

Flashback to November, 1980:

A shortwave listener at the dials of a brand new Sony ICF-2001. His or her thoughts while tuning the bands—"I still can't get used to just watching the digits zip by as I tune around; I miss seeing the dial pointer tremendously. On the other hand, I don't have to fool around any more with those *!#@ charts or guessing at the frequency. Talk about easy! Lets see, I think I'll start at the top end of 19 meters." [the radio is tuned by the 'slewing' buttons]. "What a mess! Those Soviet jammers are everywhere, blocking every Radio Free Europe and Radio Liberty outlet up here." [more tuning]

"Hey, what's this? Rough accented English....oops, there's Brezhnev in Russian fading up in the background; I should of guessed! So, it's Radio Moscow or an Eastern European presenting the propaganda of the day." [more tuning]. "There's the Radio Peking interval signal, not news but it's always interesting to realize what a long haul from China that broadcast makes....It's 2100 GMT, guess I could check for AWR—Andorra on 15045, I sure need to finally send a reception report to Andorra." [more tuning] "Oh, wait! I can catch the obituaries on Radio Free Grenada after the 2100 news! I think that's 15050 kHz. I can get the Andorra reception report another day." [more tuning]

[30 minutes later]. "Think I'll check for the new United Arab Emirates Station mentioned on DX Jukebox the other nite." [more tuning] "Well, no luck, they must still be testing. I can check the experimental HCJB transmitter on 26020 to see how propagation is doing. That may be part of the problem."

[A few minutes later]. "Things are pretty slow, guess I'll park on AFRTS, listen to a ball-game and finish reading my Communications World." [Rummaging around the desk while tuning]. "Oh, there's my order from for the 1981 WRTH. Wonder how much more it'll cost me this year—the 1980 one was \$14!" [tuning to AFRTS]. "Well, no ball-game yet, just the news....Guess I'm going to have to get used to hearing 'President Reagan' now instead of 'President Carter'—what a change." [we fade away during station ID....] this is the American Forces Radio and Television Service—AFRTS, Washington....]





A F R T S SHORTWAVE

QSL



UNITY IN ACTION

ANC 1912-1982

radio farabundo martí DEL FMLN

VOZ DEL PUEBLO SALVADOREÑO EN LUCHA **RADIO VENCEREMOS**
EL SALVADOR C.A.

Radiodifusora:
Transmitiendo desde:
Frecuencia de:
Potencia:
Horas:
Fecha:

SHORTWAVE BROADCASTING IN THE 1980s

A HOBBY PERSPECTIVE

Mitch Sams

EDITOR'S FOREWORD

As the editorial team began to finalize plans for Proceedings 1990, one of us had the wonderful idea to publish a record of shortwave broadcasting in the '80s as seen from the perspective of the hobby listener/DXer. As we cast about for a suitable author, Mitch Sams' name kept coming up. Mitch was one of the most active SWBC DXers throughout the '80s, was one of the founders of Ozark Mountain DX Club, and was a guiding hand in the modern incarnation of our own parent organization, fine tuning.

We approached Mitch with our idea of publishing a record of the 1980s. He agreed with alacrity and went right to work. In retrospect, none of us realized how difficult a task we had set for him. Writing the history of the immediate past must surely be one of the most arduous writing challenges of all—every reader is an expert in the subject, and the events being discussed are often still unfolding.

Mitch did a tremendous amount of research in the next 6 months and submitted his article for the 1990 edition. Unfortunately, neither we nor Mitch felt it to be the mix of scholarship, romance and factual record that we all wished to create. We all agreed to postpone publication until 1991. Mitch very willingly cast his net wider, sought input from a number of leading DXers in North America and abroad and virtually started over.

The history that you are about to read is the result of an unbelievable amount of work by Mitch with help from many others. We hope that you will agree that this article is an excellent record of the 1980s and a real contribution to the documentation of this avocation we all love. Thank you very much, Mitch.

John H. Bryant for the Proceedings '91 Staff

INTRODUCTION

Technological advances in shortwave receiver design introduced during the 1980s had a profound impact on the media and the hobby itself. Affordable, high performance, easy to operate, portable digital readout receivers changed listening habits and put shortwave at the fingertips of casual DXers and listeners alike. People who never had an interest in racks of gear and hours of tuning the noisy bands became involved in shortwave listening during the 1980's. For hobby clubs, the arrival of high quality photo-reduction copy machines and early versions of desk top publishing software fostered major improvements in the graphic design and in the legibility of most club bulletins. In some clubs, editors and contributors communicated via computer modem or Fax, radically shortening reporting lag time and accelerating the flow of information.

With the arrival of home computers, hobby software was used by many to make serious listening a bit more organized and efficient. Graphically oriented grayline and propagation predictors became popular with listeners. Radio schedule databases became available that contained hundreds of station schedules which could be easily and quickly updated. By the late 1980's several major receivers offered computer interfaces. This innovation made it possible for listeners to download schedules directly into the radio's memory. Home computer-based word processing also served to reduce the time required to produce reception reports and follow ups.

The decade of the 1980's produced many exciting moments for listeners. Political upheaval was monitored first hand on shortwave from Nicaragua and El Salvador, whose civil wars played out over the airwaves during most of the decade. Iran and Iraq fought each other not only with guns, rockets, and bombs but also with shortwave jamming and propaganda. At the close of the decade, the science of jamming suffered an almost fatal setback as a strange silence fell over the bands when the Soviet Union shutdown it's huge arsenal of jammers. Simultaneously, Eastern Block countries freed themselves from Moscow's control one by one, their stations changed format, sometimes their names and interval signals and even began to criticize the former communist leaders. On three separate occasions shortwave listeners were the first to know that a Soviet president had died. When Brezhnev, Andropov and Chernenko each died while in office, Radio Moscow played uninterrupted somber music and then finally made the announcement

to the world. The Falklands War, hostage releases, and Tiananmen Square were also witnessed over the airwaves.

Several countries became active on shortwave during the '80s—Syria, Marshall Islands and Tonga, for example. Others went silent Andorra, Grenada, Maldives, Comoros, Falklands and Mauritius. Some countries changed names, such as Rhodesia, Upper Volta and Burma. Cambodia couldn't decide, changing to "Kampuchea" then later back to "Cambodia."

AFRTS, the friendly voice from home for US service personnel overseas, AFRTS, left shortwave in favor of satellite feeds to local stations at overseas military posts. As part of this change the shortwave station, FEN, in Japan left the air.

Privately-owned commercial shortwave broadcasting was again attempted in the US during the 1980's. Radio station WRNO in New Orleans came on the air early in the decade followed by a flood of privately funded US shortwave stations. Most of these new stations were founded and solely supported by religious organizations. Two new commercial publications geared to the shortwave listener appeared during the 1980's: Popular Communications and Monitoring Times. Happily, old-timer Popular Electronics returned. Two publications, however, ceased publications—Elementary Electronics and Communications World.

A comparison between the 1980 World Radio and TV Handbook (WRTH) and the 1990 WRTH provides a snapshot of changes that occurred during the '80s. There are noticeable differences in the country listings of the 1980 WRTH as compared to the 1990 WRTH. Latin America underwent the greatest change. For example, there were 43 Brazilians listed in the 3 MHz band in 1980, but only 18 were listed by 1989. Similarly, 14 Brazilians were listed in the 2 MHz region, down to 7 by 1989. Colombia and Venezuela lost well over half their shortwave outlets, really quieting 60 meters down. These stations on 60 meters used to produce some of the best signal levels from Latin America on shortwave.

