Not more than ONE MONTH after the event, the organiser 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 programme including start lists and a plan of the organisation shall be sent to the ARDF WG Chairman for the archives not more than SIX MONTHS after the event.

# INTERNATIONAL AMATEUR RADIO UNION

## Region 1

### RULES FOR CHAMPIONSHIPS

### IN AMATEUR RADIO DIRECTION FINDING

#### PART B - COMPETITION

version 2.7 (January 15th, 2005)

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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 organising 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 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 organised 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 informations, 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 informations 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.

## **19. Courses**

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- 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**

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

## **21. Maps**

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- 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 organiser.
- 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 organiser 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**

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- 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\*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 organiser 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 organiser. 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**

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- 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 practise 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.
- 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, eg. 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**

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- 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 organised 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 organiser 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 organised 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 organiser. 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 runnability. 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 organiser shall be given a new start time.

## **25. Transmitters**

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- 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 organiser.
- 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 organising 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, only the finish beacon shall be registered as the last one.
- 25.8 The finish beacon shall be placed at the entrance of the finish corridor.
- 25.9 All transmitters including 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**

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- 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 organiser.
- 26.6 Having crossed the finish line, a competitor may not re-enter the competition terrain without the permission of the organiser. 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**

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- 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 organiser shall arrange a dignified prize-giving ceremony.
- 28.6 The prize-giving ceremonies shall be performed by the representatives of the organising society and the IARU Regional Organisation.
- 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**

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- 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 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 organiser, 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 organiser is not allowed. Attempts to gain any information related to the courses, beyond that provided by the organiser, 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 organising 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 authorised 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)
  - Modulation depth 75 +/- 5%
  - Keying speed 8 ... 12 WPM
  - Antenna polarisation 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 organiser (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

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## 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 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 organised 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 runnable 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 minimising "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 organised 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 electro-magnetic 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.

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 colours (eg 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**

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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 \* 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 \* 8 mm.
3. The use of any other control registering system requires prior approval of the ARDF WG.

## Appendix 4: IARU ARDF International Class Referees

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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 licence
  - 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 – unactive 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 31<sup>st</sup> a list to the chairman of the ARDF WG showing the activities of their referees in the year ended.

## Appendix 5 : Starting list preparation

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

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 organising society (see part A – Organisation, 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 organisers 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 - organisers 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:

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 organiser 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 organiser 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 adaption 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 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 organiser 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 organiser 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 organiser 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 organiser 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 organiser should prefer to employ an electronical 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 organiser intends to use an approved software for the balloting process, or b) the organiser 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 electronical balloting procedure shall be carried out on a computer determined by the ARDF WG Chairman. The organising society shall present the list of all participants. The result lists of the last two championships shall be supplied by the chairman.*

## Appendix 6: Rules for Youth Regional ARDF Championships

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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 organised by an amateur radio society authorised by its corresponding IARU Organisation.
- 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 organiser 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 authorised 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 organising 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:
- 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
  - transmitters to be searched for by particular categories.
- Y25.14 All transmitters shall be guarded.





**THE INTERNATIONAL AMATEUR RADIO UNION,  
REGION 1  
AMATEUR RADIO DIRECTION FINDING  
WORKING GROUP**



Rainer Floesser, DL5NBZ, Flensburger Str. 6, D-90427 Nuernberg

**To  
the members of IARU R1 ARDF WG  
the members of IARU R1 EC**

**Chairman:**

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**Date: 21. October 2003**

**wrA302**

**Minutes of the 24th IARU Region 1 ARDF Working Group Meeting  
held in Cetniewo, Poland on 7th and 9th September 2003**

Agenda of the meeting:

1. Opening by the Chairman
2. Welcome to the Guests
3. Introduction of the present Working Group members and the attendants
4. Apologies for absence, accepting the proxies
5. To approve the agenda
6. To approve the program of the 14th IARU ARDF Region 1 Championships
7. To approve the composition of the International Jury to the 14th IARU ARDF Region 1 Championships
8. To receive the minutes of the 23rd Plenary Meeting held in Valdragone/San Marino
9. To receive the chairman's report
10. To discuss the application of new International Class Referees
11. To receive preliminary information of 12th IARU ARDF World Championships to be hosted by the Czech Society CRC in 2004
12. To receive preliminary information of 15th IARU Region 1 ARDF Championships to be hosted by the Amateur Society of Serbia and Montenegro SRSCG
13. To receive preliminary information of 13th IARU ARDF World Championships to be hosted by the Bulgarian Society BFRA in 2006
14. To discuss the venue and to decide the hosting society of the 5th Youth ARDF Championships of IARU Region 1
15. To discuss the venue of the 16th ARDF Championships of IARU Region 1 in 2007

