



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



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

**To all members of the IARU Region 1 ARDF  
Working Group**

**Chairman:**

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**Date: 10. August 2011**

**wB114**

**Minutes of the  
32nd Plenary Meeting of the IARU Region 1 ARDF Working Group**

**(the venue of International 5 days ARDF competition in Turnov Hotel Karel IV -  
Friday, July 1st to Sunday, July 3rd 2011)**

**The proposed agenda:**

1. Opening by the Chairman
2. Welcome to the Guests
3. Introduction of the present Working Group Members and their attendants
4. Apologies for absence, accepting the proxies
5. To approve the agenda
6. To receive the minutes of the 31st Plenary Meeting held in Opatja/HR
7. To receive the chairman's report
8. To receive the report of the Sub Group Rules
9. To discuss the proposed changes to the rules
  - 9.1. Changes of age categories (Appendix A)
  - 9.2. Foxoring Rules (Appendix B)
  - 9.3. The IARU R1 ARDF Sprint and Foxoring Championships (Appendix C )
  - 9.4. ARDF for the Blind (Proposal by SRR to make HRS rules for the Blind official R1 rules Appendix D)
  - 9.5. UARL proposal (Appendix G)
  - 9.6. REF-Union proposal (Appendix H)
  - 9.7. SRR proposal (Appendix I)
10. To discuss the application of new International Class Referees (Appendix F)
11. IARU Region 1 General Conference August, 2011 in South Africa
  - 11.1 To discuss ARDF related papers to the General Conference
    - 11.1.1. SC11\_C3\_34 EC Change to ARDF Rules (Appendix E)

11.2 To find a candidate for the elections to the chairman and the vice chairman of IARU R1 ARDF WG to be held at the IARU General Conference 2011 in August 2011

12. To confirm an Informal Meeting of IARU R1 ARDF WG to deal with International Competitions (World Championships, Regional Championships and Youth Championships) during the IARU Region 1 ARDF Championships held in September.

13. Any other business, courtesies

14. To close the meeting

#### 1. Opening by the Chairman

The meeting was opened by the chairman at 21:20h, Friday July 1st

#### 2. Welcome to the Guests

There were no guests present

#### 3. Introduction of the present Working Group Members and their attendants

	Name	Call	Society		1	2
1	Rainer Floesser	DL5NBZ	Chairman	dl5nbz@ardf-r1.org	X	X
2	Kurt Smet	ON4CHE	UBA	on4che@uba.be	X	X
3	Kai Pastor	DG0YT	DARC	dg0yt@darcd.de	X	X
4	Jozef Fekiac	OM3CEE	SARA	feckiac@mac.com	X	X
5	Dick Fijlstra	PA0DFN	VERON	pa0dfn@veron.nl	X	X
6	Krzysztof Jaroszewicz	SQ2ICY	PZK	krzysztof.jaroszewicz@gazeta.pl	X	X
7	Bob Titterington	G3ORY	RSGB	g3ory@lineon.net	X	X
8	Paul Rudolf	HB9AIR	USKA	margpaulrudolf@econophone.ch	X	X
9	Remigijus Masilionis		LRMD	r.masilionis@gmail.com		X

#### 4. Apologies for absence, accepting the proxies

Proxies:

EDA: Arne Jensen, OZ9VA to Bob Titterington, G3ORY

REF: Patrice Vette, F8ATG to Bob Titterington, G3ORY

SRR: Chermen Guliev, UA3BL to Jiri Marecek, OK2BWN

OEVSV: Harald Gosch, OE6GC to o Jiri Marecek, OK2BWN  
FRR: Olah Marcel to o Jiri Marecek, OK2BWN  
UARL: Igor Lazarev, US0VA to Dick Fijlstra, PA0DFN

Aligmantas Dapkus, LY2CD to Remigijus Masilionis

Written votes from BFRA

BFRA sent their votes to some items of the to the chairman by eMail  
All proxies and the written votes were accepted.

9 societies were present, 6 societies were represented by proxy, 1 society gave written votes

5. To approve the agenda

The agenda was approved unanimously

6. To receive the minutes of the 31st Plenary Meeting held in Opatja/HR

There was a remark by Bob, G3ORY, that his name was misspelled in the list of presence and he was also present at the meeting on September 14th

The minutes were accepted with this corrections unanimously.

7. To receive the chairman's report

**The Chairman's report**

The ARDF World Championships 2010 in Opatija/Croatia was a milestone in the development of our sport. Never before a ARDF Championship has as many competitors as the last one. This is documenting an unbroken interest in our sport. For the first time a ARDF World Championship for the Blind was held in Croatia. This was a great success in bringing „normal“ and handicapped sportsmen together, proofing that even ARDF is an amateur radio branch integrating handicapped people. There were a lot of requests from different societies for organizing such kind of competitions on a regular basis.

On our last WG meeting we were able to do further improvements of our rules. The main developments in the last years were creating new categories to provide fair competitions to all age groups in our sports. This is why the number of competitors is growing rapidly.

The ARDF Youth Championships 2011 in Bulgaria had around 100 competitors, which is also a new record.

Our Championships are changing from amateur sport events to real business, where societies can make good money with. Basically there is no problem when societies make money by organizing a good event, but it is our duty to care for fair rules which are not effected by financial interest.

The real life within the WG is in the Sub Group rules. There were a lot of discussions since our last meeting and lot of proposal for changes of the rules are to be discussed and voted on at this meeting. This proposals are the result of long discussions via email and many hours of work. I like to thank the Sub Group Rules for there effective work for our sport. In all the controversial opinions there is always a winner: not a society, but our sport.

Apart from the Sub Group Rules there is almost no life in the Working Group. A real bad example is the record keeping of International Class Referees. 6 month after the request for the activity reports only 6 societies sent their reports.

Here we need a really big improvement within the WG in the next future.

