I.A.R.U.

REGION 1

Conference 1996

Tel-Aviv, Israel

CONFERENCE REPORT

1996

Mr Robert W Jones, Director, Radio Communications Bureau
of the International Telecommunication Union

Mr Joseph Obstfeld, 4X6KJ speaking at the Opening Ceremony

Mr Shlomo Waxe, Director General, Ministry of Communications.

Louis v.d.Nadort, PAoLOU visiting the special station, 4XIARU

This Report has been compiled from the documents of the Conference in Tel-Aviv, Israel, in order to provide a convenient reference source to the recommendations and decisions of the Conference.

It is hoped that those responsible for the actions required following the Conference will find the Report of assistance in this work.

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DELEGATE LIST

Executive Committee	Louis v.d.Nadort, PA0LOU Wojciech Nietyksza, SP5FM John Allaway, G3FKM Rossella Aloserij-Spadini, I1RYS Hans v.d.Groenendaal, ZS5AKV Vincent Magrou, F5FJT Jari Jussila, OH2BU A Razak A.Al-Shahwarzi, A41JT Mustafa Diop, 6W1KI
Chairmen of Committee C4 and C5	Alf Almedal, LA5QK Arie Dogterom, PA0EZ
IARU	Richard L Baldwin, W1RU (President) Michael Owen, VK3KI (Vice President) Larry Price, W4RA, (Secretary)
Region 1 Representatives	Krzysztof Slomczynski, SP5HS (ARDF) Christian Verholt, OZ8CY (EMC) John Bazley, G3HCT (CLG) Ron Roden, G4GKO (IARU-MS) Hans Welens, ON6WQ (STARS) Gaston Bertels, ON4WF (EUROCOM) Martin Harrison, G3USF (Beacons)
Office Staff	Audrey Jefcoate (R1 Office Manager) Angelika Voss, G0CCI Ian Cornes, G4OUT Hilary Claytonsmith, G4JKS Heather Evans
ARRL	Paul Rinaldo, W4RI
International Secretariat	Dave Sumner, K1ZZ
Region 2	Tom Atkins, VE3CDM (President) (o) Pedro Seidemann, YV5BPG (Secretary) (o) Steve Dunkerley, VP9IM (Treasurer) (o)

Region 3	Sangat Singh, 9M2SS M Young Soon Park, HL1FM Yoshiji Sekido, JJ1OEY
Guest Observers	Terry Carroll, ZL3QL Joong-Guea Rhee, HL1AOO

Region 1 Member Societies

AARA (Albania)	Dajlan Omeri, ZAIZ Marenglen Mema, ZA1B
ARABiH (Bosnia)	Nusret Abadzic, T93N Tarik Kupusovic, T94AK Emin Skopljak, T9IE
ARAI (Cote D'Ivoire)	Niava Jean Jacques, TU2OP
ARAS (Senegal)	Dialo Jeuels, 6W1QL
ARBF (Burkina Faso)	Kaba Youssouf, XT2KY
ARM (Monaco)	Henk van Klaveren, 3A2AH
ARRSM (San Marino)	Giancarlo Montico, T77WI Henry Franciosi, T77F (h) Cosimo Martinucci, IN3WWW
BFRA (Bulgaria)	Panayot Danev, LZ1US
CARS (Cyprus)	Aristides Kaponides, 5B4JE
CRAM (Mali)	Diadie Toure
CRC (Czech Republic)	Jiry Marecek, OK2BWN Miroslav Kasal, OK2AOK Milos Prostecky, OK1MP
DARC (Germany)	Horst Ellgering, DL9MH (h) Rainer FloBner, DL5NBZ Bernd Hafner, DB4DL Walter Schlink, DL3OAP Heinz-Gunter Bottcher, DK2NH Hartmut Buttig, DL1VDL Hans Ehlers, DF5UG Lothar Wilke, DL5ATD Astrid Ihsen, Secretary Hans Berg, DJ6TJ Michel Devereau, DL2OBZ

	Gunter Konig, DJ8CY Manfred Dudde, DL5KCZ Hellmut Fischer, DF7VX
EDR (Denmark)	Hans Pyndt, OZ5DX Ivan Stauning, OZ7IS (h)
ERAU (Estonia)	Enn Lohk, ES1AR
FRA (Faroe Islands)	Arne Arnskov, OY1A
FRR (Romania)	Calin Rosetti, YO3RA Stephan Fenyo, YO3JW Gil Dragulescu, YO3FU
GARS (Ghana)	Kofi Jackson 9G1AJ
HRS (Croatia)	Zelijko Ulip, 9A2EG
IARC (Israel)	Joseph Obstfeld. 4X6KJ (h) Alex Vilensky, 4X1MH Shlomo Menuhin, 4X1AS Jim Stone, 4X1RU Arie Surkiss. 4X6UO Shalon Beitcher, 4Z4UT Mark Stern, 4Z4KX Nomi Dor, 4X6DW Alon Bar-Sela, 4X1AB, (o) (Ministry of Communications) Mrs Miriam Stessel,4X6KT (Licensing Manager & Liaison to the Ministry of Comm)
IRTS (Ireland)	Sean Donelan, EI4GK Paul 0'Kane, EI5DI
LARS (Lesotho)	Nelson D Matsie 7P8ND
LRMD (Lithuania)	Arunas Vaglys, LY2IJ
MRASZ (Hungary)	Bela Berzsenyi, HA5EB Istvan Bogyo. HA0DU Loszlo Berzsenyi, HA5EA Imre Gajarszki, HA4YD Laszlo Weisz, HA3NU
NRRL (Norway)	Victor Hvistendahl, LA1ZH Helge Karlsen, LA1BR Ole Garpestad, LA2RR (h) Anne-Lise Gaardso, Office Manager
OVSV (Austria)	Michael Kastelic, OE1MCU

	Ronald Eisenwagner, OE3REB (h)
PZK (Poland)	Zdzislaw Bienkowski, SP6LB Waldemar Krassowski, SP4KM (o) PTT
RAAG (Greece)	Dimitri Tzelatidis, SV1RL
REF (France)	Elysee Bismuth, F6ORV Sotos Kalantsis, F6BZQ Jean-Marie Gaucheron, F3YP (h) Philippe Martin, F6ETI Michel Rousselet, F5FLN
ROARS (Oman)	Abdalla D Al Qasmi, A41KB Nassar K Al Rawahy, A41KG Salim A Al Kitani, A41JV Hamad Al-Siyabi, A41KT
RSGB (United Kingdom)	Tim Hughes, G3GVV (h) Malcolm Appleby, G3ZNU John Forward, G3HTA Mike Dixon, G3PFR Ian Suart, GM4AUP Ron Glaisher, G6LX John Morris, GM4ANB Graham Shirville (o) Stuart Cooke (o)
RSK (Kenya)	Max Raicha, 5Z4MR
RSM (Macedonia)	Tome Dimiskovski, Z32RA Trajko Gjorcevski, Z31RU
RSZ (Zambia)	Brian Otter, 9J2BO
SARA (Slovakia)	Anton Mraz, OM3LU (h) Stefan Horecky, OM3JW Kurt Kawasch, OM8AA
SARL (South Africa)	Tony Reumerman. ZS6AOG Christopher Turner, ZS6GM (h)
SLARS (Sierra Leone)	Cassandra Davies, 9L1YL
SRAL (Finland)	Marku Toijala, OH2BOZ Jussi Liukkon, OH5LK Jukka Sirvio, OH6DD

SRJ (Yugoslavia)	Hranislav Milsevoc, YT1AD Gojko Mitrovic, YU6AO
SRR (Russia)	Boris Stepanov, RU3AX (h) Yakov Lapovok, UA1FA Yuri Zaruba, UA9OBA Irina Zarouba, RZ9OA Igor Beresin, RW4IB Tatyana Khovanskaya, Ministry of Communications of Russia
SSA (Sweden)	Kjell Jarl, SM7GVF Gunnar Kvarnefalk, SM0SMK Lars Olsson, SM3AVG
TARC (Tanzania)	J.Bill Musoke, 5H3JB
UARL (Ukraine)	Nikolai V Gostry, UT5UT
UBA (Belgium)	Carine Ramon, ON7LX Jean Claude Renard, ON5TH Pierre Cornelis, ON7PC (h)
URA (Andorra)	Juan Sauri, C31US (h) Miquel A.Diego Aznar, C31MO
URE (Spain)	Gonzalo Belay, EA1RF (h) Angel Padin, EA1QF Antoni Baques, EA3BRA Regina Tomas, EB3DQE
USKA (Switzerland)	Walter Schmutz, HB9AGA (h) Werner Langhart, HB9OL Rudolf Heuberger, HB9QX
VERON (Netherlands)	Agnes Tobbe, PA3ADR, (h) Joeke van der Velde, PA0VDV Kees Murre, PA2CHM Henk van Amersfoort, PA0HVA Leon Kusters, PA3DOG Paul Veldkamp, PA0SON
ZRS (Slovenkia)	Leopold Kobal, S57U Joze Vehovc, S51EJ

CHAIRMEN OF SPECIALISED BODIES AND COORDINATORS

The following appointments were re-confirmed, or newly elected:

Chairman of HF Committee	LA5QK
Chairman of VHF/UHF/Microwaves Committee	PA0EZ
Chairman of ERC	SP5FM
Chairman ARDF Working Group	SP5HS
Chairman CLG Working Group	G3HCT
Chairman EMC Working Group	OZ8CY
Chairman STARS Working Group	ON6WQ
Coordinator AFRCI-COM	vacant
Coordinator EURO-COM	ON4WF
HF Contest Sub-Group Chairman	OH2KI
Coordinator High Speed Telegraphy	HA3NU
Coordinator IARU-MS	G4GKO
Coordinator IBP	G3USF
Coordinator Handicapped	PA3ADR
Coordinator 29MHz Repeaters	SM3AVQ
Coordinator Sporadic-E Studies	G3YLA
Coordinator Tropospheric Studies	G3LTP
Coordinator VHF/UHF Microwave Beacons	G4ASR (RSGB)
VHF/UHF Records Keeper	GM4ANB
Coordinator Auroral Studies	OH2LX

REGION 1 CONFERENCE

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The seventeenth triennial Conference of the IARU Region 1 took place from 29 September to 6 October, 1996 at the Dan Panorama Hotel, Tel-Aviv, Israel. The previous Conferences had been held in Paris (1950), Lausanne (1953) Stresa (1956), Bad Godesburg (1958), Folkestone (1960), Malmo (1963), Opatija (1966), Brussels (1969), Scheveningen (1972), Warsaw (1975), Miskolc-Tapolca (1978), Brighton (1981), Cefalu (1984), Noorwijkerhout (1987), Torrelmolinos (1990) and De Haan (1993).

Forty seven Member Societies attended and seven were represented by proxy. Those present were:
AARA, ARABiH, ARAI, ARAS, ARBF, ARM, ARRSM, BFRA, CARS, CRAM, CRC, DARC, EDR, ERAU, FRA, FRR, GARS (Ghana), HRS, IARC, IRTS, LARS, LRMD, MRASZ, NRRL, OVSV, PZK, RAAG, REF, ROARS, RSGB, RSK, RSM, RSZ, SARA, SARL, SLARS, SRAL, SRJ, SRR, SSA, TARC, UARL, UBA, URA, URE, USKA, VERON, and ZRS.

The Societies represented by proxy were:

SARL (South Africa) holding the proxy of ZARS (Zimbabwe)
ROARS (Oman) " " " " RJARS (Jordan)
RSGB (United Kingdom) " " " " GARS (Gibraltar)
ARAS (Senegal) " "' " " RSTG (Gambia)
ARAI (Cote d'Ivoire) " " " " AGRA (Gabon)
RSK (Kenya) " " " " MARS (Mauritius)
USKA (Switzerland) " " " " AFVL (Liechtenstein)

The Conference was particularly honoured by the presence of Mr Robert Jones, Head of the Radiocommunication Bureau at the International Telecommunication Union. He spoke at the opening plenary ceremony and formally opened the Conference. Mr David Court, head of the European Radiocommunication Office was also present.

IARU Region 1 was very pleased to be able to welcome visitors from outside the Region. Those included Mr Joong-Guea Rhee, HL1AOO, President of KARL, Mr Dave Sumner, K1ZZ, and Mr Paul Rinaldo, W4RI, executive vice president and technical editor respectively of the American Radio Relay League. Mr Terry Carrell, ZL3QL, from NZART. Members of the Administrative Council peresent were Mr Richard Baldwin, W1RU, (President), Mr Michael Owen, VK3KI, (Vice President), Dr Larry Price, W4RA, (Secretary), Mr Tom Atkins, VE3CDM, (President of IARU Region 2), Mr Pedro Seidermann, YV5BPG, (Secretary of Region 2), Mr Steve Dunkerly, VP9IM (Treasurer of Region 2), Mr Sangat Singh, 9M2SS, Mr M. Young Soon Park, HL1FM, and Mr Yoshiji Sekido, JJ1OEY, members of the Region 3 Board.

OPENING CEREMONY

The Chairman, PA0LOU, opened the meeting at 10.10a.m. on Monday 30 September, 1996 and welcomed all delegates and guests present.

The meeting then stood in silence for friends who had passed away since the De Haan Conference, Noel Eaton, VE3CJ (President Emeritus of the IARU), Per-Anders Kinmann, SM5ZD (former Chairman of IARU Region 1), Jaap Dijkshoorn, PA0TO (Chairman of the Region 1 CLG), and Jean Wolff, LX1JW who died on 17 January, 1996 at the age of 92.

A special welcome was extended to representatives of Regions 2 and 3, observers from ARRL and KARL, and delegates from a number of new member societies attending for the first time.

The Chairman announced that due to unforeseen circumstances the Mayor of Tel-Aviv was unable to be present.

The Honorary President of IARC, Mr Yankele Yitshaki, 4X1AH welcomed delegates to the Holy Land, saying that the choice of Israel as a conference venue was a great honour both to the IARC and to the people of Israel. He went on to express his hopes for lasting peace in Israel and world-wide, stressing the important contribution the amateur radio movement had been able to make to world-wide understanding and peace. He expressed his regret about the recent downward trend in the number of radio amateurs, citing competition from computers as the likely reason. He concluded his address by thanking Joe Obstfeld, 4X6KJ for his tremendous work in organising the conference, and by wishing everybody a happy stay in Israel and a successful conference.

Mr Joseph Obstfeld, 4X6KJ, Chairman of IARC then extended a traditional Hebrew greeting to the delegates. He referred briefly to modern technologies which were competing with amateur radio in meeting man's desire to communicate with other human beings, such as mobile telephones and the Internet. He concluded his speech by wishing delegates a productive and successful conference. *(The full text of 4X6KJ's speech is found on page 12 of this report).*

Mr Shlomo Waxe, Director General of the Ministry of Communications addressed the meeting on behalf of the Israeli government and the Ministry of Communications. He stressed the good relationship his ministry enjoyed with IARC. *((The full text of Mr Waxe's speech is found on page 13 of this report).*

In his response the President of the International Amateur Radio Union, Mr Richard L Baldwin, W1RU thanked Mr Waxe for his speech. He went on to talk about the uniqueness of the present conference, being not only the first conference to be held outside Europe but also the first conference to be held since the announcement of the major review of the amateur radio service due to be held in 1999. He stressed the importance of the forthcoming

review saying that it was both a challenge and an opportunity. *(The full text of WIRU's speech is found on pages 14 and 15 of this report.*

The Chairman then invited Mr Robert W Jones, Director, Radio-communication s Bureau of the International Telecommunication Union to open the conference.

Mr Jones introduced himself as a fellow radio amateur, call sign VE3CTM.

He spoke briefly about the structure and organisation of the ITU which was founded in 1865 as the International Telegraph Union and now had 186 member states before going on to talk about the threats to amateur radio from other spectrum users and urging the radio amateur community to speak with one voice and to spread the message about the many benefits of amateur radio. He suggested that the next World Telecommunications Day would present an excellent opportunity to do this as its theme would be "Telecommunications and Humanitarian Assistance". *(The full text of Mr Jones's speech is found on pages 16-19 of this report.*

Mr Jones then declared the conference officially open.

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Following the official opening of the Conference the following were elected as Chairman and members of committees of the Conference

Committee C.2 (Credentials and Finance)
Dr Horst Ellgering, DL9MH.

REF (France), FRA Faroe Islands)
IARC (Israel), ARAS (Senegal)
URE (Spain), VERON (Netherlands)

Committee C.3 (General Administrative & Organisational)
Louis van de Nadort, PAoLOU

Committee C.6 (Election and Ballot)
Mr R J Hughes, G3GVV

RU3AX (Russia), A41KG (Oman), 4X6KJ (Israel)

Roy Stevens, G2BVN Memorial Award:

The Chairman announced that more than one proposal had been received, and that a committee would need to be set up to deliberate on these proposals in accordance with the rules for the award. Five member societies were drawn at random to form this committee. These were:

RSGB (United Kingdom), LARS (Lesotho),
DARC (Germany), VERON (Netherlands), RSM (Macedonia)

Mr Richard Baldwin, W1RU speaking at the Opening Ceremony

אגודת חובבי הרדיו בישראל
ISRAEL AMATEUR RADIO CLUB
P.O.B. 17600 Tel-Aviv 61176 ת"א 17600 ת.ד.

WELCOME BY MR JOSEPH OBSTFELD, 4X6KJ

Mr President of IARU, Chairman of Region 1, Presidents of Member Societies, Honoured Guests, Fellow Amateurs, Ladies and Gentlemen -

On behalf of the *Israel Amateur Radio Club* it is my honour and pleasure to extend to you an ancient and traditional Hebrew

"BRUCHIM HABA-IM"

which translated into English means:

"Welcome to those that came"

to this IARU Region 1 Conference, which for the first time since IARU was founded is being held in the Middle East, at the cross roads of the three continents that make up Region 1.

The Israel Amateur Radio Club is proud to be the host to so many representatives of Amateur Radio Societies at this time of enormous changes in every field of personal, local and long distance communications.

New technologies, ease of use of the cellular phone and the internet are but two examples of the low cost everyday systems competing with Amateur Radio in mans desire to communicate with his fellow men.

It is our earnest desire that the historical tradition of experimentation and innovation of the Amateur Radio fraternity will prevail and carry us through the millennium into the 21st century.

Our duty at this conference is to set the pattern for our future and continue to contribute to peace and co-operation among the nations remembering our traditional saying "friendship through amateur radio".

May we at IARC wish you all a happy and memorable stay, fruitful discussions and a successful conference.

STATE OF ISRAEL

MINISTRY OF COMMUNICATIONS

OPENING SPEECH TO
THE INTERNATIONAL AMATEUR RADIO UNION (IARU) REGION 1
CONFERENCE BY MR SHLOMO WAXE,DIRECTOR
GENERAL OF THE MINISTRY OF COMMUNICATIONS,
30 SEPTEMBER, 1996.

Honourable President of the International Amateur Radio Union, Chairman of the Conference of the International Amateur Radio Union of Region 1, Honourable Presidency, Radio Amateurs and distinguished guests.

On behalf of the Government of Israel, the Ministry of Communications and myself, it is my honour and pleasure to welcome you to this Conference.

We are pleased that you chose to gather in our country, and we are proud to give our sponsorship to this important conference.

Our Ministry has a good relationship with the Israel Amateur Radio Club, appreciates the activities of the Radio Amateurs in Israel and in the world and respects the assistance which the Radio Amateurs provide in case of emergencies and natural disasters, without differentiating between race, nationality or religion of those in need.