- 16.To receive a report about testing a new system with 10 transmitters by Jiri Marecek OK2BWN
- 17.Any other business, courtesies
- 18.To close the meeting

#### Attendance:

In the Chair: Rainer Floesser, DL5NBZ

	1st session:	2nd session:
BFRA	Panayot Danev, LZ1US	Panayot Danev, LZ1US
CRC	Jiri Marecek, OK2BWN	Jiri Marecek, OK2BWN
DARC	Kai Buchhold, DH0NAZ	Kai Buchhold, DH0NAZ
HRS	Branko Vidovic, 9A2AT	Branko Vidovic, 9A2AT
LRMD	Algimantas Dapkus, LY2CD	---
MRASz	Miklos Venczel, HA0LZ	---
NRRL	Svein Olsen, LA6KCA	Svein Olsen, LA6KCA
PZK	Krzysztof Slomczynski, SP5HS	Krzysztof Slomczynski, SP5HS
REF Union	Lucien Vidal, F4DKA	Lucien Vidal, F4DKA
SRR	Tchermen Gouliev, UA3BL	Tchermen Gouliev, UA3BL
SCG	Dusan Ceha, YU1EA	Dusan Ceha, YU1EA
SSA	Jan Palmquist, SM5FUG	Jan Palmquist, SM5FUG
UARL	Victor Bobrov, UT3UV	---
VERON	Henk Vrolijk, PA0HPV	Henk Vrolijk, PA0HPV
ZRS	Franci Zankar, S57CT	---

#### Guests:

BFRA	Viktor Tsenkov, LZ3NN	---
BFRA	Roussko Roussev, LZ1RT	---
CRC	Pavel Valenta	---
DARC	Karl-Heinz Mols, DL9ME	Karl-Heinz Mols, DL9ME
HRS	Zeljko Ulip, 9A2EY	Zeljko Ulip, 9A2EY
MRASz	Istvan Borcsok, HA8ZG	---
MRASz	Jozsef Ballai, HA8LIC	---
SARA	Dusan Kawasch, OM8AAA	---
SSA	Lars Nordgren, SM0OY	Lars Nordgren, SM0OY
SRR	Alexandre Koshkine, UA3FW	---
UARL	Ms. Walentina Beh, UT5XA	---
HRS	---	Zeljko Ulip, 9A2EY

#### Ad 1:

The meeting chaired by the ARDF WG Chairman Rainer Floesser, DL5NBZ, was opened at 08:25 hours on Sunday, 7th September. The representative of the hosting society PZK, Krzysztof Slomczynski, SP5HS, welcomed the attendants.

#### Ad 2:

The DL5NBZ welcomed the honorary guest Panayot Danev, LZ1US, member of Executive Committee of

IARU Region 1. Panayot Danev, LZ1US relayed the greetings to the meeting from Chairman of Executive Committee Ole Garpestad, LA2RR (long time ARDF competitor and ARDF International Class referee).

The Chairman informed on the passing away of the three outstanding ARDF amateurs during the last year period: Paul Rudolf, HB9IR, Hans Rackwitz, DJ8FF and Harry Deblie ON7HD. Their memory was honoured by the minute of silence.

Ad 3:

The present members of ARDF WG and guests introduced themselves.

Ad 4:

The meeting received the apologies for absence from the following WG members:

Oivind Solli, LA1KP

Arne Jensen, OZ9VA

The meeting accepted the following proxies:

REF: Guillaume Vidal, F4DJO to Lucien Vidal, F4DKA

UBA: Rik Strobbe, ON7YD to Henk Vrolijk, PA0HPV

SRSCG: Gojko Mitrovic, YU6AO to Dusan Ceha, YU1EA

NRRL: Oivind Solli LA1KP to Svein Olsen, LA6KCA

EDR: Arne Jensen, OZ9VA to NRRL

UARL: to Victor Bobrov, UT3UV (permanent representation in the ARDF WG)

DARC: Rainer Floesser, DL5NBZ to Kai Buchhold, DH0NAZ

The Chairman handed over the certificate of ARDF International Class Referee to Victor Bobrov, UT3UV.