The big challenge for the near future is doing steps towards the sporting world. With a growing number of competitors and participating societies we are close to becoming a recognized sport.

There is still the vision to get IARU the International Federation for Radiosport.

All member societies of the Working Group are invited to make our sport ready for this new world.

Again my best thanks to all active members of the WG for their assistance and work!

Rainer Floesser, DL5NBZ  
Chairman IARU Region 1 ARDF WG

## 8. To receive the report of the Sub Group Rules

### IARU R1 ARDF WG Sub-Group Rules annual report 2011

The IARU R1 ARDF WG Sub-Group Rules (SGR later on) is a specialized body established in 1997. Its aim is studying and testing new ideas in ARDF, processing of proposals from ARDF WG members and IARU societies and issuing suggestions which, after approval of ARDF WG or IARU R1 General Conference, became new points (or modifications of existing points) of IARU R1 ARDF Rules.

The Rules change procedure:

- 1 collecting the proposals for ARDF Rules improvement
- 2 understanding the problem, finding all possible solutions and consequences
- 3 testing solutions at national level competitions
- 4 preparing the new wording of the affected points of the Rules
- 5 submitting the suggestion to the ARDF WG meeting for approval.

The changes in Part A of the Rules require approval of the IARU R1 General Conference.

There are some long-term projects, which are to be dealt with. During the time, SGR will issue preliminary report on this projects, asking for comments.

In the period from the last ARDF WG meeting held in Opatija in 2010 our main job was the final language and formal correction of the ARDF Rules Part B V29 (2011). This job was successfully completed and the currently valid version of the ARDF Rules was published at the ARDF WG website.

Having completed IARU R1 ARDF Rules V29 (2011), we got the high quality base for current events and for further improvements. In my humble opinion, no radical changes are expected in close future.

Currently the most important topics in ARDF Rules are possible changes in age categories, especially in 35+, and new ARDF formats (sprint, foxoring) and their integrating into competition system and sport life. Also some advanced procedure for starting list drawing would be useful.

Now we should focus our effort to improving sport quality of ARDF competitions, using the Rules as an advanced tool. A detailed instruction manual for ARDF events organizers is prepared. We would appreciate all suggestions and contributions.

In the end I would like to express many thanks to my colleagues in SGR and also to all ARDF WG members for their suggestions and valuable ideas.

Jiří Mareček, OK2BWN

IARU R1 ARDF WG Sub-Group Rules Chairman

The meeting was adjourned at 22:15h

The meeting was reopened at Saturday July 2nd, 15:15h

## 9. To discuss the proposed changes to the rules

### 9.1. Changes of age categories (Appendix A)

There was a presentation of the CRC, RSGB and SRR suggestions, long

discussion, unfortunately most people cannot get over subjective interests of different aged competitors.

The chairman called for a vote upon CRC and RSGB proposals:

8 votes in favour for RSGB, 7 votes in favour for CRC

After a further discussion all age categories affairs were considered as the matter of high importance which calls for qualified majority voting result. No decision taken, further evaluation postponed to the WG meeting in Romania.

It was decided that a change for the age categories should be done with a 2/3 majority in the vote.

#### 9.2. Foxoring Rules (Appendix B)

There was a presentation of the CRC and RSGB suggestions, some minor changes were done, the updated text was approved. The special footnote (average sensitivity receiver definition) proposed for the Appendix 1 of the Rules. The Foxoring Rules were approved unanimously by the meeting

#### 9.3. The IARU R1 ARDF Sprint and Foxoring Championships (Appendix C + J)

There was a presentation of the suggestions, some minor changes were made , updated text was approved. Special points discussed and approved:

SF14.7 Each society may enter a team of up to three competitors in each category for classic competitions (3,5 and 144 MHz) and possibly up to another three competitors in each category for Sprint and Foxoring competitions.

5.7 Regional Sprint, Foxoring or Youth Championship becomes a World Sprint, Foxoring or

Youth Championship, if at least one society from outside the relevant Region participates.

( 10 votes Yes, 1 vote against, 5 votes abstaining)

#### 9.4. ARDF for the Blind (Proposal by SRR to make HRS rules for the Blind official R1 rules Appendix D)

There was video presentation showing the 1st ARDF World Championships for the Blind.

It was decide to make the Rules for the Blind official Region 1 Rules after some changes were discussed ( 14 votes Yes, 1 vote Abstaining)

The Rules for the Blind were handed over for rewording to DL5NBZ and G3ORY

#### 9.5. UARL proposal (Appendix G)

The proposal was discussed and refused in a vote (3 - 4 months before the event is too early for exact course definitions - vital changes might arise)

Vote:1 in favour, 14 against

#### 9.6. REF-Union proposal (Appendix H)

The REF proposal was discussed and unanimously accepted

#### 9.7. SRR proposal (Appendix I)

The SRR proposal was recognized as a part of 9.1. It was unanimously decided to postpone this issue to the next meeting were 9.1 is discussed again.

10. To discuss the application of new International Class Referees (Appendix F)  
RSGB presented a proposal for a new International Class Referee. It was approved unanimously

11. IARU Region 1 General Conference August, 2011 in South Africa

- 11.1 To discuss ARDF related papers to the General Conference

- 11.1.1. SC11\_C3\_34 EC Change to ARDF Rules (Appendix E)

- The proposal was approved by the meeting unanimously

- 11.2 To find a candidate for the elections to the chairman and the vice chairman of IARU R1 ARDF WG to be held at the IARU General Conference 2011 in August 2011

Rainer Floesser, DL5NBZ was proposed by Bob, G3ORY for Chairman again  
Jiří Mareček, OK2BWN, was proposed by Rainer, DL5NBZ for Vice-Chairman again

The proposals were accepted by the meeting unanimously

The elections to the Sub Group Rules will be in the next Plenary Meeting in 2012 after the elections of the Chairman and Vice-Chairman at the General Conference.