The State of Israel joined the Radio Amateurs Licensing Agreement of the CEPT, know as TR-61 and besides this, we have reciprocal Agreements for Licensing of Radio Amateurs with additional countries in the American Continent, Africa and Australia. We are, of course, prepared to sign a similar reciprocal Agreement with any country who wishes so.

As is well-known to you, communications in the world does not rest on one's laurels. What was only a dream yesterday, has become the reality of today and will be obsolete tomorrow.

As in most developed countries, Israel opened her telecommunications services to competition for the benefit of all citizens of the country.

We hope that you, representative of more than 50 nations, will enjoy your stay in our historical country, in which we hope to achieve a comprehensive peace together with our neighbours.

Thank you all and I wish you fruitful discussions during the conference.

SPEECH BY MR RICHARD L BALDWIN, W1RU TO THE INTERNATIONAL AMATEUR RADIO UNION REGION 1 CONFERENCE 30 SEPTEMBER, 1996.

This is a unique conference, unique in two respects.

It is the first Region 1 conference to be held outside of Europe,which is a clear indication of the interest in the organizational aspect of amateur radio by Region 1 countries other than those in Europe. I congratulate the member societies of Region 1 for having chosen this venue, and I congratulate IARC for acting as the host organizer.

This is a unique conference because of the importance of the role you are about to play. This is the first IARU conference to be held since the announcement by the ITU at WRC-95 that the international radio regulations relative to the Amateur Services in Article S-25 will be reviewed at WRC-99. Therefore, you delegates at this conference have a unique opportunity to strongly influence the future of the amateur services. The dream of today is tomorrow's reality.

Article S-25, or Article 32 as it used to be named, was first written in 1927, and has not been much changed since then. It is remarkable that regulations written seventy years ago, written in a vastly different telecommunications environment, could have served us as well as they have. Those regulations written in 1927, written by people who are no longer living, have encouraged the development of a vigorous and growing amateur service. Despite the many changes in the technology and the regulatory aspects of telecommunications, amateur radio has continued to develop as a mature and responsible member of the international telecommunications community.

How, as you may ask, was 1927 so different from 1996? In many ways! In 1927 almost all telecommunications were government owned. Many of the newer modes of communication had not yet been developed, and there was no packet radio, nor television, nor spread spectrum, nor single sideband. There was no internet, with its mysterious interconnections through a world-wide web. There was no international aviation available to the public, and therefore no roaming by radio amateurs to remote spots all over the globe. And in 1927 radio amateurs had not yet demonstrated their unexcelled ability to provide communications during times of natural disaster.

And yet, despite all that, the 1927 regulations, and now, at WRC-99, the member administrations of the International Telecommunications Union are going to review those regulations and determine whether they could, or should, be improved upon.

But they are not going to review those regulations in a vacuum, because they are going to have the help of and the input from the International Amateur Radio Union. You here at this IARU Region 1 conference have a unique opportunity to help mold the future of the amateur services.

We have already started the process of an ad-hoc committee of the IARU Administrative Council - the Future of the Amateur Services Committee. That committee has initiated a discussion paper relating to the issues involved. Many of you have, as individuals and as clubs or societies, already responded to that paper, and as a result the committee has produced a report which is before you at this conference.

There will not be universal agreement on every point that you discuss here this week, and there will not be universal agreement among the three IARU regions, but in the end, with your help, the IARU Administrative Council will be able to produce a universal position for WRC-99 which we will require each member society to carry to its administration.

As you engage in your deliberations here this week, remember that you are playing a key role in the shaping of the future of amateur radio. Any changes to the regulations that you may propose should be fore the purpose of strengthening the amateur services, to make sure that they continue to be vigorous and responsible members of the telecommunications services authorized by the ITU, to make sure that they can continue to grow and meet the challenges of a rapidly changing technology.

I want very much for you to be successful.

I know that you will be successful.

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Remarks of Robert W. Jones

Director of the ITU radiocommunication Bureau

at the opening of the

IARU Region 1 Conference

Tel Aviv

September 30, 1996

Introduction

Mr. Chairman, distinguished head table guests, ladies and gentlemen. It is indeed a pleasure and an honour for me to be invited here to bring you greetings from the International Telecommunication Union.

Being with you here in Tel Aviv is of special significance for me as I myself have been a licensed radio amateur for over 38 years and have always held the call VE3CTM. Unfortunately, I have not been very active for the past many years but have always kept my licence valid.

It is good to see here many old friends and many familiar faces. I met many of you just one year and one week ago today when the IARU Region 2 conference opened in Niagara Falls, Canada.

The ITU

As you may be aware, the International Telecommunication Union is the oldest UN specialized agency, far older even than the UN itself. This year, the UN is celebrating its 51st anniversary while the ITU is celebrating its 131st birthday, having begun life as the International Telegraph Union in 1865.

The ITU is composed of 186 Member governments, Tuvalu having just joined, as well as a large number of public and private sector organizations involved in telecommunications. The ITU has what is often referred to as a federal structure. It is composed of three sectors each of which has a permanent secretariat located in Geneva. Also at the Geneva headquarters of the ITU is a General Secretariat which, inter alia, provides the necessary operational, administrative and strategic support to the three sectors. The General Secretariat is headed by the Secretary General who is assisted by a Deputy Secretary General. Each of the three Bureaux is headed by a Director.

These five senior officials of the ITU are elected at the ITU's Plenipotentiary Conference which is now convened every four years, the last one being the 1994 Plenipotentiary Conference which was held in Kyoto, Japan. The next Plenipotentiary Conference will be held in the Fall of 1998 in Minneapolis in the United States of America.

Pursuant to the ITU's Convention and Constitution, in addition to the Radiocommunication Bureau, the Radiocommunication Sector (ITU-R) includes the Radio Regulations Board, the Radiocommunication Conferences and the Radiocommunication Assemblies. In addition, the Director is advised by a Radiocommunication Advisory Group which is open to the entire membership of the Sector. As I mentioned, the membership of the Sector includes the 186 Member States as well as over 200 entities and organizations other than Administrations involved in the field of telecommunications. The IARU is one of these Radiocommunication Sector Members.

The Radio Regulations Board consists of nine, non-salaried, part-time members also elected at the Plenipotentiary Conferences. The primary role of the Board which meets up to four times a year is to approve the Rules of Procedure used by the Radiocommunication Bureau in its application of the Radio Regulations. These regulations are adopted as a multilateral treaty by Administrations participating in the Radiocommunication Conferences. The Radiocommunication Assemblies direct the work of the Study Groups which, inter alia, produce the ITU-R Recommendations for the global Standardization and advancement of radiocommunications. The Study Groups also undertake preparatory work for the Radiocommunication Conferences. I should point out that, while we use the term "Radiocommunication Conference" , it is not like most conferences. Rather it is a meeting where Member governments come together to draft an international treaty in the form of the Radio Regulations. This treaty is subsequently formally ratified by the Member governments.

The Amateur Radio Service

The amateur radio service has seen a lot of changes since I first became interested in it. Back then, just to be able to communicate with people on the other side of the world was fascinating. Today, however, that same fascination is gone. If one wants to reach someone on the other side of the world, one simply picks up the telephone or sends off an e mail on the Internet. Some youth today, in fact, seem more preoccupied with the Internet and the World Wide Web. Amateur radio can and does, however, still hold a certain interest for many and not just for the older generation. And indeed, the Internet and the World Wide Web can bé used to introduce people to amateur radio and to advance the cause of amateur radio.

The IARU

I would like to offer my congratulations to the IARU Region 1 for organising such a conference as this. The environment in which the amateur radio service finds itself is rapidly changing. Today, the radio frequency spectrum which is allocated internationally at the treaty making sessions of the Member States of the ITU is under increasing pressure. We are here in the land of the prophets so far be it for me to claim to be a prophet but let me just read for you what I said in my opening remarks one year ago at the IARU Region 2 Conference.

"New radiocommunication services are seeking access to the spectrum including relatively low capacity satellite systems operating in the VHF and UHF ranges of the spectrum."

I can assure you that when I said this one year ago in September 1995, I had absolutely no inside information of what was to transpire in 1996 but as you have recently seen, allocations to the amateur service are not exempt from the desirous glances of commercial interests. The old adage of "use it or lose it" is today a necessary but not sufficient guiding principle. There is an increasing emphasis by a growing number of governments on the financial aspects of granting access to the scarce spectrum resource and words like "spectrum pricing", "auctions" and so on are becoming more prevalent. The amateur service is allocated some very valuable spectrum and you must constantly spread the message of the benefits of amateur radio to society in general and to key governmental decision makers in particular in order to marshal support for your service.

I would point out that each year, when the ITU celebrates World Telecommunication Day on May 17th, the ITU Council approves a theme for the celebrations. Next year, in 1997 that theme will be "Telecommunications and Humanitarian Assistance". The purpose is to highlight the role played by telecommunications in delivering relief and assistance. What an excellent opportunity for the amateur radio community to talk up its valuable role in this regard. Individual amateurs, amateur radio clubs, national radio amateur associations and the IARU can all do much to promote the cause of amateur radio in 1997.

In this regard, I would also like to offer my congratulations to the IARU for the effective manner in which it is organized and operating. It is vital for the amateur service to have effective representation not just at the national level but also at the international level. Also, as many national amateur radio organizations have discovered, it is essential for you to speak with one voice even when there are genuine differences of view within the amateur community. Unless you are united, you will be the victims of the "divide and conquer" approach.

For the 1999 World Radiocommunication Conference, there is an item on the proposed agenda which calls for a consideration of Article S25

concerning the amateur and amateur satellite services. Already, the IARU has a committee established under the leadership of your President, Dick Baldwin, to prepare for this matter. I wish him and all of you every success with the work of this important committee. I know you have established another important committee, namely the 7 MHz Strategy Committee to prepare for another item on the agenda of WRC-99 which call for an examination of allocations for HF broadcasting from about 4 MHz to about 10 MHz taking into account among other things the needs of other existing services. The months and years ahead will indeed be busy and important ones.

In closing, again let me say how much of a pleasure it is for me to be with you. I wish I could stay for the entire duration of your conference but unfortunately due to another important Region 1 meeting in Geneva (this one dealing with the ITU's satellite coordination and planning framework) I must fly back early tomorrow morning. I wish you a very successful conference.

Thank you.

MINUTES OF THE FINAL PLENARY MEETING HELD ON SATURDAY 5 OCTOBER, 1996 AT THE DAN PANORAMA HOTEL, TEL-AVIV, ISRAEL

The Final Plenary Meeting was opened by 08.40 hours by the Chairman, who explained that the purpose of this meeting was to ratify Recommendations that had been decided at the various meetings during the week. It was not the purpose of the Final Plenary to re-open debate and only in those cases where there are apparent mistakes in the reports or recommendations could they be changed.

Agenda item:

1. **To receive the Minutes of the First Plenary Meeting (96/TVI/6)**

   These Minutes were adopted unanimously.

2. **To receive the Minutes of the Second Plenary Meeting (96/TVI/8) plus annex**

   These Minutes and Annex were adopted unanimously.

3. **To announce the procedure for the election of the Executive Committee**

   Mr R J Hughes, G3GVV explained the rules to the Meeting.

4. **To adopt the Report and Recommendations of Committee C3. (C3.2)**

Agenda item 6 (EMC)	- adopted unanimously.
Agenda item 7 (EUR0-COM WG)	- adopted unanimously.
Agenda item 11 (IARU-MS) Recommendations A - E	- adopted unanimously.
Agenda item 14 Recommendations 1 - 4	- adopted with a majority of 31, with 1 against, 7 abstaining
Agenda item 18 - Recommendations 1, 2, 3	- adopted unanimously

Agenda item 19A - **Change text to read: (a) through (i)** - adopted unanimously.

Agenda item 19B - These two Recommendations adopted with one abstention.

Agenda item 19.4 - Recommendations adopted unanimously.

Agenda item 20.1 - ARDF - Recommendations adopted with one vote against.

Agenda item 20.3 - STARS - All Recommendations adopted unanimously.

This concludes the Recommendations for C.3.

5. **To adopt the report and recommendaitons of Committee C.4 (C4.2)**

Recommendaiton 96/TVI/C4.1	- adopted unanimously.
Recommendaiton 96/TVI/C4.2	- adopted with 3 abstentions
Recommendation 96/TVI/C4.3	- adopted unanimously
Recommendation 96/TVI/C4.4	- adopted unanimously
Recommendation 96/TVI/C4.5	- adopted unanimously
Recommendation 96/TVI/C4.6 and C4.7	- adopted unanimously
Recommendation 96/TVI/C4.8	- adopted unanimously
Recommendation 96/TVI/C4.9	- adopted unanimously
Recommendation 96/TVI/C4.10	- adopted unanimously
Recommendation 96/TVI/C4.11	- adopted with 31 societies in favour 6 against and 10 abstaining
Recommendation 96/TVI/C4.12	- adopted unanimously
Recommendation 96/TVI/C4.13	- adopted unanimously
Recommendation 96/TVI/C4.14	- adopted unanimously
Recommendation 96/TVI/C4.15	- adopted unanimously
Recommendation 96/TVI/C4.16	- adopted with 26 societies in favour 12 against and 9 abstaining

This concludes the Recommendations for C.4.

6. To adopt the report and recommendations of Committee C.5 (C5.48)

C5.48 - page 8, the penultimate paragraph should read:

(a) "When complete the results of this working group were presented to the meeting and were accepted with only VERON voting **against** and UBA **abstaining**....."

(b) During the discussion the matter of the definition of "unmanned" and "network" stations was raised. The following preliminary recommendations were accepted:

An un-manned station is a station in the amateur or amateur satellite service which transmsits while the licence holder is NOT present at the station - a network station is a station in the amateur radio service which has a permanent link to one or more permanent stations.

page 11 - last paragraph REF expressed **THEIR** appreciation.

Recommendation M to read: Experiments by "**manned stations**".....

The following recommendations were adopted at the meeting of the VHF/UHF/Microwaves Committee in Vienna 1995, and have been adopted by the Execuitve Committee of IARU Region 1, at their meeting in April 1995 as interim IARU Region 1 policy until ratification at this conference. Consequently, Committee C5 recommends to the Plenary Meeting of this Conference that the following be adopted:

Recommendation Vienna-A	-	adopted unanimously
Recommendation Vienna-B	-	adopted unanimously
Recommendation A	-	adopted unanimously
Recommendation B	-	adopted unanimously
Recommendation C-IARUMS	-	Suggested that the word "illegal" be changed to "**non-amateur**" - change agreed.
Recommendation D	-	SARL said that the definition 12.5 channel system needed further explanation. PA0EZ replied giving the explanation and said the recommendaiton remains unchanged. SARL must talk to other countries.
Recommendation D	-	adopted with 3 against, and 7 abstaining
Recommendation E	-	adopted with 1 abstention
Recommendation F (Annex A)	-	adopted unanimously
Recommendation G	-	adopted unanimously

Recommendation H (Annex C)	-	adopted unanimously
Recommendation J	-	adopted with 6 against and 12 Member Societies abstaining
Recommendation K	-	adopted with 1 against and 1 abstaining
Recommendation L	-	Revision of the 145 MHz Band Plan - adopted with 2 against and 7 abstaining
Recommendation M- as amended	-	adopted unanimously
Recommendation N	-	adopted unanimously.
Recommendation O	-	adopted with 2 votes against
Recommendation P	-	The chairman said there was difficulty with the word "**shall**" agreed that the word should be changed to "**endeavour**" - adopted as amended.

The Recommendation should now read:

It is recommended that every endeavour should be made not to hold an IARU Region 1 General Conference at the same time as an IARU Region 1 VHF/UHF/Microwaves contest.

This concluded the Recommendations for C.5.

7. To adopt the record and recommendations of Committee C.2 (Financial Section) (C2.4 - rev.1.)

All the Recommendations from C.2 were adopted with one vote against recommendaton C2.3

At this point PA0LOU gave a vote of thanks to all the chairmen of Committees for all the work undertaken during the week.

8. Election of the Executive Committee

The following results were announced by Mr R J Hughes, G3GVV

Position	Nominee	Votes Received
Chairman	PA0LOU	Returned unopposed
Vice Chairman	SP5FM	Returned unopposed
Secretary	G3FKM	Returned unopposed
Treasurer	I1RYS	Returned unopposed
Members:	A41JT	48 (elected)
	DF5UG	45 (elected)

F5JFT	37 (elected)
LA2RR	27
YT1AD	10
ZS5AKV	35 (elected)
6W1KI	45 (elected)

The chairman expressed his thanks for the confidence shown by his re-election and also that of the Vice-President, Secretary and Treasurer. He welcomed DF5UG onto the committee and thanked the retiring member Jari Jusilla, OH2BU for serving on the Executive Committee during the past three years.

9. Election of Chairman of specialised bodies and co-ordinators

Chairman HF Committee	- LA5QK was re-elected
Chairman VHF Committee	- PA0EZ was re-elected
STARS WG	- ON6WQ was re-elected
ARDF WG	- SP5HS was re-elected
Handicapped	- PA3ADR was re-elected
IARUMS	- G4GKO was re-elected
IBP	- G3USF was re-elected
CLG	- G3HCT was elected
ERC	- SP5FM was re-elected
HST	- HA3NU was elected
Contest Sub WG	- OH2KI was elected
EURO-COM	- ON4WF was re-elected

10. To establish the venue for the next conference

Introductions were made by the proposing Member Societies, NRRL, ARRSM and URE.

The Chairman gave an outline of what was expected from the host society, in terms of facilities and cost; emphasisng the enormity of the task to be undertaken by the host society.

After the secret ballot the following results were recorded:

NRRL - 25 ARRSM - 19 URE - 8

NRRL was declared the host society for 1999 and ARRSM and URE immediately gave their congratulations to the winner.

11. To accounce the recipient(s) of the G2BVN Memorial Trophy

The committee elected to discuss this Award announced that the Trophy would be awarded to **Lucien Aubrey, F8TM.** As he was not present the head of the French delegation came forward to receive the Trophy and said it would be presented to Lucien on a forthcoming suitable occasion.

12. A.O.B

Tom Atkins made reference to the long standing work done by Noel Eaton, VE3CJ.

A Region 1 medal and certificate was presented to Ron Glaisher, G6LX for all the work he had done in connection with the CSG Group over a period of nine years.

UBA also made a presentation to G6LX.

13. Courtesies

DARC thanked everyone for the smooth running of a very successful conference and also thanked the host society, and in particular Joseph Obstfeld for his organisational work.

There followed a number of congratulations from the other regions.

A41JT thanked everyone who had voted him onto the Executive Committee.

SP5FM read the draft letter of thanks to be sent to the CEPT content of which was accepted with acclamation. (letter attached as annex to these Minutes).

14. In closing the meeting, the chairman, urged everyone to carry on the good work of the conference week by setting into motion all the Recommendations passed.

The meeting closed at 3.10 p.m.

I. A. R. U.

REGION 1 CONFERENCE 1996

29 September - 6 October
Dan Panorama, Tel-Aviv, Israel

Tel-Aviv, 6 October 1996

Mr
Thormod Boe
Chairman,
CEPT-ERC Frequency Management Working Group

Dear Mr Chairman,

On behalf of radio-amateur societies from 84 Region 1 countries - the IARU Region 1 General Conference, Tel-Aviv, October 1996 - would like to express its sincere thanks to you, your Working Group and its sub-body PT-22 for the effort undertaken to find a suitable segment in the LF-range for amateur use.

The Conference trusts that this already demonstrated goodwill of CEPT administrations will materialise in the form of a generally acceptable solution.