Ad 5:

The meeting approved unanimously the agenda.

Ad 6:

The meeting approved unanimously the program of the 14th IARU ARDF Region 1 Championships.

Ad 7:

The meeting approved unanimously the composition of the International Jury to the 14th IARU ARDF Region 1 Championships as below:

Rainer Floesser, DL5NBZ	Chairman of the Jury
Krzysztof Slomczynski, SP5HS	Secretary of the Jury
Karl-Heinz Mols, DL9ME	Referee at start
Zygmunt J. Bauke, SP9ALM	Referee at finish
Stanislaw Wilczynski, SP2FLE	Siting referee
Adam Dyrka, SP2EDA	Technical Director
Victor Bobrov, UT3UV	Referee at the transmitter No. 1
Alexander Koshkin, UA3FW	Referee at the transmitter No. 2
Lars Nordgren, SM0OY	Referee at the transmitter No. 3

The meeting approved the time limit for 145 MHz competition of 120 minutes.

The representatives of hosting society presented the technical equipment to be used at the Championships, including electronic registration system - chip cards and electronic readers, system of electronic calculation, printing and displaying the results etc. The system, tested several times at the Polish national ARDF events, was approved unanimously by the Working Group.

The newly developed by Polish ARDF Club software for determining the start sequence was unanimously approved by Working Group to be used at this Championships on interim basis. The software will be presented later to the Chairman of ARDF WG for testing and possible approval for use within Region 1.

The starting procedure was explained in details by the Chairman and representatives of hosting society.

The Chairman informed that a new amateur society ARM has been created in Republic of Moldova. This society recently became a member society of IARU. Attempts to contact ARM immediately before the Championships, either by e-mail and by fax failed. It was decided, that invited to this Championships society FRRM has full rights to participate, but it was advised to President of FRRM to agree with the ARM that the FRRM will represent ARM as its ARDF section. In future, all invitations will be directed to ARM.

Ad 8:

The meeting approved unanimously the minutes of the 23rd Plenary Meeting held in Valdragone / San Marino.

Ad 9:

Chairman presented his report on ARDF activity in IARU Region 1 for the period of last year (the report is attached as **Appendix D**). The meeting approved the report unanimously.

Discussion arose on the official name of the Championships. Would the name "European Championships" to be used? It was explained by IARU Region 1 representative, that official name should be:

*"ARDF Championships of IARU Region 1 (Europe, Middle East, Africa and Northern Asia)".*

Ad 10:

The meeting approved unanimously the new International Class referees as below:

Bohuslav Koutek, OK1FJW	proposed by CRC
Jiri Pavlu, OK1CHE	proposed by CRC
Maurice Van de Keere, ON6VK	proposed by UBA
Ivan Todorovic, YU1UA	proposed by SRSCG
Dusan Ceha, YU1EA	proposed by SRSCG
Dejan Grozdanovic, YZ1GD	proposed by SRSCG
Anatolij P. Petrovski, UT5AQ	proposed by UARL

Ad 11:

The meeting received the preliminary information of 12th IARU ARDF World Championships to be hosted by the Czech Society CRC in 2004, presented by Jiri Marecek, OK2BWN. The written information as well as the Bulletin No.2 was handed over to all attendants of the meeting.

The problem of changing the rules was also discussed. Jiri Marecek was asked to present the proposal of changes at the second session of the meeting.

The meeting was adjourned at 11:30 hours

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The Chairman opened second session of the meeting on Tuesday 9th September at 21:00 hours.

The meeting approved the time limit for 3,5 MHz competition of 120 minutes.

Ad 12:

Dusan Ceha, YU1EA presented preliminary information of 15th IARU Region 1 ARDF Championships to be hosted by the Serbia and Montenegro society SCG in 2005. Because of the change of name of the country from Yugoslavia to Serbia and Montenegro, name of the society was changed to Savez Radioamatera Srbije i Crne Gore - shorten name: SCG.

Three venues of the Championships are considered: Beograd, Uzice and Nis. The Championship web site is to be activated next month, the information will be available also on ARDF WG web site. New technical equipment will be used, the exact date will be announced later. For the purpose of cheap air tickets, full weekend should be included.