12. To confirm an Informal Meeting of IARU R1 ARDF WG to deal with International Competitions (World Championships, Regional Championships and Youth Championships) during the IARU Region 1 ARDF Championships held in September.

This proposed Informal Meeting of IARU Region 1 ARDF WG was confirmed by the meeting unanimously.

13. Any other business, courtesies

- 13.1. The use of GPS

ARDF is a technical sport which has to deal also with new technical developments. The discussion at the last Plenary Meeting and the Meeting of International Jury at the WCH in Croatia were recognized as unprepared and unlucky.

After a discussion in the meeting it was recognized that:

- the use of GPS even with mapping capabilities is not the problem
- the real big problem is to avoid communication between competitors and other persons.

This will be an issue for discussion in the SGR in the next future.

- 13.2. Validation of Membership

It was recognized that there are a lot members listed in the WG which are inactive

for many years. To get qualified majorities in votes, it is necessary to have as many members involved in the voting as possible.

It was decided by the meeting to start a questionnaire among the listed members to get answers about the following questions:

1. Kind of ARDF done in the society
2. Bands used for competitions
3. Who are the competitors - age distribution
4. Problems with the rules
5. Contact to orienteering
6. How to continue - aims

The meeting agreed to find a solution to change Terms of Reference of the WG in a way that societies have to evaluate their representatives to the WG on a regular basis (i.e. every year) according to Constitutes and Bye-Laws of Region 1.

#### 14. To close the meeting

The Chairman passed his thanks all participants of the meeting for their effective work done during the meeting.

The Chairman gives special thanks to Jiri, OK2BWN, for organizing this meeting and taking the minutes.

The meeting was closed at 23:15h

A handwritten signature in black ink, appearing to read 'R. Floesser', written in a cursive style.

Rainer Floesser, DL5NBZ  
Chairman IARU Region 1 ARDF Working Group

# CZECH RADIO CLUB

MEMBER OF THE INTERNATIONAL AMATEUR RADIO UNION REGION 1

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To: IARU R1 ARDF Working Group  
Mr.Rainer Floesser, DL5NBZ, Chairman  
ARDF WG members

Prague, May 16, 2011

Subject: Proposal to the ARDF WG meeting agenda:

## NEW MASTERS CATEGORIES AGE LIMITS

### Introduction:

Currently following age distribution is defined by the ARDF Rules:

20	21-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	>=70
M21				M40		M50		M60		M70	
W21			W35			W50		W60			

The W35 category is too long (15 years) and difference between performance of 35-year and 49-year competitor is quite big. In addition, there are different age limits for men and women. The M21 category is also too long (20 years). Most sports have the youngest masters category starting at 35 years of age while our 40 years is quite unusual.

### Proposal:

The suggested age distribution is as follows:

20	21-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	>=70
M21			M35		M45		M55		M65		
W21		W35		W45		W55		W65			

This age distribution is simple, logical and conforms with other sports.

### Affected points of Rules:

#### 14.2. Categories:

Women (W)	Men (M)	Age
W19	M19	19 and younger
W21	M21	regardless of age
W35	M35	35 and older
W45	M45	45 and older
W55	M55	55 and older
W65	M65	65 and older

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

19.7 Number of transmitters and course lengths assigned to particular categories:

Category	number of transmitters	effective course length
W19	4...5 + finish beacon	6...8 km
W21	4...5 + finish beacon	7...9 km
W35	4...5 + finish beacon	6...8 km
W45	3...4 + finish beacon	5...7 km
W55	3...4 + finish beacon	4...6 km
W65	3...4 + finish beacon	3...5 km
M19	4...5 + finish beacon	8...10 km
M21	5 + finish beacon	9...12 km
M35	4...5 + finish beacon	8...10 km
M45	4...5 + finish beacon	6...8 km
M55	3...4 + finish beacon	5...7 km
M65	3...4 + finish beacon	4...6 km

Best ARDF regards/73!

Jiří Mareček, OK2BWN  
CRC ARDF manager

## **RSGB Submission on the proposals to alter the age categories in ARDF Competition.**

### **Introduction:**

At the meeting of the R1 Working Group held at Opatija in September 2010, the Czech National Society put forward proposals to alter the age group structure of ARDF.

The Chairman Rainer Floesser asked that members of the WG take these proposals back to their National Societies and consult widely on the issue.

### **Summary:**

This document is the RSGB response to the proposals following consultations in Great Britain and discussion and approval by the RSGB ARDF Committee at their meeting on Saturday 20 November 2010.

The paper looks at the available evidence to see if there is support for the proposals.

### **Reasons for change:**

There are two reasons why altering the age group structure is desirable.

9. An age group contains too many competitors and needs subdividing to reduce the maximum number of competitors in a category.

10. The variation of ability across the age group may be greater than is desirable. In international competition reason (a) is of limited importance because the leading teams will try to field the maximum number of competitors in all the categories that exist. There is the factor that there will be more competition for team places if the category is widened.

No evidence was produced by the Czech National Society to support reason (b) even though some of their ideas are valid.

### **Evidence of physical ability:**

The RSGB has sought to find evidence of the physical abilities of endurance athletes across age and sex for adult competitors. We wish to refer to a research paper by Elmer Sterken of the University of Groningen, The Netherlands in 2001 entitled:

“Endurance and Age: Evidence from Long-Distance Running Data”

This paper can be found at

<http://som.eldoc.ub.rug.nl/FILES/reports/themeE/2001/01E47/01E47.pdf>

The 10km data, commencing on page 21, was felt to be the most appropriate for ARDF. The best factor in each of the existing age categories and in each of the proposed categories is listed alongside the worst factor in that same category. The % reduction from best to worst is then tabulated. Note that the M70 and M65 age categories have been subdivided in an attempt to separate the rapid decline in physical ability between the ages of 75 and 79. Similar subdivisions have been made for women and also the effect of having a category change at 40 for women is shown.