Taking this opportunity the Conference would like to re-emphasize that, for the time being, the amateur community seeks only a very modest harmonised access on secondary non-interference basis (RR S4.4.) to existing spectrum arrangements, not an allocation requiring any spectrum re-organisation.

The content of this letter has been adopted unanimously by the final plenary meeting of the General Conference. Would you please, dear Mr Chairman, bring our thanks to the attention of administrations participating in the work of your Group, and possibly, to the attention of the ERC.

Yours faithfully -

Louis van de Nadort, PA0LOU

Chairman, Region 1 Executive Committee
Chairman of the Conference

CONFERENCE RECOMMENDATIONS

The following sections of this report deal with the Recommendations of the four committees of the Conference as approved by the Final Plenary Meeting.

The text of the Recommendations is given together with such additional material as is necessary for an understanding of the purpose of the Recommendation and the action required from each Member Society.

The sequence of the Recommendations does not necessarily follow the order in which the items were discussed by the committees.

****

RECOMMENDATIONS OF COMMITTEE C.2.

1. <u>PROXY VOTES</u>

The following proxy votes were approved:

SARL (South Africa) holding the proxy of	ZARS (Zimbabwe)
ROARS (Oman) " " " "	RJARS (Jordan)
RSGB (United Kingdom) " " " "	GARS (Gibraltar)
ARAS (Senegal) " " " "	RSTG (The Gambia)
ARAI (Cote d'Ivoire) " " " "	AGRA (Gabon)
RSK (Kenya) " " " "	MARS (Mauritius)
USKA (Switzerland) " " " "	AVFL (Liechtenstein)

The Committee, also noted that due to the early departure of the RSK delegate, TARC - Tanzania will hold the proxy of RSK. Article B.4.8 and B.4.8.1. of the Region's Constitution and Bye-Laws will instead apply to the proxy given by MARS to RSK.

Rec/96/TVI/C2.1

THE COST ACCOUNTING AS WELL AS CORRESPONDING HISTORIC ACCOUNTING FILES AND RELATED CERTIFIED FINANCIAL STATEMENTS (FOR ALL THE REGION'S FUNDS, INCLUDING FUND 4) FOR THE YEARS 1993, 1994 AND 1995 ARE UNANIMOUSLY APPROVED AS INDICATED IN DOC 96/TVI/C2.2

REC/96/TVI/C2.2

STARTING 1997 UP TO 1999 INCLUDED, THE YEARLY MEMBERSHIP FEE OF THE REGION IS FIXED AT CHF.1.40 PER LICENSED MEMBER;

REC/96/TVI/C2.3

HOWEVER, SHOULD THE REGION'S EXECUTIVE COMMITTEE DEEM IT NECESSARY AT ITS SOLE DISCRETION, SAID YEARLY MEMBERSHIP FEE FOR THE YEARS 1997, 1998 AND 1999 COULD BE RAISED BETWEEN A MINIMUM OF CHF.0.05 AND A MAXIMUM OF CHF 0.15 PER LICENSED MEMBER;

REC/96/TVI/C2.4

(a) STARTING 1997, IT IS HEREBY UNANIMOUSLY ADOPTED THAT MEMBER SOCIETIES - AT THEIR SOLE DISCRETION - WILL DECIDE WHETHER OR NOT TO CONTRIBUTE TO FUND 4. SAID CONTRIBUTIONS SHALL BE ON A VOLUNTARY BASIS ONLY AND SHALL BE ACCOUNTED FOR AS DONATIONS; AND

(b) THE GENERAL CONFERENCE UNANIMOUSLY ADOPTS AND SUGGESTS THAT THE YEARLY MEMBER SOCIETIES' VOLUNTARY DONATION TO FUND 4 IN THE THREE YEAR PERIOD STARTING 1997 UP TO 1999 INCLUDED IS MADE ON THE BASIS OF NO LESS THAN CHF.0.05 PER LICENSED MEMBER AND GIVES MANDATE TO THE REGION'S TREASURY TO REMIND ALL MEMBER SOCIETIES OF SAID MATTER, AND

(c) THE GENERAL CONFERENCE HEREBY UNANIMOUSLY ADOPTS THAT THE RIGHTS TO PARTICIPATE AND OR TO VOTE AT GENERAL CONFERENCES SHALL NOT BE EFFECTED BY WHETHER OR NOT A MEMBER SOCIETY HAS VOLUNTARILY MADE DONATIONS TO FUND 4 IN ACCORDANCE WITH THE REGION'S CRITERIA ADOPTED IN REC.C2.4.a AND C2.4.b ABOVE.

This concluds the Recommendations for C.2

RECOMMENDATIONS OF COMMITTEE C.3

Rec/96/TVI/C3-EMC

a. IT IS AGREED TO ACCEPT THE GUIDELINES FOR THE WORK PROGRAMME (see Annex 2 attached to this Report)

b. NATIONAL SOCIETIES ARE ENCOURAGED TO JOIN THE NATIONAL STANDARDISATION ORGANISATIONS IN ORDER TO INFLUENCE THE DEVELOPMENT OF AND VOTING ON STANDARDS

c. WE WOULD LIKE ERC TO TAKE ON THE JOB OF REMOVING LPD and SRD FROM 433.920. MHz

Rec/96/TVI/C3-EURO-COM WG

a. THAT THE EURO-COM WG REPORT (doc/96/TVI/C3.7) BE APPROVED (see Annex 3 attached to this Report)

b. THAT THE EURO-COM WG CONTINUE THEIR TASK IN THE SAME WAY AS PRESENTLY, ACCORDING TO THE TERMS OF REFERENCE ADOPTED AT THE EC MEETING HOOFDDORP, SEPTEMBER 1990.

c. THAT THE EURO-COM WG CHAIRMAN, ON4WF BE CONFIRMED IN HIS OFFICE FOR THE NEXT THREE YEARS.

96/TVI/-IARU-MS RECOMMENDATION A.

A IARU-MS WG TO BE INSTALLED BY THE FINAL PLENARY UNDER THE CHAIRMANSHIP OF THE IARU-MS CO-ORDINATOR. THIS WORKING GROUP TO CONDUCT ITS WORK BY MAIL, FAX, E-MAIL UNTIL THE 1999 CONFERENCE, WITH TERMS OF REFERENCE AS PER THE ANNEX OF THE REPORT OF THE AD-HOC CONFERENCE WG ON IARU-MS MATTERS.

Terms of Reference for the Proposed IARUMS WG

1. The IARUMS Region 1 Working Group shall be separate from and operate independantly of the established region 1 Monitoring System.

2. The objective of the working group shall be to determine methods of participating in administrations monitoring establishments with a view to recognition in our own right by CEPT, ITU, PATU, SATTC and other organisations in the region.

3. To concentrate efforts for the removal from the amateur bands sources of unauthorised transmissions.

4. To offer full assistance to the EC Region 1 and AC in their continued investigation with the various organisations for our participation in the ITU Monitoring System.

96/TVI/-IARUMS RECOMMENDATION B.

THAT THE PRESENT ORGANISATION OF THE IARU-MS REMAINS UNCHANGED UNTIL SUCH TIME THAT THE OBJECTIVES MENTIONED IN THE TERMS OF REFERENCE HAVE BEEN ACHIEVED.

96/TVI/-IARUMS RECOMMENDATION C.

THAT A MODEST INCREASE OF THE IARU-MS CO-ORDINATOR'S BUDGET IS APPROVED IN ORDER TO FACILITATE RECOMMENDATION A.

96/TVI/-IARUMS RECOMMENDATION D

A. THAT THE EC OF IARU REGION 1 AND THE ADMINISTRATIVE COUNCIL CONTINUE INVESTIGATING WITH THE ITU, CEPT AND OTHER SIMILAR INTERNATIONAL ORGANISATIONS TO ACHIEVE PARTICIPATION IN THE MONITORING OF HARMFUL INTERFERENCE AND THAT

B. ENDORSEMENT OF THIS RECOMMENDATION BE SOUGHT FROM IARU REGIONS 2 AND 3.

96/TVI/-IARUMS RECOMMENDATION E

THAT IT IS RECOMMENDED THAT THE ADMINISTRATIVE COUNCIL OF THE IARU GIVES PUBLICITY TO THE MAGNITUDE OF THE PROBLEM OF NON-AUTHORISED TRANSMISSIONS IN THE AMATEUR BANDS, AT IARU STANDS AT INTERNATIONAL OR NATIONAL TELECOMMUNICATION CONFERENCES.

Rec/96/TVI/C3.1

THE "RESOLVES" OF DOC C3.19

IT IS RECOMMENDED THAT ALL MEMBER SOCIETIES SHALL TAKE STEPS IN ORDER TO STOP ALL ILLEGAL TRAFFIC CARRIED BY AMATEUR RADIO PACKET NETWORK (BBS), AS WELL AS ON ALL OTHER MODES.

Rec/96/TVI/C3.2

IT IS RECOMMENDED THAT ALL MEMBER SOCIETIES SHALL INSTRUCT ALL PACKET RADIO SYSTEM OPERATORS (SYSOPS) ABOUT THEIR RESPONSIBILITIES AND THEIR DUTY TO REMOVE ALL ILLEGAL MESSAGES FROM THE NET.

Rec/96/TVI/C3.3

IT IS RECOMMENDED THAT IF MEMBER SOCIETIES ARE UNABLE TO STOP SUCH TRAFFIC BY THEMSELVES, THEY SHOULD SEEK NECESSARY HELP FROM THEIR TELECOMMUNICATIONS AUTHORITIES IN ORDER TO PUT A STOP TO SUCH TRAFFIC.

Rec/96/TVI/C3.4

IT IS RECOMMENDED THAT ALL MEMBER SOCIETIES ENCOURAGE THEIR MEMBERS TO INVESTIGATE THE POSSIBILITY OF INVENTING AND IMPLEMENTING A SAFE SYSTEM OF AUTHENTICATION IN ORDER TO DENY ACCESS FOR ILLEGAL STATIONS OR STATIONS WITH FALSE OR "BORROWED" CALL SIGNS.

The following 4 Recommendations refer to Agenda 14.4.
IARU POLICY CONCERNING INTERCONNECTION ETC.

Rec/96/TVI/C3.5

RADIO AMATEURS MAY ACCESS DIGITAL NETWORKS BY ANY MEANS,INCLUDING DIAL-UP MODEMS ON GATEWAYS, THE INTERNET OR OTHER ELECTRONIC MEANS. HOWEVER, AMATEUR RADIO SYSOPS OF DIGITAL GATEWAYS SHALL ENSURE THAT NON-AMATEURS CANNOT UNDER ANY CIRCUMSTANCES GAIN ACCESS TO AMATEUR RADIO NETWORKS EITHER DELIBERATELY OR ACCIDENTALLY.

Rec/96/TVI/C3.6

SYSOPS SHALL TAKE ALL AND ANY NECESSARY STEPS TO ENSURE THAT THE MATERIAL CONFORMS WITH THE RULES FOR AMATEUR RADIO TRAFFIC SET OUT IN THE RADIO REGULATIONS AND IN THE NATIONAL REGULATIONS IN THE COUNTRY CONCERNED.

Rec/96/TVI/C3.7

IF MATERIAL IS TRANSFERRED FROM A PUBLIC TELEPHONE BASED NETWORK, OR A PUBLIC DATA NETWORK (e.g. THE INTERNET), THE PERSON BRINGING THE MATERIAL INTO THE AMATEUR NETWORK SHALL DO SO UNDER HER/HIS CALL SIGN AS SENDER. IT SHOULD ALSO BE MENTIONED THAT THE MATERIAL ORIGINATES FROM e.g. THE INTERNET.

Rec/96/TVI/C3.8

REFERENCES ARE MADE TO IARU AC RESOLUTION 91.-2 (rev 95) (see Annex 4 attached)

The following 3 Recommendations refer to Agenda 18 "Bandplanning doc.C3.53

Rec/96/TVI/C3.9

THAT IT IS ESSENTIAL THAT MEMBER SOCIETIES ACTIVELY PROMOTE THE IARU BANDPLANS WITHIN THEIR COUNTRY IN ORDER TO ENCOURAGE ALL AMATEURS TO HONOUR THEM.

Rec/96/TVI/C3.10

THAT ALL MEMBER SOCIETIES DRAW THEIR MEMBER'S ATTENTION TO THESE BAND PLANS, AT LEAST ONCE A YEAR, IN THEIR PUBLICATIONS.

Rec/96/TVI/C3.11

THAT THE AMATEUR SERVICE MAKES FULL USE OF THE SPECTRUM ALLOCATED TO THE SOURCE.

The following Recommendation refers to Agenda 19A
FASC and RR S.25

Rec/96/TVI/C3.12

DEFINITION OF THE AMATEUR SERVICE (S1.56, S1.57)
IT WAS AGREED THAT THE CURRENT DEFINITION WAS SATISFACTORY AND THAT IT MET ALL OUR REQUIREMENTS WHILST REMAINING A SIMPLE DEFINITION. IT WAS CONSIDERED THAT DUE REGARD SHOULD BE GIVEN BY FASC TO THE INFORMATION PAPER PRODUCED BY THE RADIO AMATEUR SATELLITE CORPORATION.

Rec/96/TVI/C3.13

INTERNATIONAL COMMUNICATIONS MESSAGE CONTENT (S25.2)
THE INTRODUCTION OF DIGITAL MESSAGE TRANSMISSION HAD CAUSED CONFUSION IN THE UNDERSTANDING OF THE DEFINITION OF PLAIN LANGUAGE. IT WAS ACCEPTED THAT PLAIN LANGUAGE MEANT MESSAGES WHERE THE DETAILS OF THE CODE IN USE WAS PUBLISHED AND THAT IT

SHOULD NOT BE SHOWN IN ANY GREATER DETAIL THAN AT PRESENT WITHIN ITU REGULATIONS. IT IS THE ROLE OF PARTICULAR ADMINISTRATIONS TO INTERPRET THIS AS APPROPRIATE.

The following two Recommendations refer to Agenda item 19B.

Rec/96/TVI/C3.14

LF BAND ALLOCATIONS
IT IS RECOMMENDED THAT MEMBER SOCIETIES IN REGION 1 ASK THEIR NATIONAL TELECOMMUNICATIONS ADMINISTRATIONS FOR AN ACCESS TO THE LF RANGE IN THE FORM OF A SEGMENT, PREFERABLY IN THE VICINITY OF 136 kHz ON A SECONDARY,NON-INTERFERENCE BASIS (RR.342 S4.4)

Rec/96/TVI/C3.15

HOWEVER THIS SHOULD NOT PREVENT SOCIETIES FROM ASKING FOR OTHER FREQUENCIES IF CONSIDERED REALISTIC AND IT SHOULD NOT PREVENT IARU REGION 1 FROM WORKING IN FAVOUR OF THE AGREED WORLD-WIDE FREQUENCY ALLOCATION IN THE AREA 160-190 kHz IN THE FUTURE. THIS LATTER SEEMS RATHER UNREALISTIC IN REGION 1 AT THE MOMENT DUE TO MANY AND STRONG BROADCASTERS.

The following two Recommendations refer to Agenda item 19.4

Rec/96/TVI/C3.16

IT IS RECOMMENDED THAT EACH MEMBER SOCIETY SHOULD APPROACH THEIR TELECOMMUNICATIONS ADMINISTRATION WITH THE REQUEST THAT THEY DO NOT ALLOCATE FREQUENCIES TO OTHER THAN THE AMATEUR SERVICE IN THE BAND SEGMENTS THAT IARU REGION 1 HAVE ASSIGNED FOR INTERCONTINENTAL DX TRAFFIC, i.e. 3500-3510 kHz and 3775-3800 kHz.

Rec/96/TVI/C3.17

THIS APPROACH SHOULD BE REPEATED EACH TIME A NEW PERSON RESPONSIBLE FOR FREQUENCY ALLOCATION COMES INTO SERVICE.

The following three Recommendations refer to Agenda item 20.1 (ARDF)

Rec/96/TVI/C3.18

THE ARDF WORKING GROUP RECOMMENDS THE APPROVAL BY THE CONFERENCE OF THE CHANGES AND AMENDMENTS IN EXISTING "RULES FOR CHAMPIONSHIPS IN AMATEUR RADIO DIRECTION FINDING". (See doc/96/TVI/C3.28 rev 1 attached as Annex 5)

Rec/96/TVI/C3.19

THE ARDF WORKING GROUP RECOMMENDS THAT THE CONFERENCE RECONFIRMS THE RECOMMENDATION ON THE WORLD-WIDE ARDF CO-

ORDINATOR TAKEN AT THE IARU REGION 1 CONFERENCE 1993 IN DE HAAN.

Rec/96/TVI/C3.20

THE ARDF WORKING GROUP RECOMMENDS THAT KRZYSZTOF SLOMCZYNSKI, SP5HS, WILL CONTINUE HIS DUTIES AS CHAIRMAN OF IARU REGION 1 ARDF WORKING GROUP FOR THE NEXT THREE-YEAR TERM.

The following Recommendation refer to Agenda item 20.3 (STARS)

Rec/96/TVI/C3.21

THE IARU REGION 1 GENERAL CONFERENCE (TEL-AVIV 1996) RECOMMENDS THE APPROVAL OF THE CHAIRMAN'S REPORT AND THAT THE WORK AND ACTIVITIES OF THE STARS WG CONTINUE FOR A FURTHER THREE YEAR PERIOD IN ACCORDANCE WITH THE IARU REGION 1 CONSTITUTION AND BYE-LAWS, THE WORKING GROUP CURRENT TERMS OF REFERENCE AND IT'S ACTION PLAN AS OUTLINED IN DOC/96/TVI/C3.10 AND RELATED ANNEXES (See Annex 6 attached)

Rec/96/TVI/C3.22

THE IARU REGION 1 GENERAL CONFERENCE (TEL-AVIV, 1966) RECOMMENDS THAT AFRI-COM CO-ORDINATOR (IF ANY IS APPOINTED BY THIS GENERAL CONFERENCE) WORKS CLOSELY WITH THE STARS WG AND ITS ADOPTED GUIDELINES AS TO DOC/96/TVI/C3.10 AND RELATED ANNEXES (See Annex 6 attached)

Rec/96/TVI/C3.23

THE IARU REGION 1 GENERAL CONFERENCE (TEL-AVIV,1996) RECOMMENDS THAT AT THE NEXT GENERAL CONFERENCE STARS WG BE TURNED INTO A PERMANENT COMMITTEE OF IARU REGION 1 AND GIVES MANDATE TO THE STARS WG CHAIRMAN IN COORDINATION WITH THE IARU REGION 1 EXECUTIVE COMMITTEE TO PUT FORWARD A PROPOSAL FOR CONSIDERATION BY THE GENERAL CONFERENCE.

Rec/96/TVI/C3.24

THE IARU REGION 1 GENERAL CONFERENCE (TEL-AVIV, 1996) RECOMMENDS THAT DURING THE NEXT THREE YEAR PERIOD, THE APPOINTED SUB-REGIONAL COORDINATORS OF STARS WG SHALL PARTICIPATE TO THE STARS WG YEARLY MEETING AND THAT THEIR TRAVEL AND ACCOMMODATION COSTS ARE BORNE BY THE FUNDS ALLOCATED TO THE WORKING GROUP.

REC/96/TVI/C3.25

IT ALSO RECOMMENDS THAT STARS WG YEARLY MEETINGS ARE WHENEVER POSSIBLE HELD IN CONJUNCTION WITH AN ITU, OR ANY OTHER INTERNATIONAL TELECOMMUNICATION CONFERENCE/EVENT IN ORDER TO LIMIT COSTS.