Ad 13:

Panayot Danev, LZ1US presented the preliminary information of 13th IARU ARDF World Championships to be hosted by the Bulgarian society BFRA in 2006. Preliminary preparations has been started. Proposed date of the Championships is 12 - 17 September 2006 (Tuesday to Sunday). The venue will be chosen depending of hotel prices.

Ad 14:

No society presented the wish to be organiser of the 5th Youth ARDF Championships of IARU Region 1 - 2004 and 6th Youth ARDF Championships of IARU Region 1 - 2005; in result no solution was taken.

Jiri Marecek, OK2BWN underlined the need of continuing the youth championships, as being of great importance for the future of ARDF.

It was agreed that Chairman will send an e-mails to all IARU Region 1 societies asking for possibilities to organise youth championships in 2004 and 2005.

Ad 15:

No information nor proposals were received.

Ad 16:

Jiri Marecek, OK2BWN presented the principle and results of testing a new ARDF system with ten transmitters. The issue was discussed by the meeting. Above information is to be included in the ARDF WG web site, in aim to allow the member societies to organise the test events by themselves. The issue will be continued, depending on result of further testing. **see Appendix C**

Ad 17:

Two proposals were presented in written by Jiri Marecek, OK2BWN:

- a) registering of finish beacon. **see Appendix A**
- b) park race. **see Appendix B**

Chairman explained that there is no majority present at the 2nd session. The e-mail voting will be introduced in future and receipt of Chairman's e-mails including issues to be voted shall be confirmed. Silence procedure will be used (no answer till the deadline means acceptance).

ad a): advantages of registering of finish beacon were explained and discussed (competitors shall enter the finish corridor at the entrance, advantage for media and spectators). By majority of 10 votes (one abstention) the meeting has been in favour of introducing the registering of finish beacon into the rules used at the 2004 World Championships held in Czech Republic. This proposal will be included in e-mail circulated by Chairman to all WG members (see above explanation of silence procedure).

ad b): Jiri Marecek, OK2BWN explained the principle of ARDF park race, proposed to be tried during the 2004 World Championships, on the free day. The journalists, VIPs and others will be invited to participate. The name would be "Open Czech Park ARDF Championship". Such event has the advantage of wide promotion of ARDF.

Tchermen Gouliev, UA3BL proposed to re-define the existing distance limit six to ten kilometres.

Jiri Marecek, OK2BWN proposed to accept for the present Championships (3,5 MHz run) time limit longer than 120 minutes.

Ad 18:

Chairman closed the meeting at 23:30



Minutes keeper:

Krzysztof Slomczynski, SP5HS



Chairman:

Rainer Floesser, DL5NBZ

## Appendix A

**To: IARU Region 1 ARDF Working Group**

**From: Czech Radio Club**

**Suggestion: To register the finish beacon in the same way as other transmitters.**

### **Reasons:**

This change will bring two main advantages:

1. Every competitor will come to the finish corridor from the same direction. Any attempt of shortening the way to the finish by crossing the corridor side etc. will not bring any advantage and therefore need not be considered at all. It will remove all confusions, strays and other problems, which are normally very common.
2. Using the electronic registering device (which are quite common now), there is possible to link it to the information table and to the speaker stand and announce the competitors arrivals in advance, which is very comfortable for the organizers and spectators at the finish.

Registering of the final checkpoint just before the finish corridor is normal at orienteering and brings no problems to the competitors. We tested this at two ARDF competitions at the national level and competitors adapted themselves to this change without any problem.

### **Current wording of the relevant points of the ARDF Rules**

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

- M21 category shall search all five transmitters.
- 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. It has no flag and marking device and need not be discovered and registered.

25.9 Transmitters No.1 through 5 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.

### **Suggested new wording:**

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, only the finish beacon shall be registered as the last one.

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

25.9 All transmitters including 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.

**This change is considered as temporary, used at WCH2004 for testing purpose.**

## **Appendix B**

**To: IARU Region 1 ARDF Working Group**

**From: Czech Radio Club**

**Suggestion: Park ARDF race at WCH2004**

### **Basic principles:**

Park ARDF race (also named as supersprint ARDF) is a kind of ARDF, characteristic by its short course length and high speed of run. There are about 10 continuously operating transmitters in not very large (usually less than 2 sq.km), easily crossable area. Transmitters are operating at different frequencies in 3,5 MHz band, between 3550 and 3650 kHz. One of them acts as finish beacon (MO), others are distinguished by code and keying speed. The M21 category searches for 7-8 transmitters, other categories less. There is one transmitter for each particular category defined as compulsory first. The starting interval is 2-3 minutes. The start and finish points may be close one to the other, the competitors already finished are strictly separated from those waiting for their start. The finish and start points are arranged so that many spectators can watch and encourage the competitors. The usual course lengths are 3-4 km, winner times around 15-20 minutes.