### **Men**

<b>Age class</b>	<b>Best factor</b>	<b>Worst factor</b>	<b>% variation</b>
<b>Present Categories</b>			
M21 to M39	1	0.95	5.00

M40 to M49	0.944	0.885	6.25
M50 to M59	0.88	0.809	8.07
M60 to M69	0.8	0.736	8.00
M70 to M74	0.728	0.692	4.95
M70 to M79	0.728	0.626	14.01

**Proposed Categories**

M21 to M34	1	0.964	3.60
M35 to M44	0.975	0.916	6.05
M45 to M54	0.909	0.853	6.16
M55 to M64	0.845	0.768	9.12
M65 to M74	0.761	0.692	9.01
M65 to M79	0.761	0.626	17.74

**Women**

Age class	Best factor	Worst factor	% variation
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**Present Categories**

W21 to W34	1	0.988	1.2
W35 to W49	0.984	0.870	11.59
W50 to M59	0.863	0.775	10.2
W60 to W69	0.762	0.649	14.8

**Proposed categories**

W21 to W34	1	0.988	1.2
W35 to W44	0.984	0.908	7.72
W45 to W54	0.900	0.830	7.78
W55 to W64	0.821	0.706	14.0
W65 to W74	0.693	0.604	12.8
W65 to W79	0.693	0.547	21.07

**With a W21-W39 category**

W21 to W39	1	0.956	4.4
W40 to W49	0.946	0.870	8.03

The data in the paper itself shows that some common assumptions are not supported:

- The endurance running ability of men peaks at the age of 27 for the 10km distance. For women a broader peak is observed between the ages of 27 and 29.
- Both men and women are slightly better distance runners over 10km at the age of 34 than they are at the age of 21.

Now looking at the tabulated results above:

- The existing age categories for men are surprisingly even when it comes to the variation of ability across each category. M21 shows the least with 5% variation (up to 39) and M60 the worst at 8% variation. The results for M70 are not clear

cut due to the rapid decline after the age of 75 and the difficulty of setting an upper age limit to the category.

- The proposal by the Czech National Society reduces the variation across the M21 (up to 34) to 3.6% and the negative effect of this is to push the variation over the classes for men aged 55 to 69 over the 9% mark when previously they had been held at 8%
- The evidence shows that the Czech Society were correct to highlight the existing W35 category as being too wide. It has an 11.59% variation, which is out of line with all the existing men's categories. At the same time the women's existing W21 category has an amazingly low variation at just 1.2%
- The last two entries in the table above, show that if the women's W35 category was altered to W40 to W49, the new W21 to W39 category would have a 4.4% variation in ability but the new W40 to W49 category would have a variation of 8.03% which is quite acceptable.

### **Size of Age Categories:**

The start lists at WC 2010 give the numbers of competitors in each category. Some 33 countries participated and so the maximum number in each category is 99. The start list had 35 start groups giving a maximum of 70 start 'slots' for each category given that two competitors from the same category may start in the same start group providing they are seeded to be of diverse ability.

The maximum number of competitors in any category was the 57 in M40. The full list is as follows:

Men M19 = 34, M21 = 54, M40 = 57, M50 = 51, M60 = 47, M70 = 21

Women W19 = 30, W21 = 33, W35 = 24, W50 = 13, W60 = 11

There is no case to subdivide the W35 category on the basis of the number of competitors. Even M21 is not the largest category and thus is not the prime candidate for subdivision.

The maximum number of competitors in any one category (57) is still comfortably less than the 70 start slots available in a start list of 2 hours and 40 minutes duration.

### **RSGB Points:**

1. The last changes to the age groups only came into force in January 2010 and it is considered too soon to have further change.
2. If there is to be any change to the age categories then there should be a simultaneous undertaking not to further alter the age categories for a significant period (10 years?)
3. The RSGB believes that making the variation in ability across each age group as similar as possible should be the prime focus. Once the age of 60 is attained, the fall off in performance becomes much greater and we have to accept that there is little that can be done here to maintain similar variation across an age group.
4. Altering the age categories has a big impact on the competitors affected. Those in the lower half of one of the existing \*0 categories will be pleased that there is to be a \*5 category since that person will shortly move up to a new category in which they are the youngest competitor.
5. Likewise competitors who are in the upper half of an age group see the next transition move 5 years into the future and will not be happy at having to wait an additional five years before they are again the youngest in the category.

6. A wholesale alteration of the age categories as proposed by the Czech Society is not the best way forward. Only the W35 category is unaffected by their proposal.

**RSGB Recommendations:**

- The W35 category should be changed to a W40 category and no other age groups should be altered apart from the extension of W21 to W39. This will align the men and women's categories and reduce the variation of ability across the existing W35 category.
- A reasonable period following the age group changes of January 2010 should be allowed to elapse, before making further changes.

15 February 2011

**Appendix B - as approved**

**Appendix 8: Rules for the ARDF Foxoring Event**

**F1. Basic explanation**

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Foxoring is a special format of the ARDF competition. Its main features are as follows:

- At the start, competitors get competition map with marked start, finish beacon and nominal positions of the transmitters.
- Transmitters except for the finish beacon are placed close to their nominal positions marked on the maps.
- All transmitters except for the finish beacon are very weak and therefore audible only at the close vicinity of the antenna. All transmitters operate continuously.
- The RF field strength of each transmitter is adjusted so that :
  9. the transmitter is clearly audible at its nominal position marked on the map AND at the distance of 30m from its physical position
  10. the transmitter is NOT audible at the distance of 250m from its physical position.
- Competitors shall run to the close vicinity of the transmitters by means of the map and then complete the final approach by means of the direction finding receiver.