This concludes the Recommendations for C.3

RECOMMENDATIONS OF COMMITTEE C.4

Rec/96/TVI/C4.1

IT IS RECOMMENDED THAT MEMBER SOCIETIES (WHERE APPLICABLE) ENCOURAGE THEIR MEMBERS TO AVOID TRANSMITTING IN THE FREQUENCY SEGMENT 1907.5 TO 1912.5 kHz (Japanese DX window") AND TO ADOPT SPLIT-FREQUENCY METHOD WHEN ATTEMPTING TO CONTACT STATIONS IN THIS SEGMENT.

Rec/96/TVI/C.4.2

IT IS RECOMMENDED THAT THE FREQUENCIES 14.230, 21.340 AND 28.680 MHz SHOULD BE USED AS CALLING FREQUENCIES FOR SSTV/FAX OPERATORS AND THAT THEY, AFTER HAVING ESTABLISHED CONTACT, MOVE TO ANOTHER FREE FREQUENCY WITHIN THE TELEPHONY PORTION OF THE BAND.

Rec/96/TVI/C4.3

IT IS RECOMMENDED THAT THE SATELLITE DOWN-LINK SEGMENT ON THE 29 MHz BAND BE CHANGED TO 29.300 - 29.510 MHz

Rec/96/TVI/C4.4

IT IS RECOMMENDED THAT THE USE OF THE MODE PACKET RADIO SHOULD BE DISCOURAGED ON THE 7 AND 10 MHz BANDS.

Rec/96/TVI/C4.5

1. IT IS RECOMMENDED THAT FOOTNOTES TO REGION 1 HF BAND PLANS SHOULD BE AVOIDED.

2. ANY CONTROVERSIES IN CONNECTION WITH THE REGION 1 BAND PLAN SHOULD BE REGULATED BY REMARKS TO THE BAND PLAN AND SHOULD BE AGREED BY THE MAJORITY.

Rec/96/TVI/C4.6

IT IS RECOMMENDED:

1. THAT THE HF CONTEST SUB GROUP REMAIN AN AUTONOMOUS SUB-COM

MITTEE OF THE HF COMMITTEE UNDER ITS OWN CHAIRMAN WHO SHALL BE A FULL MEMBER OF THE IARU REGION 1 HF COMMITTEE AND SHOULD ATTEND ALL HFC MEETINGS AND REGIONAL CONFERENCES.

2. THAT ALL MATTERS RELATING TO HF CONTESTS MUST FIRST BE DISCUSSED AND AGREED BY THE CSG BEFORE THEY ARE PASSED TO THE HFC FOR THEIR APPROVAL.

3. THAT MATTERS SENT DIRECTLY TO AN HFC MEETING AND THAT REQUIRE IMMEDIATE ACTION MAY, HOWEVER, BE DEALT WITH BY THE HFC AFTER CONSULTATION WITH THE CSG CHAIRMAN

4. THAT THERE SHOULD BE A CHANNEL OF COMMUNICATION BETWEEN THE HFC, CSG AND THE VHF/UHF/MICROWAVE COMMITTEE TO DISCUSS CONTEST POLICY AND AGREE CONTEST DATES.

Rec/96/TVI/C4.7

IT IS RECOMMENDED THAT THE INTERNATIONAL LISTING FOR THE HF CW FIELD DAY BE DISCONTINUED FOR THE TIME BEING.

Rec/96/TVI/C4.8

IT IS RECOMMENDED THAT THE GUIDELINES FOR CO-ORDINATION OF 29 MHz REPEATERS OUTLINED IN DOC 4.12 SHOULD BE ADOPTED WHERE APPLICABLE. doc C4.12 (see Annex 7 attached)

Rec/96/TVI/C4.9

IT IS RECOMMENDED THAT THE IARU DOCUMENT BEACON POLICY AT 28 AND 50 MHz BE RENAMED BEACON OPERATION AT HF AND 50 MHz.

Rec/96/TVI/C4.10

IT IS RECOMMENDED THAT THE DOC C4.6 IARU REGION 1 HF BEACONS - A GUIDE TO GOOD PRACTICE, BE USED AS GUIDELINES FOR THE OPERATION OF HF BEACONS. (see Annex 8 attached).

Rec/96/TVI/C4.11

IT IS RECOMMENDED THAT THE BAND SEGMENT 7.035 TO 7.045 MAY BE USED FOR STORE AND FORWARD TRAFFIC IN THE AREA OF AFRICA SOUTH OF THE EQUATOR DURING LOCAL DAYLIGHT TIME.. HOWEVER, THE USE OF MORE EFFICIENT MODES THAN AX25 PACKET SHOULD BE ENCOURAGED.

Rec/96/TVI/C4.12

IT IS RECOMMENDED THAT

. THE SEGMENT BETWEEN 14.089 AND 14.099 SHOULD BE USED FOR NON-

AUTOMATIC DIGIMODE TRANSMISSION

- THE SEGMENT BETWEEN 14.101 AND 14.112 SHOULD BE USED FOR STORE-AND-FORWARD TRANSMISSION

- THE USE OF MORE MODERN/EFFICIENT DIGIMODES SHOULD BE ENCOURAGED IN LIEU OF AX25

Rec/96/TVI/C4.13

IT IS RECOMMENDED THAT MEMBER SOCIETIES OF REGION 1 SHALL CO-ORDINATE WITH THE CONTEST SUB-GROUP BEFORE INTRODUCING A NEW INTERNATIONAL CONTEST. PUBLICITY BY REGION 1 MEMBER SOCIETIES SHALL ONLY BE GIVEN TO THOSE CONTESTS WHICH ARE RECOGNISED BY THE CONTEST SUB-GROUP

Rec/96/TVI/C4.14

IT IS RECOMMENDED THAT ALL MEMBER SOCIETIES SHALL INCLUDE INFORMATION ABOUT CONTEST FREE SEGMENTS IN THEIR CONTEST RULES.

Rec/96/TVI/C4.15

IT IS RECOMMENDED THAT THE PHONE FIELD DAY SHALL TAKE PLACE FROM 1300 UTC ON THE FIRST SATURDAY IN SEPTEMBER TO THE FOLLOWING SUNDAY AT 1300 UTC.

Rec/96/TVI/C4.16

IT IS RECOMMENDED THAT THE USE OF PHONE SHALL BE PERMITTED BETWEEN 10.120 and 10.140 MHz IN THE AREA OF AFRICA SOUTH OF THE EQUATOR DURING LOCAL DAYLIGHT HOURS

Rec/96/TVI/C4.17

ALF ALMEDAL, LA5QK IS PROPOSED AS CHAIRMAN OF THE HF COMMITTEE FOR THE PERIOD 1996-1999.

RECOMMENDATIONS OF COMMITTEE C.5

RECOMMENDATION VIENNA-A

IN THE 145 MHz BAND PLAN THE FREQUENCY 145.200 MHz (FORMERLY CHANNEL S8) SHALL BE USED FOR SIMPLEX NBFM TELEPHONY BY MANNED SPACE STATIONS OVER REGION 1. FOR SPLIT FREQUENCY OPERATION THE FREQUENCY PAIR (145.200/145.800) CAN BE USED.

RECOMMENDATION VIENNA-B

THE WORD "PROVISIONAL" SHALL BE DELETED FROM ALL CURRENT MICROWAVE BAND PLANS.

RECOMMENDATION A

THAT ALL MEMBER SOCIETIES SHOULD REGULARLY SUBMIT TO THE BEACON CO-ORDINATOR UP TO DATE INFORMATION ABOUT THE BEACONS OPERATING IN THEIR COUNTRY.

RECOMMENDATION B

THE VHF MANAGER'S HANDBOOK WILL BE AMENDED IN THE FOLLOWING WAY:

1) RECOMMENDATION IN SECTION VIa ON "OBSERVER SERVICE (BRUSSELS 1969) BE DELETED.

2) RECOMMENDATION IN SECTION VId ON "STANDARDS FOR THE MICROWAVE BANDS (SCHEVENINGEN 1972)" BE DELETED.

3) RECOMMENDATION IN SECTION VIg ON "KEYING BEACONS (MISKOLC TAPOLCA 1978) BE DELETED.

4) THE WORD "PROVISIONAL" IN THE TITLE OF THE RECOMMENDATION IN SECTION VIm ON "PACKET RADIO DEFINITIONS (DE HAAN 1993) BE DELETED.

5) THE TEXT ON PROVISIONAL STANDARDS FOR FAX IN SECTION VIe (MISKOLC-TAPOLCA) 1978) BE REPLACED BY THE TEXT IN APPENDIX 1 TO THAT SECTION.

RECOMMENDATION C

THAT TERMS OF REFERENCE OF THE IARU REGION 1 MONITORING SYSTEM CO-ORDINATOR BE EXPANDED ON A TRIAL BASIS, BY INCLUDING THE MONITORING OF NON-AMATEUR USERS OF THE INPUT FREQUENCIES OF AMATEUR SATELLITE TRANSPONDERS.

RECOMMENDATION D

IARU REGION 1 SHALL IMPLEMENT A TRUE 12.5 kHz SPACED CHANNEL SYSTEM FOR FM REPEATER AND SIMPLEX OPERATION IN THE 145 MHz BAND.THE CHANGE OVER SHALL START ON 1ST JANUARY 1997 AND BE COMPLETED BY IST JANUARY 2000. INDIVIDUAL MEMBER SOCIETIES IN CONSULTATION WITH NEIGHBOURING COUNTRIES SHALL MAKE DETAILED PLANS FOR THE CHANGE IN THEIR OWN COUNTRIES,PARTICULARLY WITH RESPECT TO REPEATER OPERATION.

RECOMMENDATION E

THE RECOMMENDATION ON THE "TECHNICAL STANDARDS FOR FM REPEATERS IN THE 145 MHz BAND, (SCHEVENINGEN 1972)" SHALL ALSO APPLY TO THE 435 MHz BAND. MOREOVER ITEM 4 OF THAT RECOMMENDATION BE REWORDED AS FOLLOWS "SIMPLEX USING DEMODULATION/REMODULATION ON A SINGLE CHANNEL/FREQUENCY PAIR".

RECOMMENDATION F

THE DOCUMENT ENTITLED "BEACON POLICY AT 28 MHz AND 50 MHz (HANDBOOK APPENDIX 9A APPENDIX 2 TORREMOLINOS 1990) BE REPLACED BY THE DOCUMENT IN ANNEX A (see Annex 9 attached)

RECOMMENDATION G

THE USE OF CTCSS AS AN ALTERNATIVE OR AN ADDITION TO 1750 Hz TONE ACCESS SHALL BE ENCOURAGED FOR VHF AND UHF REPEATERS IN REGION 1 WITH THE AIM OF REDUCING OF INADVERTENT INTERFERENCE BY USERS TO REPEATERS SHARING THE SAME INPUT CHANNEL.
FOR CTCSS THE FREQUENCIES LISTED IN THE TABLE IN ANNEX B SHALL BE ADOPTED AS A STANDARD SO THAT COMPATIBILITY BETWEEN REPEATER SYSTEMS IN DIFFERENT COUNTRIES CAN BE MAINTAINED, AIDING THE TRAVELLER WHO MOVES BETWEEN COUNTRIES.
THE CTCSS FREQUENCIES SHALL BE ALLOCATED BY MEMBER SOCIETIES TO THEIR COUNTRY'S REPEATERS. THE REFERENCE LETTERS SHOWN IN ANNEX B MAY BE USED TO IDENTIFY CTCSS FREQUENCIES IN A COMPACT WAY. (see Annex 10 attached).

RECOMMENDATION H

THE DTMF SYSTEM AS SPECIFIED IN ANNEX C CAN BE USED AS AN ALTERNATIVE TO THE CONTROL OF REPEATERS, VOICE MAIL BOXES ETC.(ANNEX C IS THE MAIN BODY OF DOCUMENT C5.9 (see Annex 11 attached).

RECOMMENDATION I

THE STANDARDS IN THE HANDBOOK VIi FOR POLARISATION FOR EME, (CEFALU 1984) BE AMENDED TO LINEAR POLARISATION RATHER THAN CIRCULAR POLARISATION FOR OPERATION ABOVE 3 GHz. EUROPEAN STATIONS SHOULD USE VERTICAL POLARISATION. ALL STATIONS SHALL INCLUDE PROVISION FOR ADJUSTABLE POLARISATION AND BE PREPARED TO AGREE

THE OFFSET BEFOREHAND. EXACT POLARISATION OFFSETS SHALL BE CHECKED AT THE COMMENCEMENT OF ACTIVITY. SHOULD TECHNICAL DEVELOPMENTS OCCUR TO MAKE CIRCULAR POLARISATION PRACTICAL FOR GENERAL ADOPTION THIS WILL BE CONSIDERED AT A FUTURE CONFERENCE.

RECOMMENDATION J

THE CURRENT SYSTEM OF CHANNEL NUMBERING FOR NBFM AND DIGIPEATER CHANNELS ON THE 50 MHz, 145 MHz AND 435 MHz BANDS SHALL BE REPLACED BY A NEW UNIFORM COMPUTER COMPATIBLE DESIGNATION SYSTEM AS OUTLINED IN ANNEX D. (see Annex 12 attached).

RECOMMENDATION K

THE 50 MHz BAND PLAN, SHALL BE AMENDED AS INDICATED IN ANNEX E. (see Annex 13 attached).

RECOMMENDATION L

THE 145 MHz BAND PLAN SHALL BE AMENDED AS INDICATED IN ANNEX F. (see Annex 14 attached).

RECOMMENDATION M

EXPERIMENTS BY MANNED STATIONS USING WIDE BAND DIGITAL MODES MAY TAKE PLACE IN THE 435 MHz BAND IN THOSE COUNTRIES THAT HAVE THE FULL 10 MHz ALLOCATION. THESE EXPERIMENTS SHOULD BE IN THE ALL MODES SECTION AROUND A FREQUENCY OF 434 MHz, USE HORIZONTAL POLARISATION AND THE MINIMUM POWER REQUIRED.

RECOMMENDATION N

TO HELP INVESTIGATE VHF TRANSATLANTIC PROPAGATION, MEMBER SOCIETIES ARE ENCOURAGED TO PARTICIPATE IN AN IARU REGION 1 CO-ORDINATED PROGRAMME TO ESTABLISH "CONJUGATE BEACONS" IN THE 145 MHz BAND. (THESE WOULD BE SIMILAR TO THE CONJUGATE BEACONS IN THE HF BANDS, EMITTING SEQUENTIAL SIGNALS WHICH ARE REPEATED).

RECOMMENDATION O

IT IS PROPOSED TO REPLACE THE CURRENT NOTE 1 ON PAGE IIIc-1 OF THE HANDBOOK WITH THE FOLLOWING TEXT.
"MULTI-OPERATOR ENTRIES ARE ACCEPTED FOR PARTICIPATION. WHEN SUCH STATIONS USE A DIFFERENT CALL SIGN ON EACH BAND, THE LOGS OF THAT MULTI-OPERATOR ENTRY SHALL FOR EACH BAND CLEARLY BEAR AN INDICATION OF THE GROUP. THIS WILL PREFERABLY BE ONE OF THE CALL SIGNS USED, BUT A GROUP NAME MAY BE USED INSTEAD. ALL STATIONS BELONGING TO SUCH A-GROUP SHALL OPERATE FROM THE SAME LOCATION, i.e. SHALL NOT BE MORE THAN 50 METRES FROM EACH OTHER. THE RESULT ON EACH OF THE BANDS WHERE THE GROUP PARTICIPATES WILL BE COMBINED FOR DETERMINATION OF THE OVERALL RESULT".

ANNEXES

Annex 1	Letter attached to Final Plenary Minutes
Annex 2	Agreed Guidelines for Workprogramme (93/DHB/C3.6)
Annex 3	Eurocom Report (96/TVI/C3.7)
Annex 4	Resolution 91-2 96/TVI/C3.31)
Annex 5	Changes in IARU R1 ARDF Rules (96/TVI/C3.28 - rev 1)
Annex 6	STARS Working Group (96/TVI/C3.10)
Annex 7	Co-ordination of the 29MHz Repeaters (96/TVI/C4.12)
Annex 8	HF Beacons (96/TVI/C.4.6 and related Annexes)
Annex 9	Annex A
Annex 10	Annex B
Annex 11	Annex C
Annex 12	Annex D (96/TVI/C5.47)
Annex 13	Annex E
Annex 14	Annex F

ANNEX 2

93/DHB/C3.6

ANNEX TO
THE MINUTES OF THE SECOND MEETING IN THE
IARU REG. 1 EMC WORKING GROUP 19. sept. 1993

Agreed guidelines for Workprogram

1. The purpose

The group shall:

- be an active group responsible for the coordination of EMC, and related activities, within IARU region 1.

  Its activities should strengthen the ability of the national societies to:

  - support the development of EMC standards

  - influence the technical content of EMC standards in order to obtain the right level of equipment immunity and an adequate low limit on emission from equipment

- collect and distribute the information necessary to support the above

- have coorporation with the EMC community e.g. by attending EMC symposie and submitting papers

- be a forum for discussions on EMC-legislation

- be the coordinating body for information on equipment not complying with mandatory EMC-standards

- be a competent partner for discussing EMC problems with national and international equipmentmanufacturers.

- encourage and support the EMC education of radioamateurs by the distribution of information, examples of practical EMC countermeasures and educational programs.

2. Guidelines for Workprogramme - Tasks

A. Coordination of the work in the national amateur societies
shall be improved in order to achieve a high degree of influence on EMC standards.
This can be done e.g. if all the societies becomes a member of the national standardization-organization and if the IARU EMC group collects and distribute information on relevant standards that are out for comments and/or voting.

ANNEX 3

I. A. R. U.

REGION 1 CONFERENCE 1996

29 September - 6 October
Dan Panorama, Tel-Aviv, Israel

Committee C.3

Doc/96/TVI/C3.7

EUROCOM REPORT

1. Meeting with DGXIII staff member

In accordance with the policy defined by the Terms of Reference of the EUROCOM s.r.w., the contact established in 1993 with Mr Richter, member of Directorate XIII of the European Commission, was followed up in 1994 and in 1995.

CLG Chairman, Jaap Dijkshoorn (PA0TO) and EUROCOM Convenor, Gaston Bertels (ON4WF) met Mr Ricter in September 1994.

The following matters were discussed:
-CEPT recommenations T/R 61-01 and T/R 61-02
Conversion of CEPT recommendations into ERC Decisions
-EC Directive on the Mutual Recognition of Licences and other National Authorizations for telecommunications Services.
-Type approval of amateur equipment:
-Factory Manufactured Amateur Equipment
-Home built Amateur Equipment
-Future Aspects

The meeting lasted the whole afternoon. Mr Richter showed a real interest in amateur matters. He gave PA0T0 some very valuable documents which proved useful to the CLG Chairman during a CEPT WG RR meeting in September 1994.

2. New EUROCOM correspondents

In 1995, three more EUROCOM correspondents were appointed.

OVSV - Ronald Eisenwagner, OE3REB, Theresiengasse 11, A-1180 Vienna, Austria.
SRAL - Markku Toijala, OH2BQZ, Kiskontie 26A, FIN-00280, Helsinki, Finland.
SSA - Gunnar Kvarnefalk, SM0SMK, Ekhammarsvagen 45, S-196 30, Kungsgangen,Sweden.

Moreover, after the sudden passing away of PA0TO, VERON appointed a new correspondent - Leon Kusters, PA3DOS, Rond 1, NL-3632 BN Loenen aan de Vecht, The Netherlands.