There was several competitions organized in Czech republic, 3 of them as official Czech Park ARDF Championships. These competitions proved their usefulness, brought nice, thrilling atmosphere and attention of many spectators. Their contribution for promoting the ARDF at wide public is great.

The organizer of the World ARDF Championships 2004 intend to organize such a race on the free day, inviting also journalists, VIPs and other people to participate. The official status of the competition will be

**Open Czech Park ARDF Championships.**



## Appendix C

**To: IARU R1 ARDF WG**

**From: Jiri Marecek, OK2BWN (CRC-ARDF)**

**10 transmitters in ARDF - experience from testing competitions**

### Original reasons and considerations:

- every transmitter shall be audible once in every 5 minutes
  - competitor can run over 0,5 – 1 km at 5 minutes (according to the terrain and his condition). It is a distance, after which some information about the transmitter is already needed. Shortening this period, we come close to the situation with the transmitter operating continuously, therefore we decrease technical aspect importance and limit the competitor activity close to the classical orienteering. Lengthening the period results in waiting for a signal, increasing the chance effect and hoarding of competitors. In addition, 5 minutes is natural, organisation suitable time period.
- the number of transmitters should be increased, ideally to 10
  - Increasing number of categories already made the current system unsuitable. Using 5 transmitters, there is impossible to built appropriate courses for 9 categories – the courses are always built for 2 or 3 categories (mainly for M21 and W21) and the rest are more or less compromises. Some categories search for only 2 – 3 transmitters, which logically make them disgusted (travelling across the continent for 3 transmitters...). Increasing of the number of transmitters much increases the combination possibilities and enables to adjust not only number of transmitters, but also course length and climb exactly to the needs of particular categories.
  - Increasing number of competitors cause significant increasing of the concentration of competitors over the terrain, especially in the vicinity of transmitters. There is often possible to find the transmitter only from the crowding around it, which again increases the chance affect. More transmitters enable more uniform distribution of competitors over various transmitters.
  - Currently the part of ideal route of several categories frequently leads in parallel, even over several transmitters. More transmitters enable to distribute the ideal routes of particular categories over the competition area and limit the chance of „following“.

### Experiences from testing in terrain:

During 2001-2003, several competitions with more than 5 transmitters were organized in Czech Republic, even at 1st national level. Two possible arrangements were used:

1. 2x5 transmitters on two frequencies ("blue" and "red"), finish beacon on third frequency between them, normal timing (1 minute), the two sets of transmitters had also different keying speed
2. 10 transmitters on one frequency (and finish beacon on different frequency), transmitters operated one after the other per 30 seconds. Transmitters 1-5 had slower keying speed, transmitters 6-10 had the same codes (MOE-MO5) at faster keying speed.

**Ad 1:** There were defined additional limits: maximum number of transmitters per category was 5, no category searched for two simultaneously operating transmitters (for example, two MOE's).

This system was used at two 1st level national competitions, about 170 competitors in 13 categories took part.

Competitors reported no problems with QSY or special transmitter assignment (even children categories).

The courses were much more combined, there was practically no following between different categories.

Also the concentration on "main paths" was very low.

Pros and cons of this system:

- + no special training needed (except for QSY) - no problems even for children
- - 3 frequencies needed - no problems at 3,5 MHz, but at 144 MHz the channel spacing will be only 170 kHz. Most of receivers have worse selectivity. (there is no problem in Czech republic, because we have ARDF transmitters allowed also in simplex segment 145,200-145,550 MHz)

**Ad 2:** This system was used several times at competition of some 100 participants. M21 competitors searched for 7-8 transmitters, other categories less. No problem for competitors, no problems with receivers. There were some objections, especially at 144 MHz band, where 30 seconds may be too short for qualified bearing taking.

Pros and cons of this system:

- + no need of the third channel (no problem at 3,5 MHz)
- - transmitting time is only 10% of the whole time, which increases the influence of random, especially at 144 MHz. This also changes slightly the character of the sport itself.