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

**15. Training event**

F15.1 For training purposes the organising society shall offer a model event on the day prior to the first competition to demonstrate the transmitter features, the set-up of transmitters and antennas, the registering devices etc., which will be used in the competitions. One transmitter of each frequency which will be used in the competition shall be installed.

**16. Starting order**

F16.6 The competitors within one category start at equal start intervals. Minimum start interval is 2 minutes.

F16.7 All competitors of a particular category shall start in the same start corridor

## **19. Courses**

F19.3 Transmitters including the finish beacon shall be located not less than 250 meters apart. The transmitter nearest to the start shall be located not less than 250 meters from the start.

F19.7 Number of transmitters and course lengths assigned to particular categories:

Category	number of transmitters	effective course length
W19	5...8 + finish beacon	4...6 km
W21	6...10 + finish beacon	5...7 km
W35	5...8 + finish beacon	4...6 km
W50	4...7 + finish beacon	3...5 km
W60	4...7 + finish beacon	3...5 km
M19	6...8 + finish beacon	6...8 km
M21	8...10+ finish beacon	7...9 km
M40	6...8 + finish beacon	6...8 km
M50	5...8 + finish beacon	5...7 km
M60	5...8 + finish beacon	4...6 km
M70	4...7 + finish beacon	3...5 km

F19.8 The composition of the courses (transmitter numbers assigned to particular categories) shall be defined by the siting referee and published on or before the day prior to the competition and before the training.

## **21. Maps**

F21.3 The competition map shall cover the whole competition area including start, finish beacon and all transmitters. The map start (the point where competitors obtain the maps), nominal positions of all transmitters assigned to the particular category, finish beacon and the finish corridor shall be clearly marked on the map.

F21.6 Maps shall be protected against moisture.

## **24. Start**

F24.1 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.

F24.5 Competitors shall enter the pre-start area not earlier than FIVE MINUTES before their own start. At the same time, they shall be given their receivers. Competitors receive maps after their start, at the starting line or at the indicated point within the starting corridor.

## **25. Transmitters**

F25.3 Each transmitter shall be clearly audible during the whole competition at its nominal position marked on the map AND at the distance of 30m from its physical position. Transmitters shall NOT be audible at the distance of 250 m from their physical position. The finish beacon operates at normal power and

therefore shall be clearly audible during the whole competition from the start point. Audibility of all transmitters shall be considered as using a receiver of average sensitivity.

F25.9 All transmitters except for finish beacon have no flags. Registering devices shall be placed at the immediate vicinity of each transmitter.

F25.10 not valid

## **26. Transmitters arrangement**

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F26.1 Competitions in Foxoring are organized on the 3.5 MHz band.

F26.2 There are number of transmitters in the competition area plus the finish beacon. Transmitters shall operate continuously.

### **Technical Specifications for Amateur Radio Direction Finding Equipment**

FT2.6 Specifications for the 3.5 MHz transmitters:

- Carrier frequency \* 3510 ... 3600 kHz
- Frequency stability better than 50 ppm
- Channel spacing between the beacon and other transmitters more than 30 kHz
- Undesired products level conforming to the national regulations
- Output RF power (finish beacon) 1 ... 5 W
- Output RF power (other transmitters) 20...50 mW
- Mode A1A (keyed unmodulated carrier)
- Keying speed 8 ... 15 WPM
- Antenna (finish beacon) vertical
- Antenna (other transmitters) vertical (approx. 30 cm long)

## **Appendix C - as approved**

### **The IARU R1 ARDF Sprint and Foxoring Championships**

#### **Introduction**

IARU ARDF Championships are now organized only in basic, "classic" competition formats on 3,5 and 144 MHz bands. However, during years several other competition formats developed (ARDF sprint event, Foxoring, Long distance event, ARDF Relay competition and more). Some of them became widely wellknown and competitions are routinely organized with wide international participation although exact rules may in details differ from country to country. Out of them, ARDF sprint and Foxoring are especially suitable for attracting newcomers, youngsters and media. In addition, their rules are already stabilized and competitions at international level are organized for years.

#### **Considering that**

- the new ARDF competition formats were already introduced and are widely organized in several European countries at the International Cup level
- The ARDF Sprint Rules were already approved by ARDF WG and its usefulness is generally accepted
- The ARDF Foxoring competitions are routinely organized in several European countries for several years
- it is necessary to bring amateur radio, especially ARDF close to media, young people and public in general
- the ARDF Sprint and Foxoring competitions are extremely suitable for attracting newcomers, public and media
- most organizers are still not willing to include ARDF Sprint event into the schedule of Regional/World ARDF Championship
- it is quite easy to organize such event as a part of some traditional Cup ARDF event

**we recommend in the case that the organizer of the IARU R1/World ARDF Championships is not able/willing to include the ARDF Sprint and/or Foxoring Events into the programme of the Championships**

- to organize Regional or World ARDF Sprint and Foxoring Championships (ARDF SFCH later on) as a separate event at following conditions:
  - The ARDF SFCH is organized on annual basis
  - The ARDF SFCH is organized at a low budget standard, common at international cup competitions
  - The ARDF SFCH is organized for all official categories defined by the Rules
  - for promoting purpose any number of competitors can start unofficially at the condition already defined in the Rules
  - the ARDF SFCH can be organized as a part of some traditional ARDF event with international participation or as an independent event

#### **Affected points of Rules**

SF3.1 Regional or World ARDF Sprint and Foxoring Championships should be organized every year. It may be organized within the programme of the IARU Regional or World ARDF Championship or as a separate event.

SF3.3 Regional or World ARDF Sprint and Foxoring Championships shall take place on the 3,5 MHz amateur band. Separate competitions shall take place on different days.

5.7 Regional Sprint, Foxoring or Youth Championship becomes a World Sprint, Foxoring or Youth Championship, if at least one society from outside the relevant Region participates.