The Gulf states of Qatar, Oman and United Arab Emirates (UAE) list only a handful of 100 kw, or less, transmitters in 1980. However, during the decade they each spent oil money quite freely to upgrade their shortwave stations to the world class transmitter power levels. At decade close, their 250 kw and 500 kw signals were all very easy to hear. Indonesia lost nearly 40 percent of its shortwave tropical band outlets during the '80s, with most moving to medium wave or FM.

There was good news from Peru. The number of stations active on shortwave more than doubled in the 1980's. Peru has often been a center of new activity on the bands, due in part to the lax government regulation. Many of these newest Peruvians operated freely as completely unlicensed stations and/or broadcast on frequencies not originally allocated to them. Another hotspot was China where the number of Chinese regional stations increased as the country modernized.

Contrary to predictions of the decline of shortwave radio, the international shortwave bands became noticeably more crowded in the 80's. Overall, there are many more stations listed in the 1990 WRTH than were listed in the 1980 volume. The growth was most dramatic in fairly well defined frequency ranges, mostly on the "edges" of the shortwave bands. Frequency ranges that were once in the quiet spectral "suburbs" became crowded and bustling with "inner city" activity. The greatest increase in station count occurred in the 9800 to 9950 kHz frequency range where the station count tripled during the 80's. Other fringe frequency areas such as 7300-7500 kHz, 9400-9500 kHz, 11600-11700 kHz and 12000-12100 kHz saw a 40 to 100 percent increase. The new 22 meter band (13600-13800 kHz) had one lone Chinese outlet listed in 1980; as a result of an international agreement recognizing the new band, 36 stations cropped up by 1990.

THE STATIONS: A DECADE OF SHORTWAVE BROADCASTING

As expected, turmoil often made for the most dramatic shortwave listening in the '80s. Like other decades, the 1980s had its share of strife:

THE DEMOCRATIC MOVEMENT IN CHINA

One of the most dramatic events of the decade occurred in the last half of 1989. For much of the Spring of 1989, students and other young people had occupied famous Tiananmen Square, Beijing, at the heart of the Peoples Republic. These idealistic demonstrators for democracy and freedom even maintained their vigil during the historic visit of then USSR Premier Gorbachev. This act and the general thrust of the movement was deeply embarrassing to the aging Chinese leader. About the first word that the world received of the bloody suppression of this movement was on June 4th, 1989 at 0300 UTC. Listeners to Radio Beijing were stunned to hear a 75 second denunciation of the governments massacre of protesters in Tiananmen Square. US networks later carried recordings of these shortwave transmissions on the nightly news. The distraught Radio Beijing announcer described the carnage and then bluntly criticized the government for this action. Virtually everyone listening knew that the announcer had risked his life to

make this unprecedented statement on international shortwave radio. He was quickly replaced at Radio Beijing, although his recorded statement was mysteriously repeated during the 0400 broadcast.

The hardline Chinese leaders did not back down from their new/old strategy of suppression in spite of almost worldwide condemnation of their behavior. The denunciation of the leadership on Radio Beijing was the first and last effective public defiance heard from the inside China to protest the massacre. A clandestine station called Radio Democracy developed from this event.

DEMOCRATIZATION OF EASTERN EUROPE

At the beginning of 1989, a very historic process began. The collapse of Soviet influence in Eastern Europe in early 1989 and the thawing of the Cold War had immediate impact on shortwave broadcasting from Central and Eastern Europe. When Soviet jamming, long a major presence on the bands, stopped, listeners were very surprised. The Soviets possessed the largest network of shortwave jammers in history. As the decade closed, USSR officials were dismantling or converting the entire jamming network to peace time uses. Optimism for peace ran so high in Europe at the close of the decade that some political leaders questioned the continued need for US-funded operations like Radio Free Europe and Radio Liberty. By 1990, it looked as if their days were numbered.

As the Berlin wall fell at the end of the year and the rest of Eastern Europe broke from the Soviet grip, shortwave broadcasters in the region quickly reacted. Programming, station titles, and even the interval signals were changed. Programming was much more open now, with a wide variety of viewpoints replacing the numbing sameness of 'the Party Line.' Most stations even began to criticize the communist governments and openly call for withdrawal of Soviet troops. Radio Prague reverted to the interval signal used before World War II.



CIVIL STRIFE IN CENTRAL AMERICA

In Nicaragua and El Salvador, bloody guerilla wars continued. These conflicts were very prominent on shortwave, with several long-lived clandestine broadcasters operating throughout the '80s. It was an interesting time; it was fairly common to find two or three of these stations every night on out-of-band frequencies in the 5, 6 or 7 MHz regions.

Radio Venceremos was one of the most widely heard El Salvadoran clandestines, and happily for country counting listeners, it did broadcast from inside El Salvador. For most of the decade, this was the only way for SWBC DXers to hear El Salvador. Radio Farabundo Marti was another El Salvadoran clandestine that was widely reported.

Radio Quince de Septiembre and La Voz de Sandino were clandestine shortwave broadcasters that were directed against the Nicaraguan government. LV de Sandino sounded like a rag-tag operation while Quince seemed much more "professional." Later when Nicaraguan president Ortega was voted out of office, most of these clandestine operations went silent.

Also there were several anti-Castro stations on the air during the 1980's: R. Libertad Cubana, La Voz de Alpha 66, La Voz del CID, and La Voz de la Junta Patriotica Cubana. Most were run by expatriot organizations based in Miami. "Commandante David" was often heard on these stations, and sometimes even appeared on national TV network news in the US. At one time, La Voz del CID was openly relayed by Radio Clarin a long time licensed station in the Dominican Republic.

The US Reagan administration managed to push through the funding for an anti-Castro shortwave broadcaster based in south Florida. Radio Marti came on the air with programming intended to catch the attention of the average Cuban and to provide them with the US viewpoint on matters affecting Cuba. The station was named after one of Cuba's most celebrated national heroes. However, the initial response from listener's was not good and much of the programming was not well produced. After correcting some of these problems, the station remained on the air despite continuing criticism.

THE FALKLANDS WAR

The invasion of the Falkland Islands by Argentina in 1982 provided another backdrop for very interesting activity on the shortwave bands. As Argentinian forces overran the 84 British marines stationed on the islands, they took control of one of the hobby's prime DX targets, the Falkland Islands Broadcasting Station. They renamed it Radio Islas Malvinas—after the name by which Latin American know the Falklands. They also took control of the short-wave aeronautical station on the island and used it for broadcast purposes. Some DXers were able to hear and QSL both transmitters.

The British responded to this invasion by assembling a floating armada to retake the islands. On the way to the Falklands, British ships docked in Freetown, Sierra Leone. DXers tuned into the Sierra Leone Broadcasting Service during the 0600 UTC English news could, at times hear the names of British warships currently docked in the harbor.