Note: Similar system is used for a long time in Sweden (7 transmitters in 10 minutes). Although the transmitting interval length of 85,7 seconds is not very comfortable, there are similar reasons obvious. In my opinion, 10 minutes between two consecutive relations of the transmitter is too long.

### Conclusions:

- The 10 transmitters system proved its full functionality and applicability.
- Competitors appreciated bigger differences between courses for particular categories. Organizer reported no serious technical, logistic or organisation problems or difficulties.
- Siting referee has much more transmitter combinations available and he can build courses technically and physically appropriate to particular categories
- This system significantly decreases concentration of competitors around transmitters and also number of parallel course sections of particular categories, which results in more uniform distribution of competitors over the competition area and minimizes the chance of „following“.
- Its contribution for sports quality of ARDF course is certainly worth additional logistic and organisation problems. Meanwhile, there is quite common in OK to organize ARDF competitions at both bands simultaneously (one band for MD-15, the other for MD16- categories), whose organisation is almost equally demanding.
- **CRC-ARDF will continue organizing ARDF competitions with bigger number of transmitters. At least two competitions per year are planned for next years. Experiences of competitors and organizers will be recorded and analyzed. Results and conclusions will be announced and also forwarded to ARDF WG for further considerations.**

## Appendix D

### The Chairmans report

I like to keep this report as short as possible and focus on two major event since my last report to the 23<sup>d</sup> Plenary Meeting in San Marino.

#### 1. The General Conference in San Marino

The General Conference in San Marino was very important for ARDF and I entered two papers in the name of the WG to this Conference.

The first paper was drawing attention to the following facts:

- That at the General Conference 1999 in Lillehammer / Norway a drastic cut in the financial support of ARDF-WG by IARU Region 1 was decided (Recommendation C 2.9).
- That this reducing of financial support caused big problems in carrying out the Region 1 ARDF activities in the past three years.
- That because of the difficult financial situation of IARU Region 1 at the time of the General Conference 1999 this step was accepted by the ARDF WG, realizing the necessity of stabilizing the financial resources of IARU Region 1.

#### CONSIDERING

- That the financial situation within IARU Region 1 has improved.
- That the number of participating societies and competitors at Regional and World Championships is increasing rapidly.
- That the Region 1 EC on proposal from the ARDF WG has established a Regional Youngsters ARDF Championship attracting young people to Amateur Radio (note: getting young people is the survival of Amateur Radio).
- That several IARU Region 1 member societies requested assistance to establish and improve ARDF and ARDF activities in their countries.
- That with the present financial support to the IARU Region 1 ARDF WG all necessary activities cannot be achieved.

This paper was brought to two committees C2 Financial matters and C3 Administrative matters. As a result of C2 the following recommendation was given to the Final Plenary and accept there:

#### **Recommendation C 2.6**

***That the funding proposals for ARDF as contained in paper C 2.5 should be approved. However, the EC is encouraged to review the return on Regional investments such as ARDF.***

Also my planed budget was accepted, in which I increased the support for events and cut the office and travel expenses for the chairman to the lowest necessary amount. For 2003 there is 500 CHF support for the Youth Championships and 1500 CHF for Region 1 Championships. The same budget I have planed for 2004. Altouh WG decided that there is no support necessary for the Youth Championships I believe it is important to support this event if it is possible.

The second paper was the paper with the "new" Rules. In the 23<sup>rd</sup> Plenary Meeting of the WG we checked the Rules again and again there were som minor changes in wording. After this changes the paper was accepted in C3 and forwarded to the Final Plenary. After several year of hard work the Rules V2.6 Part A&B are now valid rules. I like to express my thanks to all involved in this great work, especially to the members of the sub group rules chaired by Karl Heinz Mols, DL9ME.

At General Conferenes there are elections. Due to the proposal of the ARDF WG I was was elected again to chair the working group. Thank you for your trust in my work. I promise to do my best.

Also the chairman of Region 1 and the executive committee were elected.

The new chairman (president) of Region1 is our friend and member of this WG for long years, Ole Garpestad, LA2RR. Panayot Danev, LZ1US, also a member of this WG and active competitor was elected a member of Executive Committee.

#### 2. 4<sup>th</sup> Youth Championships of IARU Region 1 in Bastheim Germany

The WG decided at 23<sup>rd</sup> Plenary Meeting that DARC is hosting this event. I served as the Chairman of the International Jury and Hans Ehlers, DF5UG, memeber of the Executive Committe was present on behalf of Region1. 6 member societies with 42 competitors participated in this event.

## 4th Youth ARDF Championship of IARU Region 1 in Bastheim, Germany

(IARU-R1) 23 July 2003

by Hans-H Ehlers, DF5UG, Region 1 Executive Committee

When I thought that Bastheim the site for the 2003 IARU ARDF Youth Championship was close to Munich I was wrong. When I expected to find a beautiful place surrounded by excellent ARDF facilities I was right. Bastheim a small village between Fulda and Coburg situated in the German county Under-Franconia was a very good choice for this ARDF Championship. Excellent weather conditions and a beautiful landscape did their best to both satisfy the competitors and the officials. I had the honour to open the 4th Youth ARDF Championship of IARU Region 1 in Bastheim on behalf of the IARU Region 1.

The official date was from Saturday the 7th until Wednesday the 11th of June 2003. I arrived on Saturday after a lengthy drive from Munich. Most of the drive was on Autobahn, the German motorway. Then came federal roads and finally country roads. Eventually I saw the yellow sign "Bastheim" which marked the Franconian small village. All over I noticed members of the national teams getting ready for the opening. By the different sports dress one could identify the different countries taking part as Czech Republic (CRC), Hungary (MRSAz), Russia (SRR), Slovakia (SARA), Serbia (Yugoslavia SRJ) and Germany (DARC). What a colourful sight with all the different flags, badges and dresses. The opening took place in front of the new Rathaus (city hall) of Bastheim with speeches by the Mayor of Bastheim Mr. Dietz, the chairman of the DARC district Franconia Prof. Dr. Arndt and myself for IARU R1. Greeting words were sent by the President of the Bavarian District-Government and by the IARU Region 1 chairman, LA2RR. All speeches pointed out how important activities of young people are in respect of self training and international understanding. They are also vital to the amateur radio societies to gain young members. They congratulated the local DARC radio club "Hohe Rhoen" for its effort to undertake such an international event. The DARC also organized a Youth camp for the whole week in Bastheim. We even learnt that the sun rises in Bastheim six hours earlier than in New York. To be honest I missed it due to a very short night reading through the latest issue of the terms of reference and therefore closed eyes in the early morning.

The competition started on Sunday morning. Very early the teams prepared their gear for the competition. In the forest not far from the starting point was a special warming up area. Before the start all the foxhunting equipment had to be inspected and found in order. There were two kind of transmitters used as foxes. For 3,5 MHz with an output of 2.5 W, A1A emission. For 144 MHz transmitters with an output of 0.5 W, A2A emission. The identification was in CW. After the start only the running competitors and official referees were allowed into the actual competition area. There were five foxes hidden at different places. The landscape showed all different types of topography like hills, dense forest, wet and dry areas. Quite a task for the young fox hunters. But all of them managed this parcour some of them in a very brave manner. At the final checkpoint they were greeted and cheered by the spectators and co-competitors. Afterwards the International Jury chaired by the Chairman of the IARU Region 1 ARDF Working Group, Rainer Flößer DL5NBZ checked the records and prepared the official lists. Small disputes could be solved right away. The decision of the International Jury is final and cannot be challenged afterwards. The excellent results can be found in detail on the homepage of the IARU R1 ARDF working group. Here the results of the Societies Evaluation in order: 1. Czech Republic, 2. Russia, 3. Hungary, 4. Germany, 5. Slovakia, 6. Serbia.

The following days one could find an enormous response by the local and district newspapers with following headlines: Amateur Radio Operators from all over Europe on foxhunt - An international foxhunt centre planned for Bastheim - Fox hunting a super hobby, excellent mix of technology, sport and culture in society - Around 100 participants at the European ARDF Youth Championship - Who ever listened to radio signals will be fascinated by this adventure - Foxhunting creates environmental conscience and demands knowledge of technology as well as sense of orientation and endurance - Participants and Organizers happy. I for myself fully agree with them and like to express my congratulation to both the organizers and the participants. I also like to thank the villagers of Bastheim and their Mayor for their outstanding support to this event.

Unsolved problems:

Up to now there is no good solution in naming the European ARDF Championships. As a compromise these kind of Championships are named:  
ARDF Championships of IARU Region 1 (Europe, Middle East, Africa, Northern Asia)