SF9.1 The International Jury for Regional or World ARDF Sprint and Foxoring Championships shall consist of the following members:

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

SF14.7 Each society may enter a team of up to three competitors in each category for classic competitions (3,5 and 144 MHz) and possibly up to another three competitors in each category for Sprint and Foxoring competitions.

Appendix 7: Rules for ARDF Sprint event are applied

Appendix 8: Rules for ARDF Foxoring event are applied (new proposal)

## Appendix D - as approved

### ARDF Rules for competitions organised for the Blind

1. The purpose of these rules is to regulate competitions in amateur radio direction finding (ARDF) for blind competitors, so that they can locate transmitters specifically designed for this type of competition, without assistance from others.
2. Competitions use the 3.5 MHz band in accordance with the IARU Region 1 band plan.  
The transmitters have a maximum power output of 50mW and use A1A modulation.  
The keying speed of the transmitter is at least 50 characters per minute
3. Entries should reach the organiser no later than ten days before the start of the competition. The application must include the sex, date of birth and details of membership of a Region 1 National Society or of an Association for the Blind.
4. The organiser, in consultation with the Chairman of the Region 1 ARDF Working Group will determine and announce the names of the following officials:  
  
President of the Jury (who is also the chief referee)  
The track referees (between two and six are required)  
The referees at the transmitters.
5. The President of the Jury will inspect the competition area (but not the locations of the transmitters) prior to the competition and convey to the competitors a description of the area.
6. Half an hour prior to the first start time, there is a draw to determine the start order.
7. Before the competition starts, all competitors are required to deposit their receivers in a place designated by the organiser.
8. Competitors who are waiting to start are to be separated from non-competitors and from competitors who have already finished.
9. Once competitors have been corralled as prescribed in rule 8, any of them found in possession of a hand held radio, a mobile telephone or in any other way communicates with non-competitors or with competitors who have already finished, will be disqualified.
10. Between three and five small transmitter will be placed in the competition area. This area must be free of obstacles.

11. All transmitters use the same frequency and transmit one after the other. Each transmitter sends until such time as it is located by the competitor.
12. The distance between transmitters is in the range 50 to 150 metres.
13. Transmitters send an identifying sequence in morse code using A1A modulation according to the following table:

Transmitter	Identifying signal in morse code
1	MOE
2	MOI
3	MOS
4	MOH
5	MO5

14. A circle of radius 2.5 metres is marked out on the ground around each transmitter. It can be marked with white powder or plastic tape.
15. The start line is indicated on the ground either by a length of plastic tape or a line of white powder.
16. Each competitor is accompanied by at least one track referee. The task of this referee is to prevent the competitor from moving outside the competition area and to signal when the competitor enters one of the circles defined in paragraph 14 above.
17. The normal course length is 500m with a time limit of 10 minutes. In cases where a different course length is used, the organiser, with the consent of the President of the Jury, shall decide a time limit in proportion.
18. Start procedures:
  - a. The track referee is required to introduce himself to the competitor when they meet prior to entering the start area.
  - b. The track referee assigned to the competitor leads the competitor to the start line. At this point the competitor puts on the headphones and tunes the receiver assisted by the track referee. The first transmitter starts to send 30 seconds prior to the start time
  - c. The competitor then has 30 seconds to adjust the frequency and prepare to start.
  - d. The start clock gives an audible countdown (tone bursts) of the last 5 seconds prior to the start.
  - e. At the start instant the start official shouts 'GO', the clock is started.

- f. The competitor starts searching for the first transmitter (MOE).
- g. In the case of a handicapped competitor (e.g., hand amputee) the track referee will carry out all the tasks at paragraph 18 b above.
- h. Immediately after a competitor has started, the accompanying track referee leads the next competitor to the start.
19. All competitors, regardless of whether they are blind or visually impaired, must wear opaque goggles or a blindfold. The efficiency of the goggles or blindfold is to be checked by the chief referee.
20. The track referee must move parallel to the competitor at a distance of 1 metre shoulder to shoulder. The track referee shall not walk or run in front of or behind the competitor.
21. In the case of a wheelchair bound competitor who is blind, the competitor will be accompanied by a companion whose task is to push the wheelchair. This companion is not subject to rule 8 above, but is required to wear a blindfold or opaque goggles (rule 19 applies). When the competitor is searching for a transmitter, he or she gives the companion directional instructions (e.g., straight, left, right, left a bit etc)
22. When a competitor enters the marked circle around a transmitter or steps on the marking of the circle, the transmitter is deemed to have been located. At this instant the accompanying track referee stops the competitor by saying 'STOP' and touching the competitor on the shoulder. At the same time he raises his other hand vigorously into the air to signal to the referee at this transmitter to turn it off and to the referee at the next transmitter in the sequence to turn this next transmitter on.
23. In the event of the failure of a receiver, the competitor is deemed to have ended the competition. The result for this competitor is based on the number of transmitters found prior to the failure. If the receiver fails prior to finding the first transmitter the competitor may be allowed to re-start with a new receiver at the discretion of the chief referee. In the event of a transmitter failure, the competitor has the right to restart.
24. When a competitor enters the circle of the last transmitter, the clock is stopped and the elapsed time calculated. The chief referee arranges for this time to be communicated to the competitor without delay.
25. The track referee is not permitted to help the competitor in any way. Rule 22 details the actions of the track referee when a required transmitter is approached. Should the competitor approach an obstacle (for example a boundary fence surrounding the competition area), the track referee stops the competitor with a touch on the hand and the words 'STOP CORRECTION'.

Should the competitor approach a transmitter that is not sending (and is thus not the transmitter being sought) the track referee stops the competitor with a touch on the hand and the words ' STOP CORRECTION ANTENNA' and has the right to move the competitor two or three steps left or right.