The Falklands war produced two interesting, and opposing, clandestine broadcasters. Argentina created "Liberty," a rather blatant propaganda broadcasting service staffed by a sexy-voiced female announcer. She encouraged British troops to go home, Tokyo Rose style. The "Liberty" broadcast opened and closed with the song "Yesterday" by the Beatles. A year later, after much detective work, Don Jensen managed to land a "Liberty" QSL which confirmed the transmitter site to be in Argentina. The British Defense Ministry, in turn, borrowed a BBC relay transmitter on Ascension Is. and put into action Radio Atlantico del Sur. This "clandestine" station broadcast directly to the people of Argentina and to the occupying forces on the Falklands.

Suddenly, one of the most exotic targets for shortwave listeners had been thrust into the limelight. Many avid DXers watched network TV news and saw excellent TV footage of downtown Port Stanley and of the broadcast station. It was extensively damaged during the war.

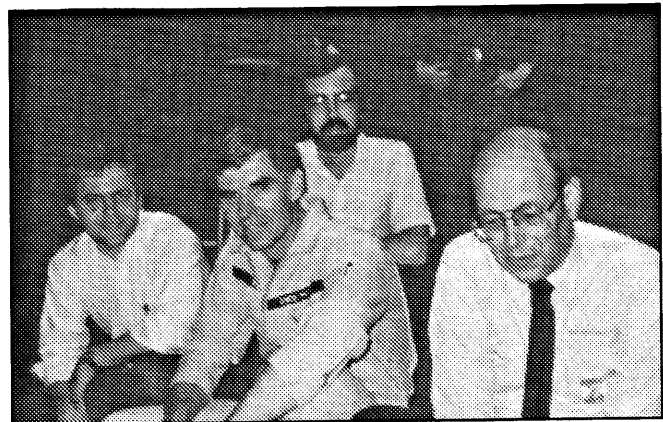
THE IRAN—IRAQ WAR

The Iran/Iraq war, which raged for most of the decade, cluttered the bands with "bubble" and "whoop-whoop" jammers. Both countries jammed each other and each other's supporters incessantly. The Iraqi cause seemed to have more money available for clandestine broadcasts than did Iran. Radio Iran, an anti-Iranian government station, put out a powerful signal that was heard in North America. Another anti-Iranian was Radio Vatan, or "Radio Homeland," which was broadcast from transmitters in Egypt.

AROUND THE WORLD— THE VOYAGER FLIGHT

On a happier note, the record setting non-stop around the world flight of the Voyager aircraft in December of 1986 provided some of the most dramatic "broadcasts" of the decade. These transmissions were actually two-way radio communication over the aeronautical bands, but many shortwave broadcast listeners enjoyed them immensely nevertheless.

On the historic flight, the tension and excitement experienced by the two pilots, Dick Rutan and Jeana Yeager, was very evident to listeners. At one point when Voyager was off the western coast of Mexico, listeners sat on the edges of their chairs as they listened to pilot Dick Rutan pull the aircraft out of a near disastrous engine stall. The beautiful QSL cards issued by the flight crew had been pre-cancelled with the date of the landing over a Charles Lindburgh commemorative stamp.



Left to right: Mitch Sams, Voyager astronaut Dick Rutan, Kirk Allen, and John Bryant.

PROLIFERATION OF US DOMESTIC SHORTWAVE STATIONS

In 1982 a surprising rumor surfaced that New Orleans businessman Joseph Costello had applied for a commercial shortwave license. Costello owned an FM station and several movie theaters in the New Orleans area broadcasting at the time. Since no American licenses of this type had been issued since before WWII, it seemed doubtful that Mr. Costello would be granted a license. However, in the spirit of 'deregulation', the license was issued, construction began and soon WRNO, "The Rock of the World," was on the air.

Such a flood of new US shortwave broadcasters followed WRNO that it was difficult to keep up with all the activity. One of the new stations, KYOI, was located on the US territory of Saipan, Northern Mariannas in the Pacific. DXers were happy because this produced a new radio country for them to hear. This station targeted Japanese teenagers

with a slick Rock and Roll format and numerous commercials. The programming was produced in Los Angeles and was in Japanese. A third US shortwave broadcaster tried commercial rock and roll as well; they were issued the call letters KUSW and were located in Salt Lake City, Utah. It looked as if the commercialization of US shortwave had finally succeeded. At one point, WRNO even sold shortwave converters for the car.

Reality soon intervened, however. All three stations found trans-national marketing and audience verification almost impossibly difficult. Thus, they each had great difficulty attracting substantial sponsors. Both KYOI and KUSW experienced financial difficulties and were eventually sold to religious broadcasters. WRNO produced fewer and fewer shortwave segments, relying more on the simulcast of their FM station. They also sold airtime to religious organizations to help pay bills.

It seemed that the only groups that had the money and the motivation to use privately owned US-based shortwave were the religious broadcaster. The list of new religious stations is long: WMLK, KCBI, WWCR, KVOH and WHRI to name just a few. Two new religious shortwavers located on the US Territory of Guam—one a FEBC station, the other an Adventist World Radio station. Another bright spot for listeners was KNLS which was established in Anchor Point, Alaska and produced another new radio country for SWBC DXer types.

There was one new religious broadcaster that gained widespread listenership. It was the new Christian Science Monitor station, WCSN, from Scott's Corner, Maine. In keeping with the Christian Science tradition of excellent news coverage, WCSN soon rivaled the VOA for comprehensive, quality news of world affairs.

The strangest new US broadcaster, though, was the one that never was. NDXE, of Opelika, Alabama promised many spectacular new firsts for shortwave, including stereo shortwave broadcasts! The ever-hopeful owner managed to market license plates, t-shirts, and other memorabilia and even placed a full page ad in the WRTH. The enterprising Alabamian accomplished all of this without ever going on the air, or even owning a transmitter. Apparently things had never been completely in place for the station to become licensed and for construction to begin; NDXE quietly disappeared at mid-decade.

VOICES FROM THE PACIFIC

The economic growth and increased development of the Pacific countries fostered several new shortwave stations and new radio countries during the 1980's. Shortwave was well suited for the region since great broadcast distances and widely scattered audiences were the norm. Somewhat like Africa in the '60s, the 1980's saw some island groups gain nationhood, with some even developing to the point of sponsoring shortwave outlets. Kiribati made use of a point-to-point feeder as a shortwave broadcast station. At first there was some controversy in the hobby as to whether general broadcasting was really what the station intended. This was a vital point for those hobbyists following the NASWA Country List; NASWA only recognizes reception from SW broadcasters. To the relief of all concerned, Radio Kiribati later confirmed that the station was serving dually as a point-to-point utility relaying programs to a remote AM station while simultaneously serving outlying island listeners directly as a broadcaster.

Radio Cook Islands became a bit easier for DXers to hear when they moved up to the 25 meter band and with increased power. After being flooded by QSL requests, they nearly quit QSLing all together. The Marshall Islands surprised everybody by suddenly appearing on 60 meters one night. WSZO had local flavor and was enjoyed by all who heard their unique programs. Equipment problems and leadership changes at the station later lead to erratic operation and virtual closure of the shortwave service by decade end. Yet another exotic new radio country was established for SWBCers when Radio Tonga took to the airwaves on 5030 kHz.

Papua New Guinea is a country, like Indonesia, India, China and Peru, which makes extensive use of shortwave radio networking to blanket the country. Most of Papua New Guinea's twenty-odd provincial stations moved from the 120 meter band up to 90 meters during the decade. By 1990, more than half of the stations received new Japanese NEC 10 kilowatt transmitters as part of the growing Japanese foreign aid program in the Pacific. These new units upgraded the worn out and poorly maintained mostly 4 kilowatt units left behind by the Australian administration at the time of national independence in the early 1970s. Only Radio Enga remained behind on the 120 meter band.