3. A new Telecommunications Terminal Equipment Directive

Meeting Mr Richter, early in 1995, we learned that a new Directive was being prepared. This was announced in the annual report 1995.

In December 1995, the draft of this Directive appeared to be nearly ready. The Radio Amateur Service and the Satellite Amateur Service seem to be within the scope of this Directive.

This was announced in a Newsletter (December 1995) circulated to the EC and to the EUROCOM correspondents.

Up until now, the draft has not yet been published. It is being examined within Directorate XIII. We were told, that it will probably be ready mid March, 1996.

The draft will be submitted for approval to the European Parliament and to the Social and Economic Committee.

As soon as we can get hold of it, we will circulate it to the EC and to the EUROCOM correspondents.

EUROCOM members will be invited to examine this drafted Directive. They will be asked to address their observations and suggestions to the convenor within a short time. The convenor will summarise.

Mr Richter has suggested to meet an IARU/EUROCOM delegation in Brussels for a discussion about the implications of the Directive on the Amateur Service.

It is important to define a common attitude before meeting the representative of Directorate XIII of the European Commission.

The next step will be to decide upon any further action, it will possibly be found necessary to undertake.

Gaston Bertels, ON4WF
EUROCOM Convenor.

I. A. R. U.

REGION 1 CONFERENCE 1996

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Dan Panorama, Tel-Aviv, Israel

ANNEX 4

Committee C.3

Doc/96/TVI/C3.31

RESOLUTION 91-2
(Revised 1995)

(concerning guidelines for "DIGIMODE")

The IARU Administrative Council, Bandung, October 1991,

considering the growing popularity of "DIGIMODE" for the relaying of messages between radio amateurs,

recognizing that a medium as effective as "DIGIMODE" can invite abuse through the introduction of traffic that is inappropriate to the Amateur Service internationally,

noting Resolution 87-2 (Revised 1989) which urges adherence to the spirit and intentions of the ITU Radio Regulations in handling traffic, and calls attention to the undesirable aspects of the uncontrolled proliferation of unattended store-and-forward "mailbox stations,

resolves that the attached "Guidelines for 'DIGIMODE' Operators" and "Guidelines for 'DIGIMODE' Bulletin Board Operators" first adopted at the IARU Region 3 Conference, Bandung, 1991, and later revised, shall be distributed to IARU member-societies worldwide with the request that they be shared with the amateurs of each country; and

further resolves that future IARU regional conferences are invited to suggest improvements to these guidelines so they will continue to be representative of good Amateur Radio operating practices as these practices evolve over time.

Guidelines for "DIGIMODE" Operators

1. Amateur Radio takes pride in being self-regulated. "DIGIMODE" Operators should continue this tradition.

2. "DIGIMODE" Operators, like all Amateur Radio Operators, should observe published Band Plans.

3. A "DIGIMODE" Operator should not send the following traffic either direct or via mail boxes:

a. All advertising for selling, buying or trading goods, including amateur equipment (except if permitted by local regulations)

b. All statements or propaganda on political or religious subjects;

c. All inappropriate language, as, for instance, the use of swear words, obscenities, defamatory or libelous language, etc.;

d. All material which may infringe Copyright;

e. All material which infringes privacy, whether personal or corporate.

4. A "DIGIMODE" Operator utilizing a BBS should avoid transmitting unnecessary or redundant messages and documents in order to enhance network efficiency.

5. A "DIGIMODE" Operator utilizing a BBS should ensure that the callsign of the originating station, including the name of the person responsible in the case of a club station, is clearly shown on every message so that the sender can be identified.

6. A "DIGIMODE" Operator should avoid messages that are too long for efficient relay though the network.

7. A "DIGIMODE" Operator utilizing a BBS should ensure that all messages transmitted are addressed to the appropriate group of recipients and not addressed to inappropriate areas in order to enhance network efficiency.

Guidelines of "DIGIMODE" Bulletin Board Operators

1. The Operator of a "DIGIMODE" Bulletin Board is obliged to provide a reliable service, within a defined area for a defined purpose.

2. A "DIGIMODE" Bulletin Board Operator is morally responsible for all messages forwarded by his/her system. He/she should make his/her best efforts to insure that the traffic forwarded is appropriate to the Amateur Radio Service and in accordance with the Guidelines for "DIGIMODE" Operators.

3. HF Mailboxes should only be used where there is a genuine need that cannot be provided by VHF or other means.

4. A "DIGIMODE" Bulletin Board Operator may take action to exclude a User who persistently contravenes the Guidelines for "DIGIMODE" Operators. Excluding a User should only be done as a last resort after the User has been warned and where exclusion does not contravene local regulations.

5. "DIGIMODE" Bulletin Board Operators should be aware of their responsibilities for the content of messages and are encouraged to use authentication mechanisms.

I. A. R. U.
REGION 1 CONFERENCE 1996
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Dan Panorama, Tel-Aviv, Israel

ANNEX 5

Committee C.3

Doc/96/TVI/C3.28 rev.1

CHANGES IN THE IARU R1 ARDF RULES
(ARDF Working Group)

Considering that:

at the present one can find in the Rules almost everything about ARDF, except a definition of what ARDF is really about. A clear definition of ARDF may help to remind the organisers of ARDF competitions that ARDF is in the first place a technical amateur radio activity and not a mainly athletic sport,

it is proposed to add the following points to chapter A:

A3.1 Amateur Radio Direction Finding is a sport, where competitors independently, by means of a direction finding receiver, select their courses and search for transmitters hidden within the competition area.

A3.2 The ARDF competition shall check technical, running and orienteering skills of a competitor. The technical skill and concentration ability shall be decisive for the result.

A3.3 The given technical/orienteering tasks must be solvable by means of the direction finding receiver.

A3.4 Organising ARDF competitions and interpreting the rules, the principle of sport fairness and justice shall be respected.

Considering that:

a majority of the societies is in favour of introducing an additional category for male participants above the age of 55,

it is proposed to amend the points B2.1, B2.3, C1.1, C2.4, C3.3, C4.1, D2.3, D2.4, D2.5 and D2.7 as follows:

B2.1 In each national team ... (no changes)
a) not more than THREE seniors ... (no changes)
b) not more than THREE women ... (no changes)
c) not more than THREE juniors ... (no changes)
d) not more than THREE old timers ... (no changes)
e) not more than THREE veterans. Competitors starting in VETERAN category shall be born before January 1st of the year defined as the year in which championships take place minus fifty five,
shall be present in any team.
Each team shall have ... (no changes)

B2.3 For ARDF competitions at national level, ARDF WG recommends that **one additional team of THREE youngsters (regardless of sex) is allowed to take part. Competitors starting in YOUNGSTERS category shall be born on or after January 1st of the year defined as the year in which the competition takes place minus fifteen.** Additional categories ... (no changes)

C1.1 IARU ARDF Championships ... (no changes). In this case, one band shall be used for seniors and women, the other by juniors, old timers **and veterans.**

C2.4 ... A sixth transmitter acting as a beacon shall be placed at the entrance to the "finishing corridor" (see **D2.11**). ... (no changes).

C3.3 The starting numbers assigned to the competitors by the **Organising Society** ... (no changes).

C4.1 Classification shall be ... (no changes)

3,5 MHz band - seniors	144 MHz band - seniors
3,5 MHz band - juniors	144 MHz band - juniors
3,5 MHz band - women	144 MHz band - women
3,5 MHz band - old timers	144 MHz band - old timers
3,5 MHz band - veterans	**144 MHz band - veterans**

For teams, the same ... (no changes)

D2.3 Competitors shall commence to search for the hidden transmitters in groups of maximum **FIVE**. ... (no changes).

D2.4 Each group shall at a maximum consist of one senior, one junior, one women, one old timer **and one veteran**. ... (delete the last sentence).

D2.5 **Two starting corridors** shall be provided ... (no changes)
... One corridor shall be used as the starting point for seniors and women and the other corridor shall be used as the starting point for juniors, old timers **and veterans.**
Delete the sentence from "Notwithstanding the above ...)

D2.7 (now D2.8) Transmitters shall be searched ... (no changes)
Senior competitors shall search for ALL FIVE TRANSMITTERS
Junior competitors shall NOT search for TRANSMITTER No.3
Women competitors shall NOT search for TRANSMITTER No.4
Old Timer competitors shall NOT search for TRANSMITTER No.5
Veteran competitors shall NOT search for TRANSMITTER No.2
The sequence in which ... (no changes)

Considering that:

there is a need to inform the participants on the exact frequencies and technical data of transmitters used in the ARDF competitions well prior to the event,

it is proposed to amend point B2.6 as follows:

B2.6 Not later than FIVE MONTHS prior to the date of commencement of the Championships, the Organising Society shall send the following information by registered mail **to the appointed Chairman of International Jury and** to those societies ... (no changes)

a) ... (no changes)
b) ... (no changes)
c) ... (no changes)

d) the following technical information:
- the exact frequencies and output power of the transmitters and beacons on both bands,
- the description (type, gain, height above the terrain) of the 144 MHz antennas,
- the description (lenght, grounding system) of the 3,5 MHz antennas,
- the average altitude of the competition area, if exceeding 1000 meters above sea level,
- the character of the competition area.

e) ... (the present point d) - no changes)

The present point C2.14 is to be deleted.

Considering that:

the Amateur Radio Direction Finding is a part of amateur radio service and thus shall conform the relevant radio regulations,

it is proposed to add the new point C2.14 as follows:

C2.14 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 regards to their identification and to their being operated only by duly authorised radio amateur operators.

Considering that:

the present method of determination of start sequence could be freely interpreted depending of odd or even number of participating teams, etc.,

it is proposed to replace the current point C3.1 and to amend the point C3.2 as follows:

C3.1 Drawing procedure.
At the presentation desk there shall be prepared two non-transparent bags (one for each band) with numbered tickets. The number of tickets in each bag shall exceed the number of all entried competitors by fifty. The tickets shall be weell mixed.
At the presentation, every team leader shall draw numbers for all his competitors, separately for each category and band. The numbers shall be registered with regard to the particular categories and bands. The drawn tickets shall not be returned into the bags.
After the presentation closing, the Organising Society shall complete and announce the "empty" starting list containing only the names of participating teams. The sequence of each category within each band is given by increasing order of drawn numbers.
The team leaders shall be given at least two hours to assign the names of competitors to their starting positions. The final starting list shall be officially announced and the copy given to all team leaders not later than at 20.00 hours the day prior to the competition.

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

Considering that:

it is recommended to allow the competitors to continue their run in case of accidental malfunction of the receiver,

it is proposed to amend the points D2.1, D2.6, and to add new point D2.7 as follows:

D2.1 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 particular team or competitor, shall be placed at an indicated point just beyond the starting line beside the starting corridor.** The hidden transmitters shall remain silent until collection of receivers is completed.

D2.6 When the starting signal is given, competitors **may switch on their receivers and they** shall run along the starting corridor. When the competitor reaches the end, he or she **shall commence searching for hidden transmitters. Competitors shall not stop in the starting corridor except in the case of receiver malfunction.**

D2.7 If the competitor finds out a failure of his or her receiver, he or she may return within his or her own running time to the starting line and take his or her spare receiver or components from the referee. It is strictly forbidden to give or take any assistance from or to any person except for referees.

Points D2.7 through D2.10 are to be renumbered to D2.8 through D2.11

I. A. R. U.

REGION 1 CONFERENCE 1996

29 September - 6 October
Dan Panorama, Tel-Aviv, Israel

ANNEX 6

STARS WORKING GROUP

SUMMARY

Page 2. Introduction

Page 3. Country Reports

Page 5. What did we learn ? (part 2)
- From PADC to STARS
- The aims
- The philosophy
- The programme
- The ways
- The means
- The "Double c" rule
- Know how
- Time
- Success
- How does STARS work ... internally?
- The future

Page 9. Plan of action (1997-1999)

Page 10. Draft recommendations

Page 11. Annex 1. Inventory

STARS WORKING GROUP REPORT (1993-1995)

INTRODUCTION

The 1990 General Conference in Torremolinos (Spain) recommended the (now former) PADC to urgently find a "NEW APPROACH" to the Promotion of Amateur Radio in Developing Countries.

After the Torremolinos Conference, the work of the working group focussed clearly on the Southern African subregion. Thanks to the activity of the late Peter Strauss, the support of projects in Swaziland, Lesotho, Zimbabwe and Mozambique started.

Also, assuming that "seven heads are better than one", a task force team was formed to spread the support action of the working group to the whole of the African continent and to work out the new approach strategy requested by the General Conference. The team included the Chariman of the WG and 5 sub-regional coordinators, as follows: Driss Bendani 7X4MD for Northern Africa, Tafa Diop 6W1KI for West Africa (French speaking countries), Cassandra Davies 9L1YL for the English speaking countries in the same sub-region, Max Raicha 5Z4MR for East Africa and Hans van de Groenendaal ZS6AKV (now ZS5) for Southern Africa. In addition Rossella Spadini I1RYS, joined in her capacity of Region 1 Treasurer, and thus also Treasurer of Fund 4.

At the 1993 General Conference in De Haan (Belgium), **STARS - Support The Amateur Radio Service** - Working Group was born.

Its new approach summarized in new terms of reference of the Working Group, its plan of action, strategy and scope were unanimously approved.

New support projects were recommended and funds were put aside in Fund 4 for them.

Today **STARS WG** consists of a chairman, appointed by the General Conference, who is responsible for the general coordination and logistics. In addition, the subregional coordinators (appointed by the WG Chairman) are responsible for establishing and maintaining relations with all member societies and telecom authorities in their subregion, the planning, preparing and proposing of possible projects and, after their approval, the implementation, coordination, follow up, evaluation, in short: for the support to the 'local people' in charge of the practical realisation of the project and for feeding back information to the WG Chairman. Further WG members are the EC member appointed to liaise with STARS WG, the IARU-Region 1 Treasurer (in charge of Fund 4) and the representatives of all the interested IARU Region 1 member societies.

Today, only three years after its formation, we can proudly say that the STARS WG has proven to be successful. Figures and facts are there to establish so.

A total of 4 new IARU member societies have been formed and initiated as a result of the action of the STARS WG and its subregional coordinators.

It is mandatory that this 1996 General Conference approves, consolidates and reinforces STARS, giving the Working Group the means to maintain and strengthen its action in the future. The seeds that STARS WG has dispersed over the past years must now be cherished and cared for.

Obviously, this means an enormous amount of work to be performed, not just by the WG Chairman, but especially by the subregional coordinators. Broadly speaking, they are the "key persons", the links between the dispersed radio amateur operators (and societies, if any) in the different countries of their subregion and STARS WG. Ultimately, they monitor the growth (and thus, the future) of the amateur radio service in their subregions and they help to build the constructive relationships between an amateur radio society and its corresponding national telecom authority which is the backbone of the amateur services' good international reputation at ITU level.

It is my strong belief that the work of this group of people as well as STARS WG deserves to be boosted, possibly by giving them the means and opportunity to meet once a year in between general conferences (just like the HF- and VHF-committees do).

If all this is granted by this General Conference, then the end results will be obviously good.

But before proposing the draft recommendations that STARS WG would like to have approved, the following are the latest developments in Africa:

COUNTRY REPORTS

For some reason or another, we noticed a shift towards Western Africa after the 1993 General Conference in De Haan (Belgium).

Two newly formed societies ARBF (Burkina Faso) and CRAM (Mali) focused all our attention. Thanks to the combined financial support of Fund 4 and the REF-Union as well as the combined action between Tafa Diop 6W1KI and Vincent Magrou F5JFT, both societies were gifted with club stations.

We expect in he next three year period, more activity in yet another subregion of Africa. Max Raicha 5Z4MR helped the formation of new societies in Uganda (UARS) and Tanzania (TARC).

On the other hand, some Ethiopian radio amateurs have joined into a society and the same has happened in Madagascar. We expect both societies to join IARU shortly.

In Botswana and Zambia, the existing societies (BARS and ZARS) are becoming more and more active.

1) Northern Africa

Egypt: EAWC participated actively in Africa Telecom in April 1994.

2) Western Africa (French)

Burkina Faso: 2 club stations have been ordered in France and delivered; one for Ouagadougou and one for Bobo Dioulasso; in a later stage a 3rd (mobile) HF-station plus VHF equipment will be installed.

Mali: the installation of the club station can be expected in the second half of 1996.

Cameroon: following the Abidjan Seminar (see further) Philippe Vieira TU2UR has established contact.

Congo: the French Clipperton DX Club has plans for an educational project over there; they have local contacts and seek our collaboration for the establishment of a club station.

Chad: exactly the same story; Tafa Diop has a contact person there too.

Côte d'Ivoire: although the second largest society in Africa, they are still in need for equipment to extend the possibilities at the national club station in Abidjan as well as to put up additional club stations in other cities, like Yamoussoukro, Man, Bouaké. To reinforce the existing and new societies in Western Africa, a seminar was held in Abidjan, from 24-31 October 1994. The aim was double: first of all to train the local representatives of the amateur service to have succesful contacts with their (and possibly other) licensing authorities and secondly to bring the few amateurs in the region in closer touch with eachother. This first seminar was a success in both aspects.

Cape Verde: we have good contacts with the telecom authority. Tafa has good hope for the installation of a project there in the near future.

Guinea Bissau: we have one, very enthousiastic contact person there, who proposed to regroup the members of a former radio club.

Togo: also as a result of the Abidjan Seminar, Koffi A. Jackson 9G1AJ established a contact overthere.

3) Western Africa (English)

Gambia, Sierra Leone, Ghana: upon the request of the delegates of those 3 societies attending the Abidjan Seminar, the RSGB was so generous to donate several manuals to each of the projects.

Ghana: GARS has installed a club house in the compound of the Accra Technical Training Centre.

4) Eastern Africa

Djibouti: the society is being reactivated; we have hope for the future.

Ethiopia: EARS has officialy obtained the club call sign ET3AA; the first transmission was on 5 July 1994; for the first time in 20 years licenses have been issued to Ethiopian citizens; EARS (not a member society yet) has now some 15 City & Guilds licensees; they also have good contacts with the British and American Schools in Addis Ababa.

Sudan: we also have good contacts in this country, but both the economical and political situation and the unreliablility of the postage and telecommunications, make it very difficult to prepare a project over there.

Kenya: apart from the Kisumu and Nairobi school stations, a third one has been established near Nairobi at the Hill Crest School; RSK has published a licence manual for the new novice class; since the introduction of the novice license, several have successfully sat the exam; different school projects are identified and will be implemented in 1996 (beside the 3 existing); Max Raicha organized a massive participation in JOTA; on 21-22 October 1995, some 70 children from 12

different troops took part at the mike of 5Z38NSA, installed at the Kisumu Technical Training Institute; some 137 QSO's were made with 7 African countries.

Seychelles: this seems to be a very hard case; once again Max 5Z4MR had to start all over again with 2 other amateur operators.

Uganda: The big day here was February 4th 1995, when UARS came to be.

Tanzania: TARC was founded at a general meeting held on May 6, 1995 attended by some 23 Tanzanian amateurs; their application formalities to become IARU-member have now been completed.

5) Southern Africa

Madagascar: Ben Witvliet 5R8DS has left the country and the establishment of MARA will further be managed by its co-founder, Solofo Randrenjason 5R8ET; this will probably be one of the next societies to join the IARU.

Botswana: G.V. Sulu A22GV is president of BARS again and trying to revive the society, the previous office bearers all having left the country without informing the members.

Lesotho and Swaziland: both projects are developing slowly but continuously, with a new input of interested students every school year.

Mozambique: LREM have some 52 members, of whom 6 are licensed; the club station C91TDM is active several times a week.

Zambia: in 1995 RSZ grew from 8 to 24 members, 5 of which are native Zambians; the main problems are 1) the import restrictions on radio equipment, 2) the fact that the few members they have live so far apart and 3) the lack of information and promotional material; STARS could help them to produce some kind of brochure.

Zimbabwe: a project at the National University, has already generated more than 20 new ham's; a 2m transceiver and packet TNC have been supplied to the University of Zimbabwe Radio Club.

YARIA: (= Youth for Amateur Radio in Africa) is organized 3 times a year by Hans ZS5AKV and represents a growing success, especially among South African students. They take this opportunity to contact different African (and other) countries.

WHAT DID WE LEARN ? (Part 2)

☑ **FROM PADC TO STARS**

In the Introduction, we explained why the STARS new approach is now a proven success.

Listed in the previous pages of this report, you have been able to "taste" (although in small bites) what STARS has made of its mandate, country by country.

For those member Societies which are new to the concept of STARS, we have hereunder summarised what STARS is all about.

☑ **The AIMS** of STARS are the same as those of the Region 1 (since 1950) and of the IARU (since 1925): to defend, protect, extend, develop and promote the amateur radio service. The work of STARS is specifically directed to those areas of the Region where amateur radio activity is low or non existent.

☑ **The PHILOSOPHY** behind all this is that the IARU is the only representative for the amateur radio

service which is recognized by the ITU. If an IARU member society wants to have good, friendly and regular contacts with its national telecom authorities, then the basis for an active, viable and truly representative society is the recruitment of members having the nationality of that country (rather than expatriots).

☑ **The PROGRAMME** to put this philosophy into practice and achieve the aims of STARS would be to HELP with the founding of a national society, to HELP with the establishment of one or more clubstations and to HELP with the organization of an educational programme.

☑ **The WAYS** to do so are as follows:

1) make contact with the local amateur radio operators (including expatriates who stay there for a longer term) and their national society (if any) and discuss with them the existing problems and the possible solutions. In some cases a national society has to be established and made an IARU member first;

2) establish good relations with the telecom authorities and convince them of the respectability and usefulness of the amateur radio service by explaining such aspects as technical training (both in electricity and electronics as well as operating practice, human relations, international understanding, emergency communications and disaster relief, etc). Eventually, some changes in their Radio Regulations might be suggested (in a very diplomatic way): Radio Amateur Examination, licence fee, novice or restricted licensing, etc.;

3) look for a good place to set up a project (probably a technical school, high school, university, training centre, ...);

4) work out a possible project with the 'local people' and the competent authorities, including the solution of such problems as import of equipment, need for trainers, etc.;

5) propose the detailed project (including the budget) to the STARS-WG, which will forward it to the EC or the General Conference.

☑ **The MEANS** to do so are collected and given out of the IARU Region 1's **FUND 4.** Individual member Societies are also welcome to donate funds directly to Fund 4 to be used for a specific STARS project. If they prefer, they may give certain donations in kind, under the books e.g.

☑ **THE "DOUBLE C" RULE**

COLLABORATION and **COMMUNICATION.** This is the VITAL rule for STARS. The truth of the matter is that STARS is not just policy guidelines, speeches, or sums of money. STARS is basically a collective effort. Its whole foundation is based on a belief in COLLABORATION. Since the chairman, the treasurer, the SRC and the 'local people' cannot possibly do the job all by themselves and have to rely on the information supplied by all

the others, COMMUNICATION is an essential condition for success.

☑ **KNOW-HOW**

We are most eager to share our know how with others, particularly if they are willing to do so with us. I think of occasional travellers (business or tourism), development-aid workers, DX-peditioners, etc. By bringing together all the available knowledge, we should be able to maximize our chances. I refer to Annex 1 where you find those countries listed about which we are most in need of information.

☑ **TIME**

Not all projects take the same time to complete. Sometimes we have to bring together a group of interested people to form a society first, sometimes an existing society calls for our help.

Sometimes the necessary equipment can be acquired localy (or in an adjacent country), sometimes it has to be imported at great cost. Sometimes our good intentions our simply countered by the political events. The lesson is that in STARS programmes speed is not essential. Results are.

☑ **HOW DOES STARS WG WORK ... INTERNALLY ?**

Normally speaking, this should remain the WG Chairman's secret. However, on such special occasion, I will show you a glimpse.

All the WG internal work is based on communication and collaboration (remember, the 'double c' rule listed here on your left?), so the gathering and dissemination of information is crucial.

1) Making an inventory:
- there are 54 states in Africa, representing 51 ITU votes (Eritrea, the Seychelles and the D.A.R. Sahara are not voting members);
- there are 25 IARU member societies (20 in 1990, at least 3 of which where dormant at that time);
- we have regular contacts in 35 countries (in total).

2) Collecting information from different sources:
books, magazines (ham and others), ITU and IARU material, but most of all people: local people, expatriates, DX-peditioners, etc.

3) Establishing contact:
this is mainly done by the subregional coordinators.

4) Preparing and putting up a project:
see "The ways" as well as "The project cycle" in our previous report to the General Conference 1993.

This should always be done in close collaboration with the local society (so if there isn't any, the first step is to have one created): they are in the best position to determine the local needs.

5) The follow up:
This is the most difficult part (remember once again the "double c" rule), also because a project is never finished, but the external help cannot

go on for ever.

In Annex 1 to this document, you will be able to pinpoint those areas where your help to STARS would be most needed.

☑

SUCCESS

If all the African governments would vote in favour of the amateur service at the next ITU conference, this would undoubtedly be a success. If this does not happen, I hope you will not blame STARS and conclude it's a total failure. Are all the European governments allways 100% supporting us? Unfortunately not. So the success of STARS should be measured otherwise. E.g. by the number of new societies or licenced amateurs in Africa, or by their activity.

☑ THE FUTURE

No one knows (exactly) how the future will feel and unfold for the ARS worldwide and in our Region. But one of the essential changes is that we are no longer the same Service. WE ARE CONSUMED OUT. In this decade and into the next century the trend is evident: commercial services develop faster than the ARS. They will exert pressure - both nationally and internationally - to obtain radio spectrum. There is the risk that they may obtain it at our expenses (e.g. microwaves, etc.). It will take all the running we can do, to keep in the same place. If we want to get somewhere else, we must run at least twice as fast as that! STARS supports the development of the ARS and therefore deals with the FUTURE of the service.

STARS Plan of action (1997-1999)

In principle, all the projects consist of the supply of educational material (estimated at 500 CHF), radio equipment (transceivers, antennae, cables and tools) for club stations (estimated at 6.000 CHF per station, including packaging, shipping, handling and taxes) and ancillary costs (estimated at 3.500 CHF, including travel).

The average estimated cost per project would thus be 10.000 CHF. The exact budget (which can vary due to local needs, national tax regulations, etc.) will be worked out per project, by the sub regional coordinator and the local society, and submitted by the chairman to the EC.

The distinction made below is based on the analysis of the situation in the country concerned, both on the political level and the state of development of the amateur service. The "A" projects have either already been started up and need to be prolongued or are most likely to get started on short notice, whithin the next 3 years. The countries listed after the "B" projects are either politicaly unstable or do not have a national society yet. We have however sound contacts there and if the conditions would meliorate, a project could be started in no time.

"A" PROJECTS	"B" PROJECTS
1) Egypt	1) Algeria
2) Burkina Faso	2) Tunisia
3) Mali	3) Cameroon
4) Côte d'Ivoire	4) République Centrafricaine
5) Senegal	5) Cap Verde
6) Ghana	6) Chad
7) Kenya	7) Congo
8) Uganda	8) Guinea Bissau
9) Tanzania	9) Sierra Leone
10) Madagascar	10) Gambia
11) Botswana	11) Ethiopia
12) Zambia	12) Sudan
13) Swaziland	13) Seychelles
14) Lesotho	14) Mozambique
15) Zimbabwe	15) Namibia

Of course, if by any lucky combination of circumstances, all 15 "A" projects and possibly a few of the "B" projects, would have to be funded simultaneously, our reserves would not be sufficient.

However, we think that this situation is highly unlikely and not to be expected to occur in the next 3 years. Besides, considering that all people involved are dealing with STARS on a voluntary basis, i.e. in their free time, i.e. the time not devoted to professional and family activities, we are forced to concentrate on just a few projects.

This is why we have asked Committee 2 to temporarily reduce the additional fee for Fund 4 from 0.20 CHF to 0.05 CHF over the next 3 year period. Such recommendation to be reviewed at the next IARU Region 1 General Conference.

Draft recommendations.

All the above considered, STARS WG wishes the IARU Region 1 General Conference to adopt the following recommendations:

STARS 1 The IARU Region 1 General Conference (Tel Aviv, 1996) unanimously recommends the approval of the chairman's report and that the work and activities of the STARS WG continues for a further three year period in accordance with the IARU Region 1 Constitution and Bye-Laws, the Working Group current terms of reference and its action plan as outlined in Doc. 96/TVI/C3.10 and related annexes.

STARS 2 The IARU Region 1 General Conference (Tel Aviv, 1996) unanimously recommends that all action taken by Africom Coordinator (if any is appointed by this General Conference) are coordinated and in line with STARS WG and its adopted guidelines as to Doc. 96/TVI/C3.10 and related annexes.

STARS 3 The IARU Region 1 General Conference (Tel Aviv, 1996) unanimously recommends that at the next general Conference to be held in 1999, the possibility to turn STARS WG into a permanent Committee of IARU-Region 1 shall be taken into consideration and gives mandate to the STARS WG Chairman in coordination with the IARU Region 1 Executive Committee to put forward a suitable proposal for discussion.

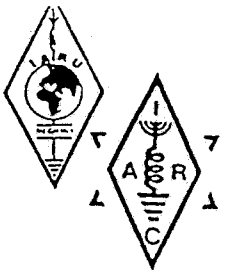
STARS 4 The IARU Region 1 General Conference (Tel Aviv, 1996) unanimously recommends that during the next three year period, the appointed sub-regional coordinators of STARS WG shall be allowed to participate to the STARS WG yearly meeting and that their travel and accommodation costs are borne by the funds allocated to the Working Group. It also recommends that STARS WG yearly meetings are - whenever possible - held in conjunction with an ITU or any other international telecommunication conferences/events in order to limit costs.

STARS 5 The IARU Region 1 General Conference (Tel Aviv, 1996) unanimously recommends that Mr Hans Welens, ON6WQ, is appointed STARS WG Chairman for the next three year period.

I. A. R. U.

REGION 1 CONFERENCE 1996

29 September - 6 October
Dan Panorama, Tel-Aviv, Israel



Annex 1. Inventory. (Rev.1)

COUNTRY	ITU	SOCIETY	IARU	CONTACT	LIAISON	ADDRESS	TELEPHONE	FAX
Algeria	1	ARA	1	0	Sadek Laskri	B.P. 1, 16000 Algers	0	0
Angola	1	LARA	0	0		C.P. 484, Luanda	0	0
Benin	1		0	1	Peter Schulze	B.P.06-2535, Cotonou	229313779	229313879
Botswana	1	BARS	1	0	G.V. Sulu	P.O.Box 1873, Gaborone	267372481	267303642
Burkina Faso	1	ARBF	1	0	Youssouf Kaba	B.P.10.000, Ouagadougou	226363019	226300930
Burundi	1		0	0			0	0
Cameroon	1		0	1	Felix N'Dono		0	0
Cape Verde	1		0	1	J.L. Almeida	C.P. 220, Praia	238615551	238615553
Centr.Afr.Rep.	1		0	0	J.Boykota-Zouk.	Socatel, B.P.939, Bangui	236614268	236617129
Chad	1		0	1	B. Abba Goni	ONPT, N'Djamena	235521200	235521282
Comoros	1		0	0			0	0
Congo	1		0	1	André Tsouele	B.P.14153, Brazzaville	0	0
Côte d'Ivoire	1	ARAI	1	0	J.J. Niava	B.P. 170, Abidjan 01	225243346	225243346
Djibouti	1	ARAD	1	0	M.O. Moussa	B.P. 1076, Djibouti	0	0
Egypt	1	EAWC	1	0	E.S. Ramadan	P.O.Box 78, Cairo 11341	2025744841	2022574270
Equat.Guinea	1		0	0			0	0
Eritrea	1		0	0			0	0
Ethiopia	1	EARS	0	1			0	0
Gabon	1	AGRA	1	0	A. Combelles	B.P. 1826, Libreville	0	0
Gambia	1	RSTG	1	0	J.M. Voinot	B.P. 120, Banjul	0	0
Ghana	1	GARS	1	0	K.A. Jackson	P.O.Box M144, Accra	233217122110	0
Guinea	1		0	0			0	0
Guinea Bissau	1		0	1	I.Lopes Rodrig.	C.P.200, Bissau	245201414	245211414
Kenya	1	RSK	1	0	Max Raicha	P.O.Box 1641, Kisumu	2543523501	2543521400
Lesotho	1	LARS	1	0	Gunter Barak	P.O.Box 949, Maseru	266312585	266310081
Liberia	1	LRAA	1	0	H.W. Benjamin	55 Austin Pl., NY 10304	17187277080	0
Libya	1		0	1	Ali S. Gwedeh	P.O.Box 80462, Tripoli	2182177809	21821602704
Madagascar	1	MARA	0	1	S. Randrenjason	B.P. 3499, Antananarivo	0	0
Malawi	1		0	0			0	0
Mali	1	CRAM	1	0	Diadié Touré	B.P. 2826, Bamako	223217594	223225741
Mauritania	1		0	0			0	0
Mauritius	1	MARS	1	0	S. Mandary	6, Shastri Rd., 4 Bornes	2304245866	2306746268
Morocco	1	ARRAM	1	0	Brahim Sidate	B.P. 299, Rabat	2127754285	0
Mozambique	1	LREM	0	1	J.P. Santo	C.P. 2731, Maputo	0	2581400522
Namibia	1	NARL	1	0	J. Kirkpatrick	P.O.Box 1100, Windhoek	26461233121	26461224529
Niger	1		0	0			0	0
Nigeria	1	NARS	1	0	O.B. Ajayi	P.O.B. 2873 Marina, Lagos	2341884145	0
Rwanda	1		0	0			0	0
Sao Tomé & Prin	1		0	0			0	0
Senegal	1	ARAS	1	0	Tafa Diop	B.P. 2276, Dakar	221223653	221229726
Seychelles	0		0	0			0	0
Sierra Leone	1	SLARS	1	0	C. Davies	P.O.Box 992, Freetown	232228492	232227777
Somalia	1		0	0			0	0
Sudan	1		0	1	Ali Szondy	P.O.Box 73, Khartoum Airp	0	0
Swaziland	1	RSS	1	0	Willy Long	P.O.Box 1554, Manzini	26862048	26852022
Tanzania	1	TARC	1	0	Bill Musoke	P.O.B.9182, Dar-es-Salaam	0	0
Togo	1		0	1	Mr. I. Sayer	Brit.School, BP20050,Lomé	228260618	228264989
Tunisia	1		0	1	Mohamed Salhi	ISAJC, Bir El Bey 2055	2161420090	2161420608
Uganda	1	UARS	1	0		P.O.Box 9094, Kampala	0	0
Zaire	1	UZRA	0	0	K.Kabemba	B.P.35, Kinshasa 1	0	0
Zambia	1	RSZ	1	0	Fred Bunce	P.O.Box 20332, Kitwe	2602227627	2602226219
Zimbabwe	1	ZARS	1	0		P.O.Box 2377, Harare	263046341	0
South Africa	1	SARL	1	0	H.v.Groenendaal	P.O.B.1842,Hillcrest 3650	27317656334	27317656456
West.Sahara	0	URS	0	1			0	0
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54	52		25	14				

ANNEX 7

Doc/96/TVI/C4.12 rev 1

I. A. R. U.

REGION 1 CONFERENCE 1996

29 September - 6 October
Dan Panorama, Tel-Aviv, Israel

COORDINATION OF THE 29 MHz FM REPEATERS

INTRODUCTION

Since the number of active 29 MHz repeaters in Region 1 is increasing and applications for new ones are continously dropping in, it seems necessary to coordinate them on Region 1 level.
The main policy for the coordinator is, that he shall do his best to make it possible for all radio amateurs interested in 29 MHz FM repeaters to get an allocation where they do not cause interference to other repeaters or modes.
It is important for the coordinator to keep and update a list of repeaters. The Region 1 member societies should therefore provide information about changes of the 29 MHz FM Repeater situation in their countries for the coordinator.

FREQUENCY COORDINATION

The written determination of the regional and the national frequency coordination body shall prevail and be considered good amateur operating practice.

The regional frequency coordination body of IARU Region 1 is the 29 MHz MF Repeater Coordinator, nominated by and member of the HF Committee. Name, callsign and address are published in each number of Region 1 News.

The national frequency coordination is carried out in deliberation with the Region 1 Coordinator by a body nominated by the national member sosiety.

GUIDELINES FOR COORDINATION

The distance between two repeaters using the same frequency pair should be at least 250 km.

If the distance of a repeater-location to the boarder of a neighbouring country is less than 250 km, the HF Committee or the neighbouring national society must be consulted for coordination.

Access to the repeaters shall always be possible with a 1750 Hz tone. Other access methods (DTMF tones)may be allowed in parallel with the standard 1750 Hz.

If a radio link is used between the repeaters RX and TX it is advisable to use a subtone system (CTCSS).

The holder of a 29 MHz Repeater licence is free to switch off the repeater when it is misused or if the repeater in normal conditions causes interference with another one

GENERAL RULES FOR REPEATER OPERATION

Repeaters are primarily intended to facilitate mobile operation.Mobile traffic shall always have priority.

If you can hear each other on the in-frequency - QSY to a simplex frequency. Never occupy a repeater if simplex traffic is possible, because that prevents others from using it.

Use the minimum amount of power necessary to maintain contact.

Monitor the repeater in order to become familiar with any peculiarities in its operation.

There is no need for long calls. Just simply indicate that you are on the repeater.

Identify legally. You must identify at least every 10 minutes during a contact and at the end of it.

Pause between transmissions to allow other hams to break in and gain access to repeater too.

Be thoughtful and keep the transmissions as short as possible. Be aware that your transmissions are monitored by many listeners. Don't give the amateur radio hobby a bad reputation!

THE 29 MHz FM SEGMENT

FREQUENCY (MHz)	APPLICATION
29.510	Band edge, don't use.
29.520 - 29.550	FM Simplex
29.560 - 29.590	Repeater inputs, (10 kHz spacing)
29.600	Calling Frequency
29.610 - 29.650	FM Simplex
29.660 - 29.690	Repeater outputs, (10 kHz spacing)
29.700	

FREQUENCIES FOR FM REPEATERS

DESIGNATION	REPEATER INPUT	REPEATER OUTPUT
RH1	29.560 MHz	29.660 MHz
RH2	29.570 MHz	29.670 MHz
RH3	29.580 MHz	29.680 MHz
RH4	29.590 MHz	29.690 MHz

I. A. R. U.

REGION 1 CONFERENCE 1996

29 September - 6 October
Dan Panorama, Tel-Aviv, Israel

ANNEX 8

Committee C.4

Doc/96/TVI/C4.6

IARU REGION 1 CONFERENCE 1996

Input paper from Region 1 HF Beacon Coordinator to IARU HF Committee

It is proposed that: the IARU document 'BEACON POLICY AT 28 AND 50 MHZ' be changed to 'BEACON OPERATION AT HF AND 50MHZ' **and that** the following document be approved as a guide to good practice for IARU Region 1 HF beacon operation.

IARU REGION 1 HF BEACONS - A GUIDE TO GOOD PRACTICE

Beacon transmissions have long been used as guides to the presence of HF openings and have contributed significantly to our knowledge of propagation. However, the number of HF beacons is steadily increasing and the amount of spectrum available is under pressure. It is more important than ever that beacon operators are aware of the technical parameters required, the reasons for them and the procedure to be followed to obtain an agreed frequency. This is particularly important in respect of bands with narrow beacon allocations.

It is not the intention of this document to prescribe the exact purpose of any beacon, its power level or the number of beacons in any country. It is also not intended to be applied rigorously to experimental or special-purpose beacons. It should, however, apply to the vast majority of HF beacons for propagation monitoring.

1. COORDINATION PROCEDURE

The beacon proposal should be agreed within the national society (with consultation with neighbouring societies where appropriate) and a provisional frequency chosen. The proposed frequency should be submitted to the IARU regional HF beacon coordinator to check for potential interference problems.

2. TRANSMISSION MODE

In the interests of spectrum economy the preferred transmission mode at HF is A1a cw. If F1a is used the shift should not exceed 250Hz, with MARK on the nominal frequency and SPACE on the lower. Care must be taken to ensure that the transmission has the lowest possible levels of spurious signals, key clicks and phase noise.

3. FREQUENCY ACCURACY AND SPACING

All beacons should operate within the IARU-designated sub-bands. Additionally, solo beacons should avoid frequencies assigned by the IARU to frequency-sharing networks. Frequencies are currently assigned either on an exact kHz

(e.g. 28205.0) or a half kHz (e.g. 28.205.5). (However, if beacon numbers continue to grow 100Hz spacing may be introduced.) Beacons should normally be capable of operating within +/- 25Hz of their nominal frequency.

4. MESSAGE

As beacons are often heard at very low signal levels. often among spurious signals, it is important that their message be simple, unambiguous and repeated frequently. It is also necessary to have a short period of carrier for frequency checking and strength measurement purposes, and to make it easy to distinguish the mark frequency where fsk is used.

The message should therefore consist of 5-10 seconds of carrier followed by the callsign and (if required) the grid locator at 10-12 words per minute. Nothing more. No gaps in transmission.

5. POWER

To avoid inefficient use of spectrum and presenting an unduly pessimistic impression of propagation conditions a minimum power of 10 watts e.r.p. is recommended at HF. Other than this there are no recommendations as to power or antennas other than suitability for purpose and the need to minimise interference.

6. OPERATION

Operation should be 24-hour continuous. (This does not preclude beacons that switch to different frequencies or beam headings on a regular basis.)

Beacon operators must try to ensure that the operational parameters of their beacons remains as stable as possible and that non-operational time is kept to a minimum.

7. STATUS

It is important that the operational parameters and status of all beacons be widely known. This information should be sent to the Region 1 HF beacon coordinator via the local beacon coordinator or spectrum manager at least once a year or whenever the operational parameters are changed.

Martin Harrison G3USF
Region 1 HF Beacon Coordinator
February 1996

PART OF C4.6 - AGENDA ITEM

Updated 26ix96

Worldwide List of HF Beacons

Freq	Call	Town	Loc	ERPw	Ant	Direct	Mode	Status
1801	PY2AMI	Americana SP	GG67IF	5	Inv. V		A1	OP?
1817	ZS1J	Plettenberg Bay	KF15PF	1	1/2 Dip	E-W	A1	24
1840	OK0EM	Kromeriz	JN89	5	LW		A1	Non-OP
3525	PY2AMI	Americana SP	GG67IF	5	Inv V		A1	OP?
3557.5	DK0WCY	Scheggerott	JO44VQ	30	Dipole		A1	0700-0800 1530-1700zz
3600	OK0EN	Kam. Zehrovice	JO70AC	150mw	Dipole	90/270	A1	24
3699	VK2RCW	Turramurra	QF56				A1	24
5470	LN2A	Sveio	JO29PO	550	Vert Monop	Omni	A1/F1	ITU24+
7048	PY2AMI	Americana SP	GG67IF	5	Inv V		A1	OP?
7049	PY7BCN	Fortaleza CE	HI06RF					OP?
7870	LN2A	Sveio	JO29PO	700	Vert Monop	Omni	A1/F1	ITU24+
10144.6	DK0WCY	Scheggerott	JO44VQ	30	Hor. Loop	Omni	A1	24zz
10407	LN2A	Sveio	JO29PO	750	Vert Monop	Omni	A1/F1	ITU24+
14070	PY2AMI	Americana SP	GG67IF	5	GP	Omni	A1	OP?
14100.0	JA2IGY	Mt Asama	PM84JK	0.1-100	Vertical	Omni	A1	IBP T+3
14100.0	KH6WO	Honolulu	BL11BK	0.1-100	Vertical	Omni	A1	IBP cycle
14100.0	LU4AA	Buenos Aires	GF05	0.1-100	Vertical	Omni	A1	IBP cycle
14100.0	OH2B	Espoo	KP20KE	0.1-100	X loops	Omni	A1	IBP cycle
14100.0	W6WX	Nr San Jose CA	CM87	0.1-100	Turnstile	Omni	A1	IBP cycle
14100.0	4U1UN	UN NY	FN20AS	0.1-100	Vertical	Omni	A1	IBP T+0
14100.0	4X6TU	Tel Aviv	KM72JC	0.1-100	Vertical	Omni	A1	IBP cycle
14100.0	ZS6DN	Pretoria	KF44DC	0.1-100	Vertical	Omni	A1	IBP cycle
14100.0	YV5B	Caracas	FK60NL	0.1-100	Vertical	Omni	A1	IBP cycle
14100.0	CS3B	Madeira	IM12	0.1-100	Vertical	Omni	A1	IBP cycle
14100.0	5Z4B						A1	IBP U/C
14100.0	OA4B						A1	IBP U/C
14100.0	VE8AT						A1	IBP U/C
14100.0	ZL6B						A1	IBP U/C
14100.0	4S7B						A1	IBP U/C
14405	LN2A	Sveio	JO29PO	750	Vert Monop	Omni	A1/F1	ITU24+
18068.1	IK6BAK	Montefelcino	JN63KR	12	Dipx2	Omni	A1	24
18100	PY2AMI	Americana SP	GG67IF	5	GP	Omni	A1	?
18101	VE3RAT	Thornhill ONT	FN03GL	1	Vertical	Omni	A1	24
18102	I1M	Bordighera	JN33UT	10	5/8 Vert	Omni	A1	24
18110	DL0AGS	Kassel	JO41NL	5	GP	Omni	A1	24
18110.0	YV5B	Caracas	FK60NL	0.1-100	Vertical	Omni	A1	IBP cycle
18110.0	LU4AA	Buenos Aires	GF05	0.1-100	Vertical	Omni	A1	IBP cycle
18110.0	JA2IGY	Mt Asama	PM84JK				A1	IBP U/C
18110.0	ZS6DN	Pretoria	KF44DC	0.1-100	Vertical	Omni	A1	IBP cycle
18110.0	4X6TU	Tel Aviv	KM72JC	0.1-100	Vertical	Omni	A1	IBP cycle
18110.0	4U1UN	U. Nations NY	FN20AS				A1	IBP U/C
18110.0	OH2B	Espoo	KP20KE	0.1-100	Vertical	Omni	A1	IBP cycle
18110.0	CS3B	Madeira	IM12	0.1-100	Vertical	Omni	A1	IBP cycle
18110.0	OA4B			0.1-100	Vertical	Omni	A1	IBP U/C
18110.0	5Z4B			0.1-100	Vertical	Omni	A1	IBP U/C
18110.0	VE8AT			0.1-100	Vertical	Omni	A1	IBP U/C
18110.0	ZL6B			0.1-100	Vertical	Omni	A1	IBP U/C
18110.0	4S7B			0.1-100	Vertical	Omni	A1	IBP U/C

20947	LN2A	Sveio	JO29PO	550	Vert Monop	Omni	A1/F1	ITU24+
21105	PY2AMI	Americana SP	GG67IF	5	Inv V		A1	OP?
21150.0	W6WX	Nr San Jose CA	CM87	0.1-100	Turnstile	Omni	A1	IBP cycle
21150.0	KH6WO	Honolulu	BL11BK	0.1-100		Omni	A1	IBP cycle
21150.0	LU4AA	Buenos Aires	GF05	0.1-100	Vertical	Omni	A1	IBP cycle
21150.0	YV5B	Caracas	FK60NL	0.1-100	Vertical	Omni	A1	IBP cycle
21150.0	JA2IGY	Mt Asama	PM84JK	0.1-100	Vertical	Omni	A1	IBP U/C
21150.0	4X6TU	Tel Aviv	KM72JC	0.1-100	Vertical	Omni	A1	IBP cycle
21150.0	ZS6DN	Pretoria	KF44DC	0.1-100	Vertical	Omni	A1	IBP cycle
21150.0	OH2B	Espoo	KP20KE	0.1-100	Vertical	Omni	A1	IBP cycle
21150.0	CS3B	Madeira	IM12	0.1-100	Vertical	Omni	A1	IBP cycle
21150.0	5Z4B			0.1-100	Vertical	Omni	A1	IBP U/C
21150.0	OA4B			0.1-100	Vertical	Omni	A1	IBP U/C
21150.0	VE8AT			0.1-100	Vertical	Omni	A1	IBP U/C
21150.0	4S7B			0.1-100	Vertical	Omni	A1	IBP U/C
21150.0	ZL6B			0.1-100	Vertical	Omni	A1	IBP U/C
21151.0	I1M	Bordighera	JN33UT	10	2 5/8 Vert	Omni	A1	24
24915.0	IK6BAK	Montefelcino	JN63KR	12	Dip x 2	Omni	A1	24
24930	DK0HHH	Hamburg	JO53AM	10	Dip	Omni	A1	24
24930.0	YV5B	Caracas	FK60NL	0.1-100	Vertical	Omni	A1	IBP cycle
24930.0	LU4AA	Buenos Aires	GF05	0.1-100	Vertical	Omni	A1	IBP cycle
24930.0	JA2IGY	Mt Asama	PM84JK	0.1-100	Vertical	Omni	A1	IBP U/C
24930.0	ZS6DN	Pretoria	KF44DC	0.1-100	Vertical	Omni	A1	IBP cycle
24930.0	4X6TU	Tel Aviv	KM72JC	0.1-100	Vertical	Omni	A1	IBP cycle
24930.0	4U1UN	UN NY	FN20AS	0.1-100	Vertical	Omni	A1	IBP U/C
24930.0	OH2B	Espoo	KP20KE	0.1-100	Vertical	Omni	A1	IBP cycle
24930.0	CS3B	Madeira	IM12	0.1-100	Vertical	Omni	A1	IBP cycle
24930.0	OA4B			0.1-100	Vertical	Omni	A1	IBP U/C
24930.0	5Z4B			0.1-100	Vertical	Omni	A1	IBP U/C
24930.0	VE8AT			0.1-100	Vertical	Omni	A1	IBP U/C
24930.0	4S7B			0.1-100	Vertical	Omni	A1	IBP U/C
24930.0	ZL6B			0.1-100	Vertical	Omni	A1	IBP U/C
24932	PY2AMI	Americana SP	GG67IF	5	GP	Omni	A1	OP?
28125	KA5FYI	Austin TX	EM10DI	1	Slope Dip			24
28175	VE3TEN	Ottawa	FN25	10	GP	Omni	A1	24
28180	OD5TEN	Tripoli	KM74WK				A1	Non Op
28180.3	I1M	Bordighera	JN33UT	5/20	2x5/8 Vert	Omni	A1	24
28182.0	SV3AQR	Amalias	KM07QS	4	GP	Omni	A1	24?
28186	ZS6PW	Pretoria	KG44DE	15	3 el. Yagi	N	A1	08-1800*
28195.1	IY4M	Bologna	JN54QK	20	5/8 GP	Omni	A1	ROBOT/24
28195	LU6DTS	La Plata	GF15AC	5	GP	Omni	A1	24
28195	VE6YF	Edmonton AB	DO25	10	GP	Omni	A1	24
28195	W2RTB	Rochester NY	FN13ED					?
28197.0	VE7MTY	Pitt Meadows		5	Vertical	Omni	A1	24
28197.9	LU5FSY	Rafael	FF98GS	5			A1	24?
28200.0	W6WX	Nr San Jose CA	CM87	0.1-100	Turnstile	Omni	A1	IBP cycle
28200.0	KH6WO	Honolulu	BL11BK	0.1-100	Vertical	Omni	A1	IBP cycle
28200.0	JA2IGY	Mt Asama	PM84JK	0.1-100	Vertical	Omni	A1	IBP U/C
28200.0	LU4AA	Buenos Aires	GF05	0.1-100	Vertical	Omni	A1	IBP cycle
28200.0	YB5B	Caracas	FK60NL	0.1-100	Vertical	Omni	A1	IBP cycle
28200.0	ZS6DN	Pretoria	KF44DC	0.1-100	Vertical	Omni	A1	IBP cycle
28200.0	4X6TU	Tel Aviv	KM72JC	0.1-100	Vertical	Omni	A1	IBP cycle
28200.0	OH2B	Espoo	KP20KE	0.1-100	Vertical	Omni	A1	IBP cycle
28200.0	CS3B	Madeira	IM12	0.1-100	Vertical	Omni	A1	IBP cycle
28200.0	OA4B			0.1-100	Vertical	Omni	A1	IBP U/C
28200.0	5Z4B			0.1-100	Vertical	Omni	A1	IBP U/C
28200.0	VE8AT			0.1-100	Vertical	Omni	A1	IBP U/C
28200.0	4S7B			0.1-100	Vertical	Omni	A1	IBP U/C
28201	EI							Planned
28202	ZS1J	Plettenberg Bay	KF15PF	5	1/2 Vert	Omni	A1	24*
28203.6	KD6UVN	Laguna Beach	CA DM13CN					?

28205	WA4SZE/4	McCaysville GA			Vertical	Omni	A1	24?
28205.0	DL0IGI	Mt Predigstuhl	JN67KQ	100	Vert Dip	Omni	F1	24
28207	KJ4X	Pickens SC	EM84PW	2	Vertical	Omni	A1	24
28207	KE4NL	Ninety Six SC	EM94AE	10	Vertical	Omni	A1	IRREG
28208	W8KFL/4	Venice FL	EL87TB	10	Vertical	Omni	A1	24
28209	NX2O	Staten I. NY?	FN30	10	GP	Omni	A1	24
28211	KC4DPC	Wilmington NC	FM14BF	5	Indoor Dip		A1	24
28210	N7SCQ	Portola CA	CM99ST	5			A1	24
28211.2	LA4TEN	Sotra I.	JP20MG	250	Vertical	Omni	A1	24
28212	LU1UG	Gen. Pico		5	GP	Omni	A1	IRREG
28213	PT7BCN	Fortaleza CE	HI06RF	5	GP	Omni	A1	IRREG
28214.5	KB4SB	SugarloafKeyFL	EL94FP	0.5	Dipole		A1	?
28216	KA9SZX	Champagne IL	EN50VD	1	CX 1000	Omni	A1	24
28215	GB3RAL	Nr Didcot	IO91IN	25	1/4 GP	Omni	F1	24
28217.9	N2BJB	Suffern NY	FN21WC				A1	?
28218	VE2TWO	Radisson PQ	FO13				A1	T QRT
28218	W8UR	Mackinaw C. MI	EN75	0.5	Vertical	Omni	A1	24
28219	PT8AA	Rio Branco AC	FI60CA	5	GP	Omni	A1	IRREG
28219	WB9VMY	Calumet OK	EM05	2	Vertical	Omni	A1	IRREG
28220	LU4XS	T. del Fuego	FD65PA	2	GP	Omni	A1	IRREG
28220	5B4CY	Zyyi	KM64PR	26	GP	Omni	F1	24
28220	KB9DJA	Mooresville IN	EM69RO	35	GP	Omni	A1	24
28221.4	K5PF	Apex NC	FM05	8	Vertical	Omni	A1	12-0300
28222	W9BZW	Lake Bluff IL	EN62BG	10	GP	Omni	A1	24
28222.8	HG5GEW	Tapolca	JN86NQ	10	GP	Omni	F1	24
28225	KW7Y	Camano I. WA	CN88SD	4	Vertical	Omni	A1	24
28225.7	LW5EJU							?
28226	PY2AMI	Americana SP	GG67IF	5	GP	Omni	A1	OP?
28230.9	ZL2MHF	Mt Climie	RE78BU	1	Vert. Dip	Omni	A1	24
28231	KQ4TG	Leland NC	FM14	7	GP	Omni	A1	24
28232	W7JPI	Sonoita AZ	DM41QP	5	3 el Yagi	045	A1	24
28233	KD4EC	Jupiter FL	EL96WV	7	Vertical	Omni	A1	24
28233	N2VMF	Freehold NJ					A1	?
28233.8	N6TWX	LawrencevilleGA	EM73		Double Zep		A1	IRREG
28235.5	VE1CBZ	Fredericton NB		3	Vertical	Omni	A1	24
28237.6	LA5TEN	Nr Oslo	JO59JV	10	5/8 GP	Omni	A1	24
28237	NV6A	San Diego CA	DM12	0.5	Yagi		A1	24
28239	YO2X	Timisoara	KN05OS	2	Dipole		A1	IRREG
28239.0	K8UZW	Parma OH	EN91	16	Dipole		A1	?
28240	N3SME	Freeland PA?	FN21BA				A1	?
28240	AB8Z	Parma OH	EN91DJ				A1	24?
28240.0	VE3SBB	Thunder Bay	EN58				A1	24?
28244.0	WA6APQ	Long Beach CA	DM13	30	Vertical	Omni	A1	24
28244	VE9BEA	NB						?
28244	KF9N	Gray TN	EM86RJ	5	Vertical		A1	?
28245.5	K0VXU	Stilwell KS	EM28QT		4-el Yagi		A1	IRREG
28248	K8NHE	Mackinaw C. MI	EN75SN	0.05	Vertical	Omni	A1	24?
28250.1	Z21ANB	Bulawayo	KG47	25	GP	Omni	F1	24
28249	PI7BQC	Haarlem	JO22HK	2			A1	24
28250FV	EA3JA	Barcelona	JN11BI				A1	24
28250.8	S55ZRS	Mt Kum	JN76MC	1	Vertical	Omni	A1	24
28250	K0HTF	Des Moines IA	EN31EN	10	GP	Omni	A1	24
28251.3	WJ9Z	St Francis WI	EN62BX	15	Vertical	Omni	A1	24
28252.5	OH2TEN	Lohja	KP20AG	50	5/8 GP	Omni	A1	24
28252	WJ7X	Prior Lake MN	EN34HQ	5	Vertical	Omni	A1	24
28253	VK3SIX	Wannon Falls	QF02WH	25	GP/5el	Om/E	A1	OP?
28254.5	WA4SLT	Hastings FL	EL99GQ	20	Vertical	Omni	A1	12-24h
28256	KD4BFF	Morrisville NC	FM05OU		.		A1	?
28257.5	DK0TEN	Konstanz	JN57NP	40	GP	Omni	F1	24
28257	KM4Y	Hollywood FL	EL96UA				A1	IRREG
28259.8	KA1NSV	Hyannis MA	FN41UP	10	Vert.Dip.	Omni	A1	24
28260	VK5WI	Nr Adelaide	PF95GD	10	GP	Omni	A1	24
28262	VK2RSY	Dural	QF56MH	25	1/2 Vert	Omni	A1	24
28263	WB4LJY	Seffner FL					A1	OP?
28264	VK6RWA	Nr Perth	OF78WB	20	Vertical	Omni	A1	24
28265	VK4RIK	Cairns	QH23				A1	24

28265.0	LU1FHH	Santa Fe	FF98				A1	24
28266	VK6RTW	Albany	OF84	4	Vertical	Omni	F1	24
28266.7	LZ1TEN		KN12PO	1-.001	Vertical	Omni	A1	24
28268	OH9TEN	Pirttikoski	KP36OI	20	1/2 GP	Omni	A1	24
28268	KB4UPI	Birmingham AL	EM63NM	20	1/4 Vert	Omni	A1	QRT?
28269	VK8VF	Darwin	PH57KP	40	Vertical	Omni	A1	24
28269	WB4JHS	Kissimmee FL	EL96	5	Vertical	Omni	A1	IRREG
28270	VK4RTL	Townsville	QH30JS				F1	QRT?
28270	KF4MS	St P'burg FL	EL87PS	5	GP	Omni	A1	24
28271	KD4UAI	Smithfield NC	FM05TL	5	Vertical	Omni	A1	?
28272	WA9TPZ	Greenfield IN	EM79CS	100	Dipole		A1	?
28272.0	KN5H	Las Cruces NM	DM62	5	Vertical	Omni	A1	24
28275	K4VXP	Campbell'villKY	EM77IH	QRP			A1	?
28275	ZS1LA	Still Bay	KF05QK	20	3-el Yagi	N	F1	24
28276.8	N0JAR	Newton IA	EN31LP	5			A1	24
28276	NS8V	Grand Rapids MI	EN73EW	5	Ringo	Omni	A1	24
28277.6	DF0AAB	Kiel	JO54GH	10	GP	Omni	F1	24
28279	KG5YB	Tyler TX	EM22				A1	24
28280	NO6J	1000 Oaks CA	DM04NF	5		Omni	A1	24
28280.4	K5MW	Austin TX	EM10DH	20	GP	Omni	A1	24
28280	KD4NOQ	Memphis TN	EM55BE				A1	24
28282	VE2HOT	Montreal	FN35BJ	5	Vert Dip		A1	24
28282.7	OK0EG	Hradec Kralove	JO70WE	10	GP	Omni	F1	24
28282	LU2HDX	Villa Carlos	FF78RO	10	Vertical	Omni	F1/rtty	IRREG
28283.5	K8LKC	3 Rivers MI	EN71EX	1	1/4 GP	Omni	A1	24?
28282.5	W0ERE	HighlandvilleMO	EM36IW				A1	?
28284	N2JNT	Troy NY	FN32DR	1	GP	Omni	A1	24
28284	KD7K	West Jordon UT	DN40AP	5			A1	?
28284	KJ7AZ	Rawlins WY	DN61JS	5			A1	24
28285	KB7EFZ	Portland OR	CN85	1	5/8 GP	Omni	A1	0,15,30,45m
28285	KB7DQJ	Pt Orchard WA	CN87				A1	24?
28285	VP8ADE	Adelaide I.	FC52WK				A1	NON-OP
28285	KB2YTW	Bergen NY					A1	24?
28286	N5AQM	Chandler AZ	DM43AH	2	Vertical	Omni	A1	24?
28287.3	KE2DI	Rochester NY	FN13AC	5?	GP	Omni	A1	24
28289	WJ5O	Corpus Christi	TX EL17	2			A1	24?
28290.4	SK5TEN	Strengnes	JO89KK	75	GP	Omni	A1	24
28290.3	KE4YVL	Sophia NC	FN65RR	3	Vertical	Omni	A1	?
28292	W3RGQ	Berwick PA	FN11UB	5	Vertical	Omni	A1	IRREG
28291	KB9NV	Collinsville IL	EM58AQ	5	Vertical	Omni	A1	24
28292	LU2FFV	San Jorge		5	GP	Omni	A1	IRREG
28292.3	KS7K	Des Moines WA	CN87UJ				A1	?
28293	WC8E	Deer Park OH	EM79SD	10	Ringo		A1	24
28295.1	SK2TEN	Kristineberg	JP95HB	5	Vertical	Omni	A1	24
28294	KE0UL	Greeley CO	DN70	5	Vertical	Omni	A1	24
28295.6	W3VD	Laurel MD	FM19NE	10	Vert Dip	Omni	A1	24
28299.0	VE9MS	Fredericton NB	FN65	5	Loop		A1	24
28301.0	PI7ETE	Amersfoort	JO22QD	0.5	Vertical	Omni	F1A	24?
28345	W1FJE							IRR
28470	EA1BCN		JO55VO					?

IBP = International Beacon Project station. These beacons transmit for ten seconds on each frequency in turn in the sequence shown below. Transmissions consist of callsign at 22 wpm and 100 watts followed four 1-second dashes at 100 watts, 10 watts, 1 watt and 0.1 watt. In a transitional phase some beacons still operate on 14100 only with 1-minute transmissions also phasing down from 100 watts to 0.1 watt. Equipment is TS-50, Cushcraft R-S vertical and a Trimble Navigation GPS receiver to ensure sychronization, with a control unit built by NCDXF.

		Frequency				
Country	Call	14100	18110	21150	24930	28200
United Nations NY	4U1UN	00.00	00.10	00.20	00.30	00.40
Northern Canada	VE8AT	00.10	00.20	00.30	00.40	00.50
USA (CA)	W6WX	00:20	-	00:40	-	01:00

Hawaii	KH6WO	00.30	00.40	00.50	01.00	01.10
New Zealand	ZL6B	00.40	00.50	01.00	01.10	01.20
West Australia	VK6	00.50	01.00	01.10	01.20	01.30
Japan	JA2IGY	01.00	01.10	01.20	01.30	01.40
China	BY	01.10	01.20	01.30	01.40	01.50
Siberia	UA	01.20	01.30	01.40	01.50	02.00
Sri Lanka	4S7B	01.30	01.40	01.50	02.00	02.10
South Africa	ZS6DN	01:40	01.50	02:00	02:10	02:20
Kenya	5Z4B	01.50	02.00	02.10	02.20	02.30
Israel	4X6TU	02:00	02:10	02:20	02.30	02:40
Finland	OH2B	02:10	02:20	02:30	02:40	02:50
Madeira	CS3B	02.20	02.30	02.40	02.50	00.00
Argentina	LU4AA	02:30	02:40	02:50	00.00	00:10
Peru	OA4B	02.40	02.50	00.00	00.10	00.20
Venezuela	YV5B	02:50	00.00	00:10	00:20	00:30

W6WX and KH6WO are not currently licensed for 18 or 24 MHz operation.

? Activity pattern uncertain V= variable * May break for QSOs

+ LN2A is part of an ITU field-strength measuring programme. Its schedule is:
1 14409 00-04 20-24 40-44 mins
2 20947 04-08 24-28 44-48
3 5470 08-12 28-32 48-52
4 7870 12-16 32-36 52-56
5 10407 16-20 36-40 56-00

(Transmissions are a mix of morse and RTTY: best read about 800Hz above nominal.)

zz Normal transmission: DK0WCY beacon (x3) + 4 secs dash
During auroras: DK0WCY beacon (x3) aurora + short dashes
or DK0WCY beacon (x3) strong aurora + 9 secs dash
At every full 5 minutes basic solar/geophysical information and forecast on cw updated around 0630utc. May not operate on contest weekends. 1 hour earlier in summer.

Please notify errors/changes to Martin Harrison G3USF, HF Beacon Coordinator, Region 1 of the International Amateur Radio Union, by e-mail to poa01@keele.ac.uk or to 1 Church Fields, Keele, Staffs ST5 5HP, England. Tel: (home) +44 (0)1782 627396 Fax (work) +44 (0)1782 583452.

ANNEX A

IARU REGION 1 VHF / UHF BEACONS
A GUIDE TO GOOD PRACTICE

Beacon transmitters have long been used to indicate the presence of VHFopenings and have contributed significantly to our knowledge of propagation. As numbers of beacons, particularly on 50MHz, is increasing rapidly and the amount of spectrum available for them is under pressure, it is important that beacon builders are aware of the technical parameters required, the reasons for them and the procedure to be followed to obtain an agreed frequency.

It is not intended that this document should specify the exact purpose of a beacon, its power level or the number of beacons in any country as this should be agreed within the national society concerned. It is also not intended to be applied rigorously to experimental beacons or beacons with a special purpose. it should however apply to the vast majority of VHF/UHF beacons for propagation monitoring purposes.

1. CO-ORDINATION PROCEDURE.

The existing requirement for co-ordination of regional beacons will be retained. For non co-ordinated beacons the beacon proposal should be agreed with the national society (with consultation with neighboring societies where appropriate) and a provisional frequency chosen. If the frequency is below 146 MHz or the beacon has an ERP of greater than 10W then the frequency should be submitted to the IARU VHF beacon co-ordinator to check for potential interference problems.
(See also section IXa of the Handbook)

2. TRANSMISSION MODE

Amplitude or Frequency shift keying (A1A or F1A) may be used. However for F1A the old standard of 850 Hz is too wide a shift for the number of beacons currently in use.

When F1A is used on frequencies above 52 MHz the frequency shift must be 400Hz, arranged so that the beacon radiates on its nominal frequency during the short period of carrier between sending its call and locator (see para 4). It then moves to "space", 400Hz below and then keys back to nominal for "mark". In this way the transmission sounds like A1A in a USB receiver.

In the 50 MHz band, where beacons are closely spaced, A1A is the preferred mode. If F1A is used it is recommended that the frequency shift be 250Hz.

Care must be taken to ensure that the transmission has very low levels of spurious signals, key clicks and phase noise as beacons are often located on good sites where the potential for interference is high.

3. FREQUENCY ACCURACY AND SPACING

All co-ordinated and notified beacons should operate within the beacon segment of the band plan and be on a frequency which is a multiple of the frequency spacings in the following table. For example, beacons in the 435 MHz band should be on 432.900, 432.902, 432.904 MHz etc.

Band	Freq. Spacing
50 MHz	1 kHz[1]
70 MHz	2 kHz[1]
145 MHz	2 kHz[1]
435 MHz	2 kHz

[1] In these bands it is likely that the frequency spacing will need to be reduced to half these values if the number of beacons continues to grow at the present rates.

4. MESSAGE

As beacons are often heard at very low signal levels together with spurious signals it is important the message is simple, unambiguous and repeated frequently. It is also necessary to have a short period of carrier for frequency checking purposes and to make it easy to distinguish the mark and the frequency when using FSK.

The beacon message should consist of a callsign, (for identification,) and a carrier of 10 seconds, (for signal strength measurement for propagation studies purposes.) The message may also contain other information if required, e.g. locator, automatic identification (on packet radio or some other means), antenna direction, (if the beacon switches between several antennas). The total message should not exceed 30 seconds. The keying speed should be approximately 12 wpm.

5. OPERATION

Operation should be 24 hour continuous. This does not preclude beacons that switch to different beam headings or power levels on a regular basis. Switched beacons must be clearly identified as such and must be submitted to the IARU VHF Beacon Co-ordinator.

Beacon operators must try to ensure that the operational parameters of their beacons remain as stable as possible and that non operational periods are kept to a minimum.

6. STATUS

It is important that the operational parameters and status of each beacon are widely known. The information should be sent to the IARU VHF beacon co-ordinator via the local beacon co-ordinator or spectrum manager at least once per annum or when the operational parameters are changed to ensure the IARU list is up to date.

ANNEX 10

CTCSS frequencies in Hz to be used for repeater access.

67.0 - A	**131.8 - T**
71.9 - B	**136.5 - U**
74.4 - C	**141.3 - V**
77.0 - D	**146.2 - W**
79.7 - E	**151.4 - X**
82.5 - F	**156.7 - Y**
85.4 - G	**162.2 - Z**
88.5 - H	**167.9 - AA**
91.5 - I	**173.8 - AB**
94.8 - J	**179.9 - AC**
97.4 - K	**186.2 - AD**
100.0 - L	**192.8 - AE**
103.5 - M	**203.5 - AF**
107.2 - N	**210.7 - AG**
110.9 - O	**218.1 - AH**
114.8 - P	**225.7 - AI**
118.8 - Q	**233.6 - AJ**
123.0 - R	**241.8 - AK**
127.3 - S	**250.3 - AL**

The tones have to be accurate within +- 1%

ANNEX 11

ANNEX C

DTMF FREQUENCY PAIRS FOR CONTROLLONG REPEATERS AND VOICE-MAILBOXES

The hardware part of the DTMF system consists of a keyboard with 12 push-buttons using the symbols #,*,A,B,C,D and figures from 0 to 9. When pressed each push-button will activate 2 tones simultaneously, one above, the other below 1000 Hz, according to the following scheme :

Hz	1209	1336	1477	1633
697	1	2	3	4
770	4	5	6	B
852	7	8	9	C
941	*	0	#	D

For example, if No. 5 is pressed, the tone combination 770 Hz/1336 Hz will be the result. The tone frequencies have to be accurate within +/- 1.5 %.
Each tone burst should be betwen 65 and 105 msec long. The pause between tones should be at least 200 msec.

User functions to control the repeater :

To control the basic functions of repeaters and voice-mailboxes, the following codes should be used :

Basic commands :

* Repeater opens, (like the 1750 Hz)
* + 0 Repeater opens and transmits callsign, location and - if necessary- the CTCSS tone.
* + 1..9 Additional functions (squelch control, power level and others)

These basic commands can be extended and it is possible to control special functions of the repeaters or voice-mailboxes

ANNEX 12

CHANNEL DESIGNATION SYSTEM FOR VHF/UHF **ANNEX D to doc/96/TVI/C5.47**

The channel naming sub-group recommends the following naming scheme for VHF and UHF voice FM channels.

1) For each band, there should be a "designator letter":

F 51 MHz

V 145 MHz

U 430 MHz

2) Each "designator letter" should be followed by two (for 50 and 145 MHz) or three (for 430 MHz) digits which indicate the channel.

3) If a channel is used as a repeater *output*, its designator should be preceded by the letter "R".

4) On 51 MHz the channel numbers start at "00" for 51.000 MHz and increment by one for each 10 kHz.

5) On 145 MHz the channel numbers start at "00" for 145.000 MHz and increment by one for each 12.5 kHz.

6) On 430 MHz the channel numbers start at "000" for 430 MHz and increment by one for each 12.5 kHz.

Examples

F51 Simplex frequency 51.510 MHz

RF79 Repeater with output frequency 51.790 MHz

V40 Simplex frequency 145.500 MHz (the old S20)

RV48 Repeater with output frequency 145.600 MHz (the old R0)

U280 Simplex frequency 433.500 MHz (the old SU20)

RU002 Repeater with output frequency 430.025 MHz (the old FRU1)

RU242 Repeater with output frequency 433.025 MHz (the old RB1)

RU368 Repeater with output frequency 434.600 MHz (the old RU0)

RU692 Repeater with output frequency 438.650 MHz (the old R70)

ANNEX 13

50 - 52 MHz BANDPLAN (amended Tel Aviv 1996)

IARU Region 1 bandplan		Usage	
50.000		50.020 - 50.080	Beacons
	TELEGRAPHY (a)		
50.100		50.090	Telegraphy centre of activity
50.100		50.100 - 50.130	International Telegraphy/SSB
	ALL NARROW-BAND MODES (TELE-	50.110	DX Calling frequency (c)
50.150	GRAPHY, SSB, AM, RTTY, SSTV,		SSB Centre of activity
50.185	ETC.) (b)		Crossband centre of activity
50.50060.200			MS centre of activity
50.500		50.510	SSTV (AFSK)
		50.550	FAX working frequency
		50.600	RTTY (FSK)
		50.620 - 50.750	Digital communications
	ALL MODES	51.210 - 51.390	FM repeaters input channels,20/10 kHz spacing (e)
		51.410 - 51.590	FM
		51.510	FM calling frequency
		51.810 - 51.990	FM repeaters output channels, 20/10 kHz spacing (e)
52.000			

NOTES ON THE 50 - 52 MHz BANDPLAN

1. **IARU REGION 1 BANDPLAN**

This bandplan, first adopted at the IARU Region 1 Conference in Torremolinos (1990), is recommended for use in those countries in the European part of Region 1 which allow amateurs to operate in this part of the radio spectrum. In many countries in the African part of Region 1 (see footnotes accompanying the ITU frequency allocation table) the 50 - 54 MHz band is allocated to the Amateur Service on a primary basis, and in some cases, like for instance in South Africa, an adaptation of the Region 2 bandplan is used.

1.1. Footnotes

a. Telegraphy is permitted over the whole band; Telegraphy exclusive between 50.000 - 50.100 MHz.

b. The designation "Narrow Band" refers to transmission modes occupying a bandwidth of not more than 6 kHz (De Haan, 1993).

2. **USAGE**

The following notes are referring to the Usage column in the bandplan. As already set out in the introduction to section IIc, in the right amateur spirit operators should take notice of these agreements which are made for operating convenience, but no right to reserved frequencies can be derived from a mention in the Usage column or from the following notes.

2.1. Footnotes

c. The intercontinental DX calling frequency 50.110 MHz should not be used for calling within the European part of Region 1 at any time.

d. Channelized equipment: On this band the NBFM channel spacing is 20 kHz with 10 kHz offset.
For definition of NBFM see section VIb

e. In those countries within the European part of IARU Region 1 where it is allowed to set up FM repeaters in the 50 MHz band, the indicated channels are recommended in order to establish a commonality.
For numbering of NBFM channels see recommendation J
In those countries where the National Authorities do not permit repeaters to operate with output frequencies above 51MHz, repeater output frequencies may be 500kHz below the repeater input frequencies.

REVISION OF THE 145 MHz BANDPLAN ANNEX 14

IARU Region 1 bandplan		Usage	
144.000			
	E.M.E. SSB & Telegraphy		
144.035			
144.035			
		144.050	Telegraphy calling
	TELEGRAPHY (a)	144.100	Random MS Telegraphy reference frequency (m)
144.150		144.140 - 144.150	FAI activity telegraphy
144.150		144.150 - 144.160	FAI activity SSB
	SSB	144.195 - 144.205	Random MS SSB (m)
		144.300	SSB Calling
144.400		144.390 - 144.400	Random MS SSB (m)
144.400			
	BEACONS		
144.440			
	BEACONS(j)	144.490	SAREX uplink (q)
144.490			
	GUARD BAND		
144.500			
144.500		144.500	SSTV calling
		144.525	ATV SSB talkback centre of activity
	ALL MODE (f)	144.600	RTTY calling (n)
		144.700	FAX calling
		144.750	ATV calling/talk-back
144.800			
144.800			
	DIGITAL COMMUNICATIONS (g,h)		
144.850			
	DIGITAL COMMUNICATIONS (g,h,k)		
144.990			
144.994			
	NBFM REPEATER INPUT, 12.5 kHz spacing, (channel freqs 145.000 – 145.1875 MHz) (c)		
145.1935			
145.194		145.200	see note p
	NBFM SIMPLEX CHANNELS	145.300	RTTY local
	12.5kHz spacing, (channel freqs 145.-200– 145.5875 MHz) (c)	145.500	(Mobile) calling
145.5935			
145.594			
	NBFM REPEATER OUTPUT, 12.5kHz spacing, (channel freqs 145.600–14-5.7875 MHz) (c) (d)		
145.7935			
145.800		145.800	see note p
	AMATEUR SATELLITE SERVICE (e)		
146.000			