26. Competitors are ranked by the time taken to locate all the transmitters with the one having the shortest time being in first place.  
Competitors who exceed the time limit are ranked in order of the number of transmitters found and then the time taken to the last transmitter located.
27. The President of the Jury (chief referee) must read out the unofficial results after all the competitors finish the event.
28. There are four categories:
  - a. Male competitors younger than 21 (Juniors)
  - b. Male competitors aged 21-49 (Seniors)
  - c. Male competitors aged 50 and over (Veterans)
  - d. Female competitors

Ages are the age a competitor reaches during the year in which the competition is held.

29. In the individual competition, competitors from all classes are entered into the overall standings.  
The top three competitors in the overall standings receive trophies, while all competitors receive certificates giving their ranking place.  
The top three competitors in each category receive trophies or medals while all others receive certificates giving their ranking place.
30. In IARU Region 1 Championships, every Society may have up to two teams in each category.
31. A team comprises at least two and a maximum of three competitors, all from the same category. The results of the best placed two members are to count to determine the team result.
32. Any protest must be made in writing to the President of the Jury within half an hour of the unofficial results being read out (rule 27). The decision of the Jury is final.
33. Thirty minutes after the unofficial results are read out, the results become official. In the event of a protest, the Jury must reach its decision before the results are declared official.
34. All competitors compete at their own risk. In the event of injury a competitor may not claim compensation from the organizers.

**Appendix E - as approved**

**International Amateur Radio Union Region 1  
2011 Regional Conference – Sun City, South Africa  
12 to 19 August 2011**

Subject	Proposal to change ARDF Rules		
Society	EC	Country:	
Committee:	C3	Paper number:	SC11 C3 34
Author:	Panayot Danev, LZ1US		

The IARU Region 1 Executive Committee

considering

- that ARDF Rules do not precisely determine the deadline for designation or authorisation of the Chairman of the International Jury;
- that the Chairman of the International Jury bears a heavy responsibility and needs enough time before the Championship for establishment communications with the hosting society, referees etc.

proposes

To change Rule 9.2 as follows:

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. The designation/authorisation shall be made at least nine months prior the Championship.

**Appendix F - as approved**

From: R G Titterington G3ORY, Chairman RSGB ARDF Committee

Wiclif House,  
St Mary's Road,  
Lutterworth,  
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United Kingdom

+44 1455 552648

15<sup>th</sup> February 2011

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

Dear Rainer,

The RSGB would like to put forward Vladislav (Vlad) Boev 2E0VLB, a member of this Society, as a candidate to be an ARDF International Class Referee.

Vlad has been an active participant in the sport since 1966, when he first competed in his native Bulgaria. He was a member of the Bulgarian National Team between 1977 and 1987 and after emigrating to the UK in 1990, he became a member of the RSGB team in 2010. He has been a competition organiser for the RSGB.

He is familiar with the rules of ARDF, able to communicate fluently in English, Bulgarian and Russian and has a working knowledge of German. He is physically able to serve in the competition terrain.

The RSGB ARDF Committee wishes to commend him as a potential International Referee.

Yours ever,

Bob

## Appendix G - refused



ЛІГА РАДІОАМАТОРІВ УКРАЇНИ

**UKRAINIAN AMATEUR RADIO LEAGUE**

Зареєстровано Міністерством юстиції України 3 вересня 1992 р. Свідоцтво №286

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№ 11

February 16, 2011

To: Rainer Floesser, DL5NBZ  
IARU R1 ARDF WG Chairman

For ARDF WG discussion about correction of the point 19.8 of the Rules (The composition of the courses (transmitter numbers assigned to particular categories) shall be defined by the sitting referee and published on or before the day prior to the competition and before the team officials' meeting).

Proposition from UARL is to inform all societies 3-4 months before the Championships (Bulletin N2) about exact transmitter numbers assigned to particular categories. It allows to sportsmen to be better prepared with reference to the given conditions of competitions.

President of UARL



A. Lyakin (UT2UB)

## Appendix H - as approved

Dear Chairman, Jiri and Bob,

During last WG meeting, we tackled of representation of beacon "MO", finish corridor and arrival on the map.

At present time, only Beacon is drawn on the map. It's represent with a Double circle.

In order to indicate finish corridor and finish line on the map, the following propositions have been made during last WG :

- Beacon : Double circle
- Finish corridor : dotted line
- Finish line : a "T" at the end of finish corridor (dotted line)

In my opinion, this proposition is good but the representation could throw ARDFer's into confusion especially if ARDFer's comes from orienteering. More over, the IOF standard are not respected.

Let me explain :

The actual proposition doesn't respect the IOF standard.

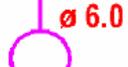
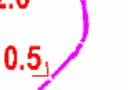
- In orienteering (IOF standard), last beacon is represent with ordinary circle (as all the others beacons).
- The arrival (= finish line) is represented with double circle (IOF symbol n°706). This is the exact location where the chronometer is stopped (the end of the race for a competitor).

If we maintain the "MO" representation with double circle, the doubt will be present every time. Where is the exact location where the chronometer will be stoped, in the place marked with double circle ?... Of course not !

Consequently and according to standard, I propose the following representation :

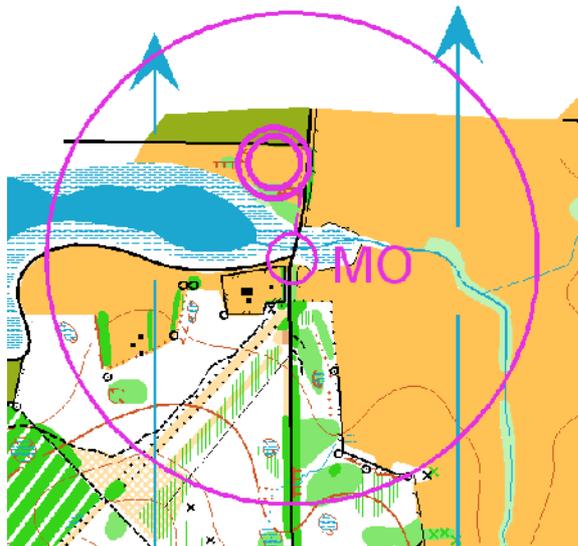
- Beacon : ordinary circle (IOF symbol n°702) with name "MO" or "6", (IOF symbol n°703)
- Finish corridor : Without change (dotted line) (IOF symbol n°705)
- Finish line : Double circle (IOF symbol n°706)

(Extract of IOF standard. Excuse me for the French version...)

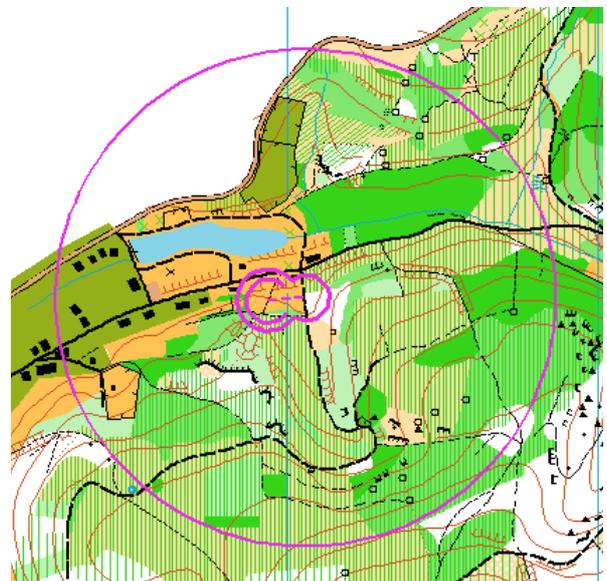
	<p><b>701 Départ</b> Le départ, (ou le point de la prise de carte s'il ne s'agit pas du départ) est représenté par un triangle équilatéral qui pointe dans la direction du premier poste. Le centre de ce triangle montre la position exacte du point de départ. - Couleur : pourpre.</p>
	<p><b>702 Poste de contrôle</b> Les postes de contrôle sont représentés par des cercles. Le centre du cercle doit indiquer sa position exacte. Des sections du cercle peuvent être éliminées pour éviter de masquer des détails importants. Couleur : pourpre.</p>
	<p><b>703 Numéro du poste</b> Le numéro du poste est placé à proximité du cercle, de telle manière qu'il ne masque aucun détail important. Ces numéros sont orientés vers le nord. - Couleur : pourpre.</p>
	<p><b>704 Ligne</b> Lorsque les contrôles doivent être parcourus dans un ordre défini, le départ, les postes et l'arrivée sont réunis par des traits. Des sections de ligne peuvent être omises pour ne masquer aucun détail important. - Couleur : pourpre.</p>
	<p><b>705 Itinéraire balisé</b> Un itinéraire balisé est indiqué sur la carte par des traits interrompus. Couleur : pourpre.</p>
	<p><b>706 Arrivée</b> L'arrivée est représentée par deux cercles concentriques. - Couleur : pourpre.</p>

The following pictures show the 2 cases we can meet.

Beacon away from arrival.



Beacon close to arrival.



Of course, this modification could be applied in the "foxoring rules" draft who has been just proposed.

Hopping this proposition makes one's contribution to ARDF.

**Best regards**

**Patrice F8AZG**  
**French representative to ARDF WG**

## **Appendix I - postponed**

**Dear ARDF WG Chairman, dear ARDF WG members,**

I am very sorry for being absent first time for the last 30 years but it is a fact. As far as the meeting is mostly devoted to the amendments into the rules I give my proxy to the Chairman of the WG Sub Group rules Jiri Marecek, OK2BWN.

I want to stress three points.

1. Regarding the age categories I have some different opinion. It is closer to the age categories in orienteering which is far well developed in the world than ARDF. My proposal is to have the age categories:

M21, W21 (3 competitors in the team)  
M35, W35 (3 competitors in the team)  
M45, W45 (2 competitors in the team)  
M50, W50 (2 competitors in the team)  
M55, W55 (2 competitors in the team)  
M60, W60 (2 competitors in the team)  
M65, W65 (2 competitors in the team)  
M70, W70 (2 competitors in the team)

The total number of competitors of a team increases not much but the effectiveness is huge. There are many competitors in the world older than 45 but they gave up ARDF because it is very difficult to compete with others when there is an age gap of 10 years between the veteran categories. When the age gap is 5 years (like in orienteering) it is very likely to have more people involved in ARDF.

2. I support all the existing proposals concerning the Sprint and Foxoring events except the proposal to have "... the transmitters on the air for 30 seconds in every minute".

Because " F25.9 All transmitters except for finish beacon have no flags..." competitors which do not manage to find a working transmitter (TX) in 30 sec will simply walk around it for another 30 seconds and so attract other competitors to this TX.

The same situation in ARDF was 25 years ago and that was the reason why the red/white flags had been brought into ARDF. The main aims of having flags are:

11. there is a sign at the flag which shows its number and the band;
12. the flag is the place where the registering device has been fixed;
13. competitors find the flag and then the registering device. They do not approach the TX itself. So the TX is always out of reach, accidentally pushing and therefore remains more or less safe of touch;
14. to prevent gathering competitors at a TX when it is not working. A competitor who takes a precise direction to a TX at the end of its working period from a distance about 50-400m and then keeps going accurately the bearing finds the flag. If there is no flag it is almost impossible to find a TX, only by chance.

**3. In Bulletin 2 the frequency of the finish beacon is put as 144,100MHz. According to the rules the frequency on 2m band can not be below 144.500MHz in Region 1. I informed the organizers about it and they promised to correct the mistake. But this point needs to be checked until it is right.**

**Already solved!**

Good luck in holding the meeting!

Best regards,73!  
Chermen Guliev UA3BL  
**SRR**