Many thought that Fiji had returned to the SWBC ranks when the University of the South Pacific began broadcasting law classes over an out-of-band transmitter. After a very hopeful investigation by

FREQ.	LOC.
9665	1800-1900
9670	1900-2200
15405	2200-0300
15190	0300-1000
11000	1000-1600

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hobbyists, this station proved to be a dedicated link to students on different islands and not a legitimate broadcaster. The Pacific's one clandestine operation caused quite a stir in 1983; it was called Radio Tropical—"The Voice of the Nuclear-Free Pacific." The station broadcast regularly for a few months in early 1983, using 7295 kHz generally between 0800 and 1000 UTC. The location of the station was never discovered, but the most likely location was the Marshall Islands. If so, it pre-dated WSZO by about 4 years! It is surprising that the combination of increased broadcast activity in the Pacific and the relaxation of US licensing regulations did not result in the establishment of a short-wave broadcaster from Hawaii—always a hot for rumor.

THE FAR EAST

Although the economies of several countries in the Far East prospered during the 1980s, an equivalent growth in shortwave broadcasting activity did not materialize. Japan, Korea and China did upgrade their shortwave facilities and services, but others such as Malaysia and the Philippines reduced activity on the International Bands. In this decade, most Asian broadcasting expansion occurred in medium wave, FM, television and satellite communications networks. Shortwave broadcasting generally was a low priority in development budgeting.

For the Tropical Band listener, there was a noticeable downturn in broadcast activity from this part of the world. Vietnam, Laos, Indonesia and the Koreas had put several low powered Tropical Band outlets on the air during the '70s. Many of the lower powered Indonesian stations moved to FM or to MW, while combinations of the ravages of the tropical climate, incipient guerilla war and shattered economies significantly curtailed the SWBC activities in Indochina.

AFRICA

The history of shortwave broadcasting in Africa in the 1980's is a very mixed picture. SWBC activity in some areas decreased rather markedly due to warfare or economic decline, while activity in other areas stabilized or even improved. Nigeria had a healthy regional shortwave network which was very active on the bands in the 1970s. By the end of the '80's, it was difficult to find any of the stations on the air. This downturn can be attributed to a combination of deteriorating equipment, worsening economic conditions and more reliance on medium wave and FM broadcasting. Nigeria's problems supporting a healthy shortwave broadcasting system were experienced by other countries, as well. The formerly healthy regional SWBC broadcasting networks in Angola, Zaire and Mozambique also deteriorated badly during the 1980's.

New shortwave activity in the '80's in Africa was almost exclusively driven by combinations of armed struggle, political ambition and foreign influence. Several clandestine organizations managed to get their programming on the air through host countries or stations. Southern Africa was a hot bed of activity for clandestine stations. Nelson Mandela's African National Congress was very active on medium wave, FM and shortwave. Their station, Radio Freedom, was sometimes heard on shortwave, thanks to the transmitters of the Voice of Revolutionary Ethiopia. In turn, several of the V.O.R.E. transmitters had been part of a long-time religious broadcaster based in Addis Ababa, ETLF. That station had been forcibly nationalized by the revolutionary Ethiopian government in the late 1970s. Radio Freedom's broadcasts were often in English and could be heard with violent speeches, machine gun fire and calls to battle against the South African government. Other organizations had clandestine programs produced for shortwave; SWAPO Voice of Namibia and UNITA (Voice of the Black Cockerel and Radio Truth).

Libya's leader, Col. Khadafi had many rather grandiose political and military ambitions. These were partly played out over his shortwave stations. In the 1980s, Khadafi invested heavily to upgrade the country's broadcast capability. Libya added several very high-powered transmitters which were capable of being operated from one end of the shortwave spectrum to the other. In the mid-80's the Colonel established Radio Jamahirya as a propaganda outlet to attempt to influence public opinion in the West. This high-powered international broadcaster featured readings from the Colonel's "Green Book" rather prominently. Libya was also host to several clandestine broadcasts intended to destabilize targeted neighboring governments. Libyan based broadcasts were directed against the governments of Chad (Radio Bardai), against Israel with various pro-Palestinian programs and against neighboring Sudan.

Other new shortwave ventures in Africa were more than likely funded by non-African governments or by foreign commercial interests. For example, Africa Number One was a new high-powered shortwave station built in Gabon at the beginning of the decade. Funded by French investors, it was intended primarily for commercial purposes. Africa Number One was introduced with much hype, including a listener's contest which offered an automobile as the grand prize! Curiously, the station never revealed whether the car was actually ever awarded to one of the many entrants. This transmitter site was large and modern and later become attractive to other international broadcasters as a relay site.

Another bright spot for SWBC DXers was the special broadcast in 1984 from Radio Syd in Gambia. This

event, arranged by John Ekwall of Sweden, allowed SWBC listeners to hear the country of Gambia on shortwave again. Gambia had left shortwave several years earlier. British and US government funding provided shortwave upgrade's for Lesotho and Botswana, making these two countries much easier to hear on the air. French and other foreign aid also allowed the governments of several countries to upgrade their national SWBC stations. These included Chad, Burkina Faso, Senegal and Niger. The BBC established a new relay station on the Seychelles in the Indian Ocean and a US foreign aid grant funded the Liberian Rural Communications Network, which included several low-powered shortwave broadcast stations.

SATELLITES AND RELAYS

Since the early 1960s many broadcasting experts have predicted that satellites would soon reduce the need for traditional forms of shortwave radio broadcasting. This reduced reliance on the SWBC medium would most likely come about as international broadcasters employed satellites as a point-to-point relays to ground based medium wave or FM networks in the target countries. Some experts also foresaw direct broadcasting from satellites to relatively unsophisticated portable radio receivers. This rather futuristic view did not appear to come any closer to real as the 1980s unfolded. However, the 80's did witness greatly increased reliance on satellites as feeders for the major broadcasters. During the 80s, satellites were used more often to accomplish that task, although shortwave feeders from the VOA and BBC were still easy to find at the close of the decade. Also, the AFRTS left shortwave in favor of satellite feeds to their overseas stations. Satellite TV dish owners and cable TV subscribers could, at times, find BBC and DW shortwave audio on sub carrier cable audio channels. This programming was being picked off the satellite by astute cable companies with the same equipment that they used to receive HBO and other cable TV services. Swapping transmitters and transmitter time between major broadcasters was also greatly facilitated by the use of satellite feeds.

Shortwave, however, still remained an extremely cost effective way to broadcast over great distances to large audiences. This was true throughout the 1980's. Many developing nations could not afford satellite technology and continued to be served by shortwave. It is yet to be seen how fully direct satellite broadcasting will be integrated into international radio broadcasting services.

PIRATES

Shortwave pirate activity varied widely during the 80's, especially in the US. In general, the level of pirate broadcasting tracked directly with the sunspot activity. At the sunspot peak, the pirate bands were very active every Saturday night. Many of these broadcasters simply ran an unrehearsed format of rock music and chatter and were, at best, unprofessional. However, a few pirates did offer well produced and entertaining programs. Some of these were Syncom 48, Voice of the Voyageur, Voice of Laryngitis and Jolly Roger Radio. One pirate, Radio New York International, made national headlines when it was busted live on TV aboard its rusty ship just off the East Coast of the US.

Three European pirates made regular showings in North America. They were Radio Dublin, Ireland, Weekend Music Radio, Scotland and Radio Caroline based on a ship off the coast of England.

All of this pirate activity spawned a specialized monthly bulletin published in the US which was dedicated to pirate and clandestine stations. The Association of Clandestine Enthusiasts (ACE) had several hundred members at peak of pirate activity.

QSLING

The art and science of QSLing became increasingly more difficult and expensive in the 1980's. This was due in large part to a worsening economic situation in the Third World. The area where this trend was most evident was Latin America. Economies there suffered greatly, throughout the 80's with soaring inflation rates in many countries. This great difficulty put answering reception reports low on the list of local broadcasting station priorities. To complicate things further, a number of stations received more rude and demanding reports from listeners than in the past.

Again, due to inflation, Mint stamps, long enclosed with reception reports as return postage became practically useless in Latin America. The high rate of inflation the stamps would devalue the stamps even as they were being mailed to the station. The US \$1 became the most popular form of return postage for stations in Latin America, especially.

Some ever more cost conscious major broadcasters also became less reliable QSLers. Radio Canada and several european stations virtually eliminated this traditional element of the listener—station relationship.

Beyond Latin America and some of the majors, the picture was much brighter. The large number of stations in Papua New Guinea and Indonesia were not only exotic DX targets, but they most often provided exotic QSLs as well. This reasonably reliable pattern extended almost uniformly across the Pacific and Asia as well as most of Europe.

MORE UTILITY STATIONS APPEAR

The appearance of several strong utility stations on the 90 and 60 meter bands, prime hunting grounds for Tropical Band DX was a disappointment to many. Utilities blocked nearly a third of 90 meters, and some 60 meters, resulting in the blanking of several stations. Combined with the decrease in overall broadcast activity from Africa and Latin America, the Tropical Bands became a little less pleasant to DX in '80s than they were in the '70s.

PROPAGATION

Propagation conditions generally followed the 11 year sunspot cycle as predicted, with a few exceptions. The cycle peak was quite a bit higher than predicted, so high that transatlantic TV voice from Europe could be heard just above 30 MHz in North America. During the mid-80s the east coast of North America experienced better reception from Asia than the rest of the country! While DXers in the then-signal starved Northwest had difficulty with some Indonesian outlets, DXers in Florida were hearing all active RRI outlets from 3 MHz on up. During the South China Sea Yacht Race coverage on RTV Hong Kong, ONLY DXers east of the Mississippi heard these transmissions on the 75 meter band. One other strange occurrence was the periodic appearance of shortwave stations from the southern half of South America on 31 meters near mid-day in North America.

HOW THE RECEIVER MARKET CHANGED

PORTABLES

In 1980, digital frequency readout was available on a few shortwave general coverage table top receivers. It was the most welcome technological advance to arrive on the hobby scene in many years. However, at the beginning of the decade, the electronics industry had not managed to put together a portable receiver with all of the features so desired by the listening public—portability, high performance, ease of operation and digital readout. Small portable receivers with analog dials had been around for several years, but most lacked good performance. During this period there were several portable receivers with performance that was so poor that they actually drove people away from shortwave listening. After spending from \$100 to \$250 for an introductory receiver, the new owner received a radio that couldn't reject adjacent channel interference, was too insensitive to hear even international broadcasters and/or overloaded easily. It often sported an analog frequency readout that was worse than useless.

After successfully entering the table-top market with the likes of the Yaesu FRG-7 and the Sony ICF-6800W, the Japanese began to make progress in the portable receiver market. The miniaturized, affordable effective portable shortwave radio was a product and a market that the Japanese pioneered.

In 1980 a new portable was introduced which, by itself, ushered in a new era for the hobby. The Sony ICF-2001 was every hobbyists dream portable. It was small enough to carry in a briefcase, offered accurate digital readout, keypad entry and high performance all at an affordable price. Quoting Larry Magne's review of this radio in the 1981 WRTH: "The Sony ICF-2001 is the shortwave portable designed to overcome the general public's traditional aversion to shortwave listening. With this set, nearly anyone can call upon distant cultures at the push of a button."

The 2001 unchained the listener from the table top and allowed DXing while away on business trips, vacations, or outside on the deck during the summer. Because of this receiver, many high-quality reception reports were submitted to bulletins by DXers who were traveling overseas. This receiver was even used as the main home DX receiver by several senior DXers only too happy to at last give up logging charts and other cumbersome strategies for accurately reading an analog dial.

The direct frequency readout (digital) to 1 kilohertz, unheard in a portable receiver. A keypad was available on the front of the radio which allowed the operator to punch in the desired frequency, just like a calculator. This made tuning and band-hopping quick and easy, almost as easy as tuning channels on a TV! Another revolutionary feature of the Sony 2001 was the incorporation of a small internal microprocessor controller. The microprocessor also provided memories for storing station frequencies, which then could be recalled with ease. Auto scanning could put the radio on "auto-pilot" to search an area of the spectrum for a station.

On the strength of the ICF 2001, Sony became the undisputed leader of the shortwave portable market and held that position throughout the 1980s. In 1986, an upgraded version of the 2001, the ICF-2010, was introduced. It had yet another revolutionary feature for portables, synchronous detection. This method of detecting and demodulating a signal could reduce fading, noise, adjacent channel interference, all big complaints about the shortwave medium. The ICF-2010 became the most popular single model of a radio ever sold!

Other manufacturers followed Sony's example. Panasonic began to incorporate some of the same features in its new radios. Their strategy seemed to be to provide a little less performance for less money. Panasonic rapidly developed a profusion of new models in the early part of the decade. At one point they had seven new receivers on the

market.

The first real competition for the main Sony Portables didn't come until 1984 when Radio Shack introduced the DX-400 (also sold by Uniden as the CR-2021). Its performance was respectable, but it was priced too close to the Sony to achieve a significant market share.

The last round of the shortwave portable war took place in 1986. As Sony updated to the 2010, a newcomer to the market, Sangean of Taiwan, came out with the ATS-803. Radio Shack marketed the same receiver under the name DX-440. For about \$200 one could obtain very good performance, small size and many features. With the advent of the Sangean 803, many people asked—"do I really want a 2010 so bad that I'm willing to pay \$150-\$200 more for it than for the Sangean or DX-440. This receiver was the first real "hit" for Radio Shack since the DX-160 back in the '70s. Sangean continued to introduce new portables with an astounding 9 models offered simultaneously by 1989.

TABLE-TOPS

In 1980, the Drake R-7A dominated the upper end of the table-top receiver market. The R-7A is still considered one of the best general coverage receivers ever produced and it offered most of the latest advances in receiver technology desired by the discriminating listener DXer. It was the first of the "under \$2000" super radios. Although the R-7A was popular, and is now one of the best buys on the used market, The almost \$2000 price was steep enough to keep it from widespread use. Along came the Japanese. They were able to design and market a receiver with performance characteristics similar to the R-7A, for about half the price.

During the '80s three major Japanese shortwave manufacturers dominated the table-top market—Icom, Kenwood and Japan Radio Company (JRC). Icom's first entry into the general coverage market was a home run. The new IC-R70, which borrowed from the receiver section of one of Icom's transceivers, was one of the most popular major receivers of the decade. It offered high performance and sold for as little as \$575 in 1983. The R-70 was the ICF-2001 of the table-top market, and soon was the most often mentioned radio in the contributors' pages of club bulletins around the world. The R-70 boasted good sensitivity, good stock selectivity, microprocessor control feature, and other useful extras like a notch filter and passband tuning. One measure of a receiver's popularity, strangely, is the amount of interest shown in modifying it. Many articles and tips were written on all sorts of mods to the R-70.

Kenwood's R-1000 was popular in 1980, but lacked the latest gadgets such as keypad entry and memory channels. Soon after the R-70 was released, Kenwood responded with the R-2000. It was a nice looking receiver with many of the new features DXers had now come to expect.

Japan Radio Company has long been known for producing high quality, high performance receivers and continued to do just that in '80s. In 1981 they brought out the NRD-515, a ruggedly built and reliable 'top of the market' receiver. It came out too early to take advantage of microprocessor keypad features, but had all of the other performance features that a serious listener needed. Its operation was smooth as silk and each control had the feel of quality. The 'top of the market' price tag coupled with now outdated technology caused the 519 to give way to Icom and Kenwood by 1983 or so.



Clockwise from upper left: Icom R71-A, JRC NRD525, Kenwood R1000, JRC NRD515 (with memory unit).

In 1985 Icom upgraded the popular R-70 to a version called the R-71A. This new model added a keypad with 32 tunable memories, dual VFOs, infra-red remote control and voice-synthesized frequency readout. The tuning quirks of the R-70 were redesigned and a few controls on the panel were rearranged. There was a scare, however, sometime after the introduction of the R-71A. Word got out to the hobby community that this radio contained an internal lithium battery that powered the microprocessor when the receiver was turned off. When battery power was eventually lost due to drainage, the receiver would have to be shipped back to Icom for battery replacement and reprogramming of the microprocessor! This potential hassle caused quite a stir. However, the public's fears were soon calmed and sales continued at a brisk pace. As the years went by there were no unusual maintenance problems with this R 71A.

In late 1986 word began to spread that JRC was planning a new receiver. Many had anticipated this and, knowing JRC's reputation, assumed that this radio would be a real winner. JRC needed to replace the 515 with a new and improved model if they were to remain competitive in the marketplace. In 1987, the NRD-525 was unveiled. It was truly a masterpiece of radio gear. High performance and automation were the trademarks of the 525 and many in the "hard-core" hobbyists scrambled to purchase one. The price was high but JRC had built enough enticements into the radio to coax many into buying. In "For Sale" columns of 1987-89 it was not unusual to see the excuse "I'm selling my [current rig] so I can purchase an NRD-525."

The 525 had many extras, such as auto scanning, memories, multi-mode operation and key pad control. Each was designed to provide at least one level better performance than the equivalent attributes of the competition. The 525 also incorporated a new feature in a commercial general coverage radio: modular printed circuit board construction layout. All of the electronics were mounted on several "cards" that could easily be removed from the chassis for service. Some were disappointed not to see the same attractive and rugged look of the 515 in this new radio. As John Bryant described the front panel appearance in a Proceedings review of the radio . . . "Oh my god, I just spent \$1600 on a Bearcat scanner!" The slightly less than perfect JRC NRD-525 dominated the top end of the receiver market in the late 1980's.

One other excellent general coverage receiver was produced during later years of the decade—the Kenwood R-5000. It was released in 1987 and provided stiff competition for Icom and even JRC. It was the smallest of all the major table-top receivers and its overall performance was ranked as one of the best. One year the WRTH even voted it "Best Receiver."

Yaesu produced two radios in this time period—the FRG-7700 and the FRG-8800. Both were good radios with well thought-out designs and very reliable operation. However, their performance was one step below similarly priced Icoms, Kenwoods, JRCs and Yaesu slowly faded from the hobby scene.

There were some notable failures in the table-top receiver market. The Radio Shack DX-300/302 got the most publicity, since many hobbyists did not expect Radio Shack to market a flop. The DX-300/302 had a serious problem with front end overloading that was the result of a glaring design flaw. This failure set Radio Shack back for quite a while and it appears as if they may not venture into the table-top market again.

The 1980s saw the Japanese make a clean sweep of the American receiver market, so long the territory of such proud names as National, Hammarlund, Collins, Hallicrafters and Drake. The well respected American amateur transceiver manufacturer Ten Tec and the Heathkit Corporation each introduced 'major' receivers which were each immediate dismal failures. Both flops appeared to be the result of poor assessment of the marketplace and of the stiff quality and price competition from East Asia.

COMMERCIAL PUBLICATIONS

Even though two existing publications went out of business, the total number of commercial shortwave listener publications increased markedly during the 1980s. The most significant new publication *Radio Database International* (RDI) was first published in 1984. Edited and published by long time hobbyist, Larry Magne RDI was truly an alternative to the WRTH and focused more on program schedules and frequency listings than did the WRTH. It was described as the "TV Guide for shortwave." Although RDI lacked the station addresses and other information found in the WRTH, it was noted for its care and accuracy in its frequency listings. Magne went to great trouble to discover precise transmitter locations, as well. One example of this scholarly approach was an almost complete listing of the sources of various Chinese SWBC transmissions.

Chinese SWBC transmitter locations were considered militarily significant information by the PRC and such information was very difficult to obtain. The best feature of RDI was the graphic presentation of the broadcasting schedules of each station for every frequency. This made RDI a quick and easy guide to the bands. A couple of years after its introduction, RDI changed its name to *Passport to World Band Radio*. The "World Band Radio" term was used as a replacement for the more familiar term "Shortwave Radio."

Unfortunately, in the beginning of the decade two shortwave publications—*Elementary Electronics* and

Communications World—ceased publication. This was a real loss for the hobby and a noticeable journalistic void existed for sometime afterwards. Both magazines featured articles and columns by hobbyists such as Don Jensen, Gerry Dexter, Ralph Perry and C.M. Stanbury II.

In 1982, *Popular Communications* hit the magazine racks to fill this void. It, too, presented several hobbyists as writers. Pop Comm was a true "slick" magazine with many photos and a professional format. At first it concentrated mostly on shortwave but later included scanners, satellite and para-military themes.

Two existing publications, one owned by Larry Miller and the other by Bob Grove, merged in 1986 into what was then called *Monitoring Times*. MT gradually gained in popularity and appearance, moving from a newspaper style to a true magazine format. The magazine was a success and the dominant commercial publication at the close of the decade. Many hobbyists were happy to see the return of the famous *Popular Electronics* in 1989, especially with Don Jensen as editor of a shortwave column. Shortwave now had even more representation at the public magazine racks.

Gerry Dexter launched Tiare a unique commercial venture, in the mid '80s. Tiare Publications developed and marketed books specifically targeted to the SWL. Some of Tiare's releases are now part of the backbone of any serious listeners's library. The Language Lab series, written in Spanish, French, Portuguese and Indonesian was a revolutionary new aid for the shortwave QSLer. This series of books allowed the DXer to create and write personal letters to stations in four different languages. Also for the QSLer, was the "bible" of QSLing—*Secrets to Successful QSLing*, drawing on Gerry's many years of experience. The largest undertaking for people involved in Tiare was actually published by Sams books. This was the huge indepth handbook *Shortwave Radio Listening with the Experts*.

The shortwave mail-order business really flourished during the 1980s. The big three in the US were Gilfer Shortwave, Park Ridge, NJ, Universal Shortwave, Reynoldsburg, OH, and Electronic Equipment Bank, Vienna, Va. Their catalogs got fatter and fatter with more receivers, books and peripheral equipment offered each year. Gilfer was the old-timer in the business, but Universal and EEB became large businesses rather quickly. Universal had Fred Osterman, a hobbyist himself, who did a good job of catering to the shortwave clubs and individuals. Universal's catalog became "must" reading in the SWBC and utility DXing hobbies.

THE CLUBS

MONTHLY BULLETINS

Almost as dramatic as the change in receiver technology was the change in the hobby clubs during the 1980's. Many clubs and organizations declined in membership and several experienced hobbyists "retired" in the early '80s, leaving a void. Many who had been active in the '60s and '70s just dropped away and became inactive.

The hobby demographics also "grayed" rapidly. In the '80's there was no large pool of young, enthusiastic DXers to shoulder the load as editor's or in club management. It became more likely that a new member in a club may be 35-45 years old and quietly returning to a hobby he knew when in high school. This "new" member more than likely would have a Sony portable and many would not be interested in intense hobby activity. Many pundits have surmised that kids turned to computers and video games rather than radios in the 80's. Whether or not that is true, one thing was evident: the number of young members dwindled considerably. This trend was evident not only in North America, but also in Europe and Japan.

The new shortwave listener members were often a different breed, falling somewhere between serious DXers and program listeners. They were less interested than the old guard in the weak, noisy Tropical Band stations but they did enjoy the DX up on the International Bands when conditions were good. These new people often weren't interested in day-in and day-out program listening either, but were attracted by the news and commentary available on shortwave bands. This interest often seemed to focus on the current news hotspot in the world.

With this new makeup, fewer members seemed interested in club formalities. The motivation to send in pages of written loggings to bulletins, or to understand the cryptic jargon printed in bulletins was not strong. The downturn in club participation was widespread. Many clubs saw hundreds of members drop, and the oldest club in North America—the Newark News Radio Club—went out of business entirely in the early 80s.

One club, however, very skillfully weathered the downturn and actually managed to prosper. The Ontario DX Association (ODXA) of Canada was well led by Harold Sellers, Ron Hopkins and Dave Clark, ODXA saw the need for change early-on and reacted accordingly, concentrating ODXA services on the personal side of the hobby. Many local or regional events held that strengthened the spirit of comradery. ODXAns were also good business managers, raising money for the club and investing it in club equipment and other improvements. ODXA was the first major club to adopt total desktop publishing, which produced a professional graphic look. The ODXA's membership increased while virtually others decreased.

World DX Club, of England, also was a club emphasizing a personal and friendly approach to the hobby. They were cooperative with other organizations, and survived the '80s nicely. Arthur Ward was an excellent repre-

sentative for the organization. This club was operated on a very conservative financial basis in order to ensure continuity. Due to high UK commercial costs, the whole operation was and is run as a do-it-yourself venture. Club members were extremely loyal, with over half being members for the entire decade.

Amazingly, Bill Oliver of the North American Shortwave Association (NASWA) published every issue of *FRENDX* (now called *The Journal*) during the 1980s. NASWA, like other North American clubs, struggled through this decade. However, at decade's end, things were getting better; major improvements were on the drawing board in 1989. Another activity that was really an indirect outgrowth of the NASWA Executive Council was the now annual Winter SWL Fest, held in the Philadelphia area. Bob Brown, Harold Cones and Kris Field produced a well organized convention that became one of the largest and most worthwhile hobby events in North America.

In 1989, John Trautschold completed nearly two decades of service for SPEEDX. Peggy Thompson was president of SPEEDX, the only woman serving the hobby in that role.

The Australian clubs seemed to do well early in the decade and experienced membership loss a bit later than most others. The Australian Radio DX Club experienced a rapid membership growth in the early 80s with the arrival of digital receivers. The club also benefited from a well organized publicity drive. At one point they had monthly columns in both a national magazine (*Amateur Radio Action*) and a major daily newspaper (*The Age* in Melbourne). A new Australian club came into existence in 1982: DX Australia. Headquartered in the Melbourne area, it was well led and experienced success during the decade. Another established club, The Southern Cross DX Club went through ups and downs but was fairly successful in serving their membership with a good hobby publication.

Back in North America, Glenn Hauser continued to publish *Review of International Broadcasting* (RIB), and added a second publication—*DX Listening Digest* (DXLD)—a compendium of DX loggings and schedules. His radio show, "World Of Radio," made it to shortwave thanks to WRNO in New Orleans. Later it appeared on other new US shortwave stations. In 1989, Glenn retired from his editor's chair at NASWA after an incredible 15 years of editing the highly regarded "Listener's Notebooks".

During the 80's downturn in the US, a new club was formed from three regional clubs. The new club was called the United States DX Association (USDXA) and it started with much enthusiasm and hope. Membership quickly reached three or four hundred and the bulletin began to take on a professional look. However, financial problems set in and soon the club failed.

This discussion would not be complete without mentioning one unique publication—*BLANDX*. This bulletin was a parody of NASWA's *FRENDX*. No punches were pulled and it was hilarious.

NEWSLETTERS

The smaller, more narrowly focused and specialized hobby newsletters suffered to a lesser degree during the 80's downturn. The newsletters drew from a smaller, sometimes more regional, and a bit more committed group of listeners. In difficult economic times, it was fortunate that a newsletter was small enough that it could be funded from the family checking account if necessary.

The availability of lower cost photo reduction copying, desktop publishing, the Fax and the computer modem were very helpful to the newsletters and fostered significant improvements in the quality and speed of newsletter publishing. Reports from members could be submitted by Fax or computer to the editor who in turn typed them in "real time," thus avoiding the last minute crunch to edit.

In the final analysis, however, the newsletters did suffer during this decade and the total number being published did decline. For example, Down Under DX Survey (DUDXS) ceased publication in spite of being one of the best sources of Asian news. The DUDXS membership included David Foster, Geoff Cosier, Craig Tyson and Robert Yeo. Another good source of Asian news, DX Front Line (edited by Isao Ugusa) also ceased publication. The hobby did gain Australian-produced OZ DX at the end of the decade. It was geared to Asian news and supported by many formerly involved in DUDXS. It also drew on the expertise of many former DUDXS members.

Radio Nuevo Mundo, a Japanese newsletter emphasizing DX from Latin America, published an excellent in-depth newsletter during most of the 80s. One of its members, Takayuki Inoue, was very active and his reports were widely quoted. Radio Nuevo Mundo also published several editions of one of the best books on the subject of Latin American DXing: NAME.

Two new regional clubs became active in 1980—the Ozark Mountain DX Club and DX South Florida. Both were small, but specialized in "hard-core" DX. DXSF was run by Bob Wilkner and Steve Reinstein. Steve was a real asset to the hobby and became known for his thoroughness and expertise, especially with tropical band Latins. For several years the DXSF group was in the hot seat of DX, putting Florida on the hobby map. The Ozark Mountain DX Club founded by Mitch Sams, merged with Fine Tuning in 1986. Fine Tuning was started by Dan Ferguson in 1977 and was edited by Larry Yamron in 1986 when the merger occurred. Larry continued to publish the newsletter throughout the rest of the decade, over 7 years total! The FT editors, Dave Valko, Dan Sheedy and Kirk Allen were each expe-

rienced hobbyists who often made the news that they then edited.

John Bryant of Stillwater, OK, was a member of OMDC who joined the newly formed FT staff in 1986, heading up the Special Publications department. Special Publications produced DXers maps, Latin DXing guides, and a very comprehensive Indonesian list and guide book. However, Special Pubs real accomplishment was *Proceedings*. First published in 1988, FT's *Proceedings* has become a hobby institution. *Proceedings* is a collection of in-depth articles published annually written by and for experienced DXers. The book has become established thanks to the hard work of Bryant and the *Proceedings* staff—Dave Clark, Kevin Atkins and Guy Atkins to name a few.

John Bryant was the perfect person for the job of Chief Editor of *Proceedings*. His background both professionally and in the hobby prepared him well for the task. His approach to the hobby was much like his professional life as an Architecture Professor at OSU—scholarly. John set about to learn as much as he could about his DX targets, such as China and Indonesia, and about antennas and propagation. By 1987 when *Proceedings* kicked off, he was like a well seasoned Chief Editor ready to tackle a big project.

The newsletter *Numero Uno*, passed an incredible milestone during the 1980s, one unmatched in hobby history. Don Jensen completed 20 years and 1000 continuous issues of NU as editor/publisher. During those 20 years NU always provided the latest news. Don is probably the most experienced hobbyist of the time. Besides NU, his other projects included a monthly segment on Radio Canada International named "Don Jensen's Journal," and a shortwave column in *Popular Electronics*. Don was also primary editor for *Communications World* and wrote an excellent shortwave column in *Elementary Electronics*. Don handed the reigns of NU over to John Herkimer soon after the 20th anniversary issue.

Other newsletters that were active internationally in the '80s were PLAY-DX, published by Dario Monferini of Italy, QTH Africa, Union of Asian Dxers from Sri Lanka, and SW Bulletin from Sweden.

PEOPLE

Beginning in the mid 80's, the Committee to Preserve Radio Verifications (CPRV), with Jerry Berg as Chairperson, offered a vital service to the hobby: preserving QSL collections. These collections represent the history of the hobby and of broadcasting itself. They also represent a lifetime of work for the individuals who collected them. CPRV preserved thousands of cards that can now be enjoyed by others. Finding these collections involved much detective work, especially when some of the collections dated from the 1920s and 1930s. CPRV also provides a service that helps hobbyists informally will their collections to the organization.

Lovers of Latin American DX were delighted by the highly detailed and comprehensive reports submitted by Juan Carlos Codina. He was an embassy official living in Lima, Peru and operated an NRD-515. As might be expected, his native tongue was Spanish. Fortunately for many of us, he was also very fluent in English. With the ever increasing number of new Peruvians and Bolivians coming on the air, Codina kept the hobby world up to date on that confusing situation. The familiar "JCC" credit graced many a bulletin in the early and mid 1980s. In the latter '80s, he left Lima for an embassy assignment in Switzerland and then disappeared from the hobby limelight. Other notable sources for news from Latin America were Emilio Pedro Povrzenic and Gabriel Ivan Barrera of Argentina and Rogildo Fontenelle Aragao, from Bolivia.

Two North American shortwave listeners moved to overseas listening posts and provided a considerable amount of information from their respective regions. Gerry Bishop, who was in the military, moved to the Philippines. From this location Gerry provided newsbreaking information on Asian stations. While there, he even managed to log and QSL Bhutan.

Don Moore spent time in Honduras as a Peace Corps volunteer and traveled Central and South America extensively, all the while sending reports faithfully to hobby bulletins. His reports picked up where Codina left off. While visiting hundreds of stations throughout Latin America, Don coaxed rare QSLs out of some shortwave stations for other Norte Americano DXers. Were it not for Don's generous efforts, these beauties would probably still be in the bottom of a drawer at some remote station in Peru or Bolivia. Don's approach to the station visit was courteous and he became the hobby's good-will ambassador to Latin America.

In Germany a young enthusiastic DXer named Bernhard Gruendl became prominent in the Danish Shortwave Clubs International (DSWCI). Bernhard was a confirmed Tropical Band enthusiast and soon began editing the club's famous Tropical Band Survey, or "TBS," as well as the loggings section of the DSWCI bulletin. Bernhard filled hobby bulletins worldwide with many useful reports for several years. He died tragically in a car accident in the summer of 1991.

Other very active Europeans: German DXer, Roland Schulze, was quite active throughout most of the decade and sent reports to several clubs and Finn Krone of Denmark and several other Scandinavians did likewise.

Gordon Darling, a former BBC Monitoring Service employee, moved from the UK to the exotic country of

Papua New Guinea to work in spectrum management for the national government. Gordon provided quite a bit of information from that part of the world and was a prime contributor to the WRTH, updating their listings for Indonesia and PNG.

There are a few hobbyists who stood out at one point or another during the decade by recording a hot streak of DX news. Many of the hobbyists mentioned so far fit into that category, as well as the following individuals:

Ralph Perry, or "Ralphus" as he was affectionately known, made a name for himself in the '70s as editor and DXer extraordinaire. Peruvians and Indonesians were his specialty. He had a knack for tracking down and bagging the ID of a new station. Ralph continued this trait into the early eighties, still pulling in new Indos from his home in Texas. His job eventually moved him to Kuala Lumpur, Malaysia and he became inactive.

Jim Young, an astronomer by profession, was another longtime DXer who carried his talents into the '80s. He had a dream location for DXing: an observatory high in the mountains of coastal California. Using twin HQ-180s, Jim's ability to track and identify Asians was unprecedented. His reports often made the WRTH listings obsolete in a single evening. His country totals were among the highest in the hobby.

Ernie Behr of Ontario, Canada is a DXer whose experience and prominence goes back to the Fifties. His reports in the 1980's covered the entire frequency spectrum and every corner of the globe. Ernie's reports were detailed and investigative, often following up on other's unidentifieds.

Geoff Cosier and Craig Tyson in Australia kept the hobby up to date on Asian activities, particularly Indonesia. Craig Tyson was among the early discoverers of the 2 & 3 MHz non-RRI outlets back in the '70s. Cosier developed one of the largest Indonesian QSL collections, with over 120 verifications. Geoff also had the ability to pull some real Latin DX right out from under the noses of DXers in North and South America.

There were others who were outstanding in the area of DXing—David Clark, Canada; Kirk Allen, Oklahoma; Kevin Atkins, Alabama; and Dan Sheedy, California. Dan Sheedy's writing style was unique, with a bit of Southern California surfer/biker flavor; he was always entertaining. Kevin Atkins wrote a Christmas poem for DXers that is one of the best pieces of humorous hobby material ever written.

Two DXers distinguished themselves with their QSLing records during the '80s. Rich D'Angelo and John Wilkins collectively pulled in hundreds of rare verifications annually throughout the decade. Rich D'Angelo's consistency was also evident in his faithful reporting to several clubs and as well as his club service in numerous other capacities.

Finally, there were three DXers who's overall performance through the entire decade was unwavering. Jerry Berg, Terry Krueger and Dave Valko continued to make news for 10 years straight. All three are experienced editors—Jerry edