



Program 12–17 September 1994

MONDAY 12th

14.00	Arrival of participants, registration, coffee
17.00 - 18.00	Dinner
20.00	Jury meeting, final list of participants, draw of country start order in the 144 MHz race

TUESDAY 13th

7.00			Breakfast
	-	9.00	Team leaders state starting sequence between participants in each class for the 144 MHz race
10.00	-	14.00	Training within both 3.5 MHz and 144 MHz
11.30			Lunch
16.00			Opening ceremony
17.00			Dinner
18.30			Jury meeting

WEDNESDAY 14th

on

THURSDAY 15th

7.00		Breakfast
-	8.00	Team leaders state starting sequence between participants in each class for the 3.5 MHz race
		Jury meeting, final list of participants, draw of country start order in the 3.5 MHz race
8.45 –		Departure by bus to the free program in Stockholm
10.00		First stop Vasa Museum
12.00		Transport from the museum to Stockholm city
•		Free activities for shopping, sightseeing
		Lunch at any Clock restaurant in Stockholm (voucher from team leader)
15.30		Transport back to the Regiment
16.30		Dinner

FRIDAY 16th

5.45			Breakfast
6.30			Departure to the competition area
7.30	_	14.00	3.5 MHz Competition
14.30	-		Non-official public competition 3.5 MHz
17.00			Jury meeting and official results 3.5 MHz
18.00			Award Ceremony
19.00	-	24.00	Banquet
21.00	_	01.00	Disco dance

SATURDAY 17th

6.30		Breakfast	
09.00 -	12.00	Departure of participants	



7THARDFWorld Championships

Opening ceremony

Tuesday 16.00

The meeting point is in the area in front of the main administrative building (in case of rain in the sports gym).

- 1 The teams gather.
- **2** Introduction and Formal Opening by the President of the Swedish Amateur Radio Society, Mr. Rune Wande, SMØCOP.
- **3** A representative of the organising society of the previous championships in Hungary, hands over the official IARU flag to the organising committee.
- **4** Raising of the flag.
- **5** An introduction to the Regiment by Lieutenant Colonel Karl-Arne Malmberg.
- 6 Entertainment.
- **7** Mr. Krzysztof J. Slom-czynski *SP5HS*, Chairman of the ARDF Working Group in Region 1, brings the Opening Ceremony to a close.

This program is published by the Organising Committee of the 7th World Amateur Radio Direction Finding Championshins

Editor: Hans Sundgren SM5SVM.

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Information given in this program is correct at the time of publishing. Any changes will be announced on the information board at the information desk.

Welcome

n behalf of the ARDF Organising Committee of the Swedish Amateur Radio Society (SSA), I have great pleasure in welcoming you to this 7th ARDF World Championships, at the Regiment 1st Royal Engineers (Ing 1), close to Stockholm.

Today the Regiment is mainly concerned with training UN police forces from a number of countries before they are sent on their peace keeping missions around the world.

It was with great enthusiasm back in 1993 that the Organising Committee began the preparation for this event and as of today, we have received almost 300 applications from 27 societies – a record number in the history of the ARDF World Championships.

In 1961 our society organised the first ARDF European Championships and today, 33 years later, we have pleasure in seeing two of the participants from that year attending this year's Championships: Mr. Alexander Akimov from Russia, winner of the 144 MHz Senior class, is a guest of honour and Mr. Gunnar Svensson from Sweden, winner of the 3.5 MHz Junior class, still very much active as a fox-hunter, now represents Sweden in the Oldtimer class. Once a fox-hunter, always a fox-hunter!

Finally, I wish you the very best of luck in the competitions and I do hope that you will return home after these competitions with happy memories of Sweden in general and Swedish terrain and ARDF techniques in particular.



P-A Nordwaeger SMØBGU

Organising committee Chairman

P-A Nordwaeger SMØBGU

Technical equipmentBo Lenander *SM5CIW*

Press information

Gunnar Ahl SM5CWV

Information desk

Ludmila Chernova and Erling Glanz

Star

Lars-Gunnar Höglund SM5JCQ

Transmitter stations and service net

Alf Lindgren SM5IQ

Finish

Donald Olofsson SM5ACO

Starting lists and results ED Data

Transport

Sven Carlsson

Referees

Gunnar Ahl SM5CWV

P-A Nordwaeger

SMØBGU

Chairman of the

Organising Committee

The 1994 ARDF World Championships are organized under the auspices of the International Amateur Radio Union, Region 1, by Föreningen Sveriges Sändareamatörer SSA, of Sweden.

The executive organizing society is formed by members of radio clubs close to Stockholm:

- Stockholms rävjägare SRJ
- Västerås radioklubb VRK
- Örebro sändareamatörer ÖSA
- Eskilstuna sändareamatörer ESA
- Mälardalens radioklubb



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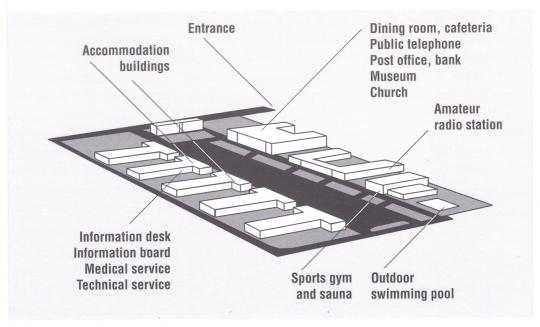
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At your service

1st Royal Engineer Regiment





Accreditation

Every person attending the championships must be able to present an accreditation card when entering the championship area.

The accreditation card is obtained at the *information* desk on arrival.

Under no circumstances may any participant be without this accreditation card when they are within the Regiment area.

Event information

Post address

World Championships ARDF, Ing 1 S-151 84 Södertälje Sweden

Visiting address

Almnäs, Södertälje

Telephone no.

(int.) +46 10 229 86 18 (nat.) 010 229 86 18

Emergencies

For police, ambulance service, the fire department etc. telephone **90 000**.

Photography

Photography is permitted within the Regiment area.

Documents

Lists of results and bulletins will be available in 2 copies per country delegation and in one copy per international jury member. Documents are available at the *information desk*.

Documents issued after the event will be distributed in one copy per society.

Amateur radio station

An amateur radio station with the call sign 8SØRDF (Radio Direction Finding) is set up in the Regiment. 8SØRDF will operate on the HF and UHF bands during the championships. European participants having license to operate in their home countries are welcome to use the station in accordance with the CEPT rules for amateur radio.



Language

English is the official language during the championships.

Information desk

All official information is published on the information boards by the *information desk*.

Lunch bag

Everybody will receive a lunch bag at breakfast, before leaving the Regiment in the morning of the two competition days. A regular lunch cannot be served during competition days.

Starting lists

Starting lists will be available on the information board at the *information desk*, in the evening before the competition.

Shuttle bus transport

There will be shuttle buses for visitors from the start area to the finish area, as well as shuttle buses from the finish area to the Regiment.

No passengers will be allowed to travel with the buses *from* the finish area *to* the start area.

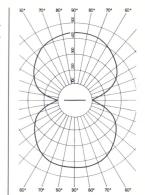
No private cars are allowed.

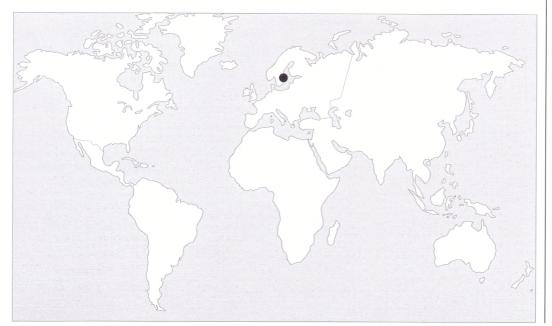
Starting area regulations

Only competitors called to start, team leaders and international jury members, are allowed to enter the official competition *starting area*.

Waiting competitors and visitors must remain in the waiting area.

No radiocommunication equipment, including broadcast receivers, is allowed into the starting or finishing area. This restriction of course, does not include the competitors receivers. The whole frequency spectrum will be monitored during the competition.









Race information



The *starting point* (the beginning of the start corridor), is marked with a *triangle* on the map. The *finish* (finish line) is marked with *double circles*.



Correct minimal clothing.

Competition maps

The maps are normal Swedish orienteering maps to scale 1:15.000 with contour intervals of 5 m, in A4 size (30 x 21 cm).

Colour code:

White	Forest
Yellow	Open land
Blue	Water
Black	Roads, paths, stones
	and buildings
Brown	Contour lines
Green	Tough vegetation,
	slow to run through

For more information, please study the information board at the *information desk* and at the *waiting area*.

Clothing regulations

The Swedish regulations for orienteering races require clothing to cover the whole body except head and arms.

Starting procedure

At the start area you will be told where to put your receiver. This will be done one competitor country at a time.

As soon as all receivers have been handed in and the competitors are gathered in the *waiting area*, the time for the first start will be announced.

When your start number is called to start, you should check in at the gate. Proceed to find your receiver.

The map and your registration card will be given to you 10 minutes before the start.

You will be allowed to enter the *starting area* 5 minutes before the start.

The starting signal is given 1 minute before the first transmitter begins transmitting. When the start signal sounds, run through the marked starting corridor without switching on your receiver. There is one corridor for Seniors and Women and another corridor for Juniors and Oldtimers.

When you reach the end of the starting corridor, you may switch on your receiver and then proceed to find the hidden transmitters.

Transmitters

The transmitting schedule follows the IARU Region 1 ARDF Rules. Five hidden transmitters 1–5 are operating sequentially on the same frequency.

Minute	Trans- mitter no.	Identi- fication call
1	1	MOE
2	2	MOI
3	3	MOS
4	4	MOH
5	5	MO5

A *finish beacon* with identification call *MO* is operating continuously on a different frequency. It is installed at the beginning of the finish corridor which has to be followed. The *finish beacon* has no punching device and is not to be visited.

Seniors should find all 5 transmitters.

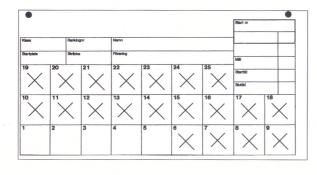
Women should find transmitters 1, 2, 3 and 5 (no. 4 excluded).

Juniors should find transmitters 1, 2, 4 and 5 (no. 3 excluded).

Oldtimers should find transmitters 1, 2, 3, and 4 (no. 5 excluded).

Registration card punching

To prove that you have found each transmitter, punch your registration card with the red puncher located on a support near the transmitter. The registration card is water proof.





Time limit

The time limit is 140 minutes.

Finishing

At the *finish beacon*, a marked corridor will lead you to the finishing line. This corridor must be followed.

After crossing the finishing line, you must hand over your map and registration card to the official responsible, and proceed forward.

The maps are returned to the team leader in the evening, at the *information desk*.

Facilities at finish

144 MHz (Wednesday)

Clothes deposited at the start are available for pick-up.

Juice is served (free of charge).

There are no showers available. Instead, buses will take you to the Regiment where facilities are available.

3.5 MHz (Friday)

Clothes deposited at the start are available for pick-up.

Coffee or juice with bread is available in the cafeteria (free of charge).

There are no showers available. Instead, buses will take you to the Regiment where facilities are available.

144 MHz transmitter data

Carrier frequency

Transmit. 1–5 ... 144.81 MHz Finish beacon .. 144.55 MHz

Effective radiated power (ERP)

0.25 W

Modulation type

A2A (keyed carrier amplitude modulated by a 900 Hz tone).

Modulation degree

85%

Aerial

300 mm halo, positioned 2–3 m above ground.

3.5 MHz transmitter data

Carrier frequency

Transmit. 1–5......3535 kHz Finish beacon.....3550 kHz

Output power

3 W into 50 ohm load.

Modulation type

A1A (keyed unmodulated carrier).

Aerial

Approx. 15 m vertical wire with three 15 m buried ground wires.

International jury

Chairman of Jury

Krzysztof J. Slomczynski SP5HS

Secretary

Gunnar Ahl SM5CWV

Technical referee

Bo Lenander *SM5CJW*

Siting referee

Lars Nordgren *SMØOY*

Start referee

Ole Garpestad *LA2RR*

Finish referee

Karl-Heinz Molz *DL9ME*

Transmitter referees

Hans Endras HB9QH

In Yong Jang HL1KPK

Hiroshi Izuta *JF1RPZ*

Wally Watkins *VK4DO*

Max Wheatley ZL2MAX



Participants

ARDF WORLD CHAMPIONSHIPS

1 1980 PolandCetniewo
7–13 Sept.

No. Year

2 1984 NorwayOslo
6–9 Sept.

3 1986 Yugoslavia Sarajevo 3–7 Sept.

4 1988 SwitzerlandBeatenberg
7–10 Sept.

5 1990 Czeckoslovakia Strbské Pleso 10–15 Sept.

6 1992 Hungary Siófok 8–13 Sept.

7 1994 Sweden Stockholm 12–17 Sept.

LIST OF PARTICIPANTS

The complete list of participants will be given to all team leaders.

USSR

URS

Country		Partic	ipants	1994					P	arti	cipa	ants	3
,		Total	SEN	WOM	JUN	OLD	Others	1980	1984	1986	1988	1990	1992
Australia	AUS	3	_	_	-	1	2	_	-	-	-	-	_
Belgium	BEL	5	2	-	_	3	_	_	-		•	_	-
Bulgaria	BUL	2	2	_	_	_	_	•	•	•	•	•	•
China	CHN	10	3	3	_	_	4	_					•
Croatia	CRO	11	2	2	2	2	3	_	-	-	-	_	•
Czech Republic	CZE	20	3	3	3	2	9	_	-	-	_	_	-
Denmark	DEN	5	1	_	2	2	_	_	_	-	_	-	_
Estonia	EST	4	3	_	_	_	1	_	-	-	-	_	-
Finland	FIN	10	3	1	_	3	3	_	-	_	-	_	-
France	FRA	13	2	3	_	3	5	_	_	_	•	•	•
Germany	GER	26	3	3	3	3	14	•			•		•
Great Britain	GBR	4	1	-	_	2	1	_	-	-	-		•
Hungary	HUN	16	3	3	3	3	4	•					•
Japan	JPN	.18	3	3	3	3.	6	_	-	•	•	•	•
Republic of Korea	KOR	11	3	-	.—	2	6	_	-	•	-	_	•
Lithuania	LTU	4	3	_	1	_	_	_	-	-	-	_	•
Macedonia	MKD	10	2	2	2	2	2	_	-	-	-	_	•
The Netherlands	HOL	3	_	1	_	2	_	_	-	_	_	_	_
New Zealand	NZL	5	_	3	_	_	2	_	-	-	-	_	_
Norway	NOR	9	3	2	_	3	1	•	•	•	•	•	•
Poland	POL	20	3	3	3	3	8	•	-	•	•	•	•
Romania	ROM	5	?	?	?	?	?	•		•	_	•	•
Russian Federation	RUS	16	3	3	3	3	4	_	-	-	-	_	•
Slovak Republic	SVK	14	3	3	3,	2	3	_	-	-	-	_	_
Sweden	SWE	10	3	2	1.1.	3	1 :		•		•	•	
Switzerland	SUI	13	2	1.1	2	3	5	•		•		•	•
Ukraine	UKR	27	3	3	3	3	15		-		1-	_	•
Total 27 co	untries	294	59	44	34	53	99						

 Korea Dem. Rep.
 PRK

Number of participating countries

11 12 17 17 19 23

Medal holders

	SENIORS Individual	Team	WO Individual	MEN	Team	JU Individua	NIORS) Team	OLDT Individ		RS Team
	1980 144 MHz										
1	Sukenik TCH	TCH	Petrochkova	URS	URS	Ruzsiczky	HUN	URS	_		_
2	Jerabek TCH	HUN	Wyszinska	POL	POL	Ambrazhas	URS	YUG	_		_
3	Babeu ROM	URS	Dimova	BUL	HUN	Simacek	TCH	TCH	-		-
	3.5 MHz										
1	Chistyakov URS	URS	Petrochkova	URS	URS	Güttlich	GER	GER	-		_
2	Dracea ROM	TCH	Vondrakova	TCH	TCH	Kajurek	POL	URS	_		_
3	Sukenik TCH	BUL	Koshkina	URS	HUN	Ambrazhas	URS	POL	_		-
	1984 144 MHz										
1	Sukenik TCH	TCH	Fent	HUN	HUN	Kim Gwang	PRK	BUL	Petrov	URS	URS
2	Vodenicharov BUL	URS	Kim	CHN	PRK	Semenov	URS	CHN		BUL	BUL
3	Guliev URS	BUL	Chernyscheva	URS	TCH	Grigorov	BUL	TCH		URS	TCH
	3.5 MHz		16.250 (4.61)								
1	Chistyakov URS	URS	Chernyscheva	URS	URS	Kim Gwang	PRK	URS	Petrov	URS	URS
2	Guliev URS	BUL	Kim Son	PRK	CHN	Zach	TCH	PRK		URS	TCH
3	Kim Chang PRK	HUN	Zhao	CHN	HUN	Jáger	HUN	TCH	Magnusek	TCH	BUL
	1986 144 MHz										
1	Chistyakov URS	URS	Koshkina	LIDE	LIDC	Kaabarayaalay	LIDC	DDI	Magnuagh	TOLL	TOLL
2	Orosi HUN	HUN	Stadler	URS GER	URS TCH	Kocharovszky Jereb	URS YUG	PRK URS	Magnusek Paál	HUN	TCH HUN
3	Dons NOR	NOR	Song	PRK	GER	Ujvári	HUN	YUG		URS	URS
			55.19			- Ojvan	11011	100	1 00101	5110	0110
1	3.5 MHz Chistyakov URS	TCH	Faget .	ROM	URS	Kocharovszky	URS	PRK	Koshkin	URS	URS
2	Teringl TCH	URS	Fent	HUN	HUN	Han	PRK	URS		HUN	SUI
3	Simacek TCH	HUN	Petrochkova	URS	PRK	Stadler	GER	HUN		SUI	YUG
	1988 144 MHz										
		LIDO	Donales	LIDO	LIDO	141	DIII	, 01111	_		LIDO
1 2	Georgiev BUL Evstratov URS	URS TCH	Bychak Koshkina	URS URS	URS TCH	Kostov Mucsi	BUL HUN	CHN BUL		URS SUI	URS TCH
3	Guliev URS	BUL	Zachova	TCH	CHN	Babic	YUG	HUN	Kirpitchenko		BUL
	3.5 MHz										
1	Kopor TCH	HUN	Han	CHN	CHN	Ning Qiang	CHN	CHN	Foursa	URS	URS
2	Georgiev BUL	TCH	Song Hwang Su		PRK	Wang Qiao	CHN .	HUN		URS :	SUI
-3	Lukács HUN	URS	Koshkina	URS	URS	Miraliev	URS	URS		SUI	YUG
13	结合。		in the second			3 4 3 3			Marie 18th		
	1990 144 MHz										
1	Pospisil TCH	TCH	Han	CHN	TCH	Pachenko	URS	PRK	Korolov I	URS	URS
2	Zelenski URS	HUN	Kim Yong Ok	PRK	CHN	Kim Yong Dok	PRK	URS		SUI	BUL
3	Nagy HUN	URS	Koshkina	URS	URS	Kim Won Jun	PRK	TCH	Blomann	TCH	SUI
	3.5 MHz										
1	Nagy HUN	HUN	Kim Yong Ok	PRK	PRK	Zhabin	URS	PRK	Kirpichenko l		URS
2	Lukács J. HUN	TCH	Song Hwang Su		URS	Kim Yong Dok	PRK	URS		JRS	HUN
3	Pospisil TCH	URS	Bichak	URS	CHN	Kim Won Jun	PRK	TCH	Venczel I	HUN	BUL
	1992 144 MHz										
1	Lukacs HUN	HUN	Provatorova	UKR	RUS	Halcsak	HUN	TCH	Tchistiakov F	ลบร	RUS
2	Pospisil TCH	TCH	Goureeva	RUS	TCH	Zolochevski	UKR	MOL	Korshunov l		UKR
3	Nagy HUN	RUS	Majstrikova	TCH	UKR	Roman	TCH	HUN		JKR	GER
	3.5 MHz										
1	Schmiedeberg GER	HUN	Maeva	RUS	RUS	Kejmar	TCH	TCH		JKR	RUS
2	Orosi HUN	RUS	Kairong	CHN	CHN	Roman	TCH	HUN	Tchistiakov F		UKR.
3	Bourdeiniy RUS	UKR	Provatorova	UKR	TCH	Halcsak	HUN	GER	Kirpitchenko	RUS	GER

COUNTRY MEDAL LIST

	Gold	Silver	Bronze
URS	39	17	21
TCH	14	17	17
HUN	10	15	15
PRK	8	10	5
CHN	6	7	3
RUS	6	3	3
BUL	3	7	8
GER	3	1	5
UKR	2	4	4
ROM	1	1	1
SUI	0	4	3
P0L	0	3	1
YUG	0	2	4
MOL	0	1	0
NOR	0	0	2
	92	92	92

This list is prepared from historical data. Please report any remarks or changes to the information desk. A new list will then be prepared.



Free day program



Around 15% of Central Stockholm consists of waterways. The population of the *City of Stockholm* is approx. 679,000 while the inhabitants living in *Greater Stockholm* is about 1,500,000.

Radio broadcasts

Radio Sweden, FM 89.6 MHz, broadcasts in English, German, Russian, Spanish, Estonian, Lettish and Swedish. Further details are available: tel. 08-784 74 00.

Tax-free shopping

There are certain regulations governing the return of VAT on larger purchases made in Sweden by non-Scandinavians. When you make a purchase you should get a VAT receipt which entitles you to a cash refund for this amount when you come to the border or the international airport.



A 17th century dream lost became a 20th century sensation

The royal warship Vasa was the first Swedish ship to have two full gun decks. But her maiden voyage on August 10th 1628 ended in a disaster. After only 15 minutes of sailing, the pride of the Swedish fleet capsized in the very harbour of Stockholm.

Today, boused in a spectacular new museum, the Vasa is unique, being the world's only fully preserved ship from the 17th century. The ship is one of Sweden's major tourist attractions.

Program, Thursday 15th

7.00 Breakfast

8.45 Departure by bus to the free program in Stockholm

10.00 First stop the Vasa Museum 12.00 Transport from the museum to Stockholm-city
Free activities for shopping, sightseeing
Lunch at any Clock restaurant in Stockholm

(voucher from team

leader)

15.30 Transport back to the Regiment

16.30 Dinner



Welcome to CLOCK September 15th 1994

Try our delicious hamburgers, P.P.P-pizzas (original pan-pizzas from Pizza Hut), salads and desserts.



Kungsg. 50, S:t Eriksg. 42, Regeringsg. 20, Nybrog. 32, Klarabergsg. 56, Sergels Torg 1. Railway Station.

Organising Societies

The International Amateur Radio Union - IARU

Representatives from National Radio Amateur Societies, including Sweden, were the founders of the IARU on April 18th, 1925 in Paris. The IARU operates on a global basis and is instrumental in establishing internationally agreed rules, methods of operation, band plans and modes etc. It is our very important link to the International Telecommunications Union ITU.

The IARU comprises four groups: First the worldwide organisation comprising the International Secretariat and Administrative Council and secondly the three regional organizations.

Region 1: Europe, Africa and nearby islands

Region 2: North and South America and nearby islands

Region 3: Asia, Australia and the Pacific.

The IARU is structured in the same manner as the ITU. Only one society in any country can be a member of the IARU because each country has only one vote.

Föreningen Sveriges Sändareamatörer – SSA

SSA is the Swedish national society for radio amateurs and was founded in 1925 with 60 members. The first Swedish amateur call issued was *SMZZ* in 1924 and our monthly magazine *QTC*, has been published since 1928.



At present SSA is deeply involved in discussions with the recently reorganized Telecom Authority, "Post och Telestyrelsen", regarding deregulation of the Amateur Radio Service to a "minimum level required by law". The licensing structure is proposed to be limited to CEPT Class 1 and CEPT Class 2 licenses only. The novice classes, very much needed for recruiting new radio amateurs, are no longer included. Some other kind of novice license is being discussed with the telecom authority.



Rune Wande SMØCOP

Rune Wande

SMØCOP

SSA President



ARDF in Sweden



In the beginning the competitors travelled by car or bicycle.

Seven transmitters - without finish beacon

A normal Swedish race includes 7 transmitters, without finish beacon, and with a transmitting sequence interval of 10 minutes (approx. 1.5 minutes each).

The time is taken at the 7th transmitter found, which can be anyone of the 7 available. This creates a variety of alternatives and the strategy becomes more important than when 5 transmitters are used. Even during night-races, 7 transmitters are used and sometimes even 10 transmitters.

Start by bicycle

The first time Radio Direction Finding was described, as far as we know, was in 1926 in the magazine "Wireless World". The article had the header "Tracking a concealed transmitter". In Sweden the sport appeared seriously two decades later, in 1948.

Because the receivers were quite large, the first competitions took place by bicycle or by car. Running with the heavy batteries was almost impossible.



In 1952 the Swedish national society for radio amateurs, SSA, decided that a Swedish Championship in ARDF should be arranged. This first championship had about 60 participants.

Scandinavian The first championships took place in Stockholm 1961.

Night races

Right from the beginning the Swedish runners arranged competitions by night and also on cross-country skis.



Before the night race in the 1969 Swedish Championships.

The first European ARDF Championships arranged by Sweden in 1961, covering both 144 MHz and 3.5 MHz.

Don't kill the cute foxes

In 1973, SSA decided that the word "fox-hunting" should be replaced by "Radio Direction Finding Orienteering". This was because there had been several misunderstandings with people feeling sorry for the foxes in the forest!

Races every week

Today Sweden ARDF activities include about fifty active runners and several hundred occasionally active runners. Every week during non-winter season, there are at least three competitions in different parts of Sweden.

Standard receivers

Almost all runners use the same 3.5 MHz receiver, which was originally designed in the sixties. This receiver, with the size of a freestyle, is built around a ferrite-antenna.

For the 144 MHz competitions there have been a variety of receivers used. A new receiver design presented in 1992 has now largely become the standard receiver.

ARDF for the future

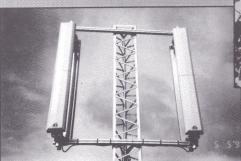
ARDF is a fairly small sport in Sweden in contrast with orienteering which has about 161,000 runners. But this can never take away the joy the active runners find in the sport. Even if the number of active ARDF runners has decreased during the last decades, we are confident that ARDF is still a sport with a strong future!

Sweden has participated in all ARDF World Championships. This team is from the 1984 championships in Norway.

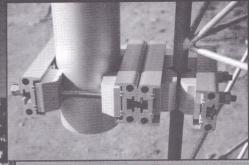


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- Tilt and spacer for conical tower installations
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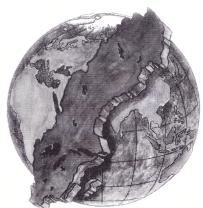
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KRYSSA TILL HELSINGFORS FÖR HALVA PRISET!

Tycker du att London med BRITISH SEPTEMBER pubar och engelsk charm känns lockande? Nu behöver du inte resa så långt, för vi startar hösten med British September. Ombord på alla fartyg från Stockholm möter du bobbies, provar guinness och lyssnar på t.ex. Rod Stewart, Cliff Richard och Elton John eller rättare sagt deras kopior. Reser du till Helsingfors träffar du på det engelska kungahuset ombord. Småskvallra

med Lady Di, Queen Elisabeth eller i alla fall med deras dubbelgångare. Så kom in från dimman till engelsk värme och charm. Båten går från Stockhom på kvällen och du får två nätter på båten och en hel dag att upptäcka Helsingfors.

230:-

Ord. pris 460:-. Exemplet gäller per person när 4 delar C-hytt. Erbjudandet gäller lör-tors under hela september och avser nybokningar då minst 2 pers. delar hytt. Åldersgräns.

VIKING LINE

Tala med din resebyrå eller Viking Line: Stockholm 08-714 56 00. Uppsala 018-13 91 10. Västerås 021-12 70 35. Norrköping 011-10 60 30. Telefonbokning öppen alla dagar 07.00–21.00. Ring och Res 08-470 56 00.

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Alla bär vi på tankar och idéer om hur vi ska utveckla vårt arbete och lösa problem.

Det som verkar omöjligt är inget hinder. Idag sätts ribban högt för att bryta upp gamla konserverande strukturer och tänka och handla i nya banor. Och fungera tillsammans i nya kundfokuserade processer. För att klara det behövs nya verktyg som knyter samman försäljning, teknik, produktion och administration på helt nya sätt. Verktyg som gör det möjligt att decentralisera och platta till organisationerna och korta ledtiderna.

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Förändringens Verktyg behövs om du vill skruva upp effektivitet och konkurrenskraft. Det är med dem du skapar de nya förutsättningarna, de nya stöden och möjligheterna i

organisationen för att förverkliga visionerna och målen. ABB Infosystems är en affärsstödjande partner för stora som små företag, för tillverkning och process, anläggning och tjänsteproduktion.

Vi har informationsverktygen som ökar din konkurrenskraft. Låt idéerna blomstra, kontakta oss.

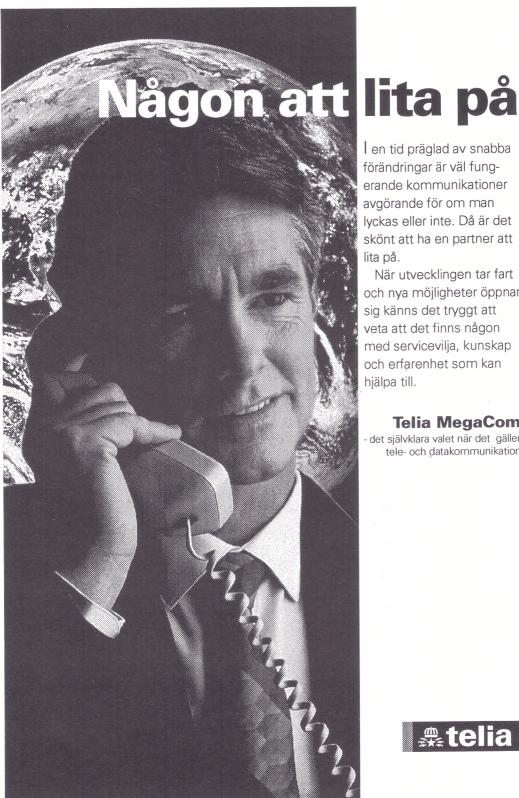
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Du som vill veta mer,

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l en tid präglad av snabba förändringar är väl fungerande kommunikationer avgörande för om man lyckas eller inte. Då är det skönt att ha en partner att lita på.

När utvecklingen tar fart och nya möjligheter öppnar sig känns det tryggt att veta att det finns någon med servicevilja, kunskap och erfarenhet som kan hjälpa till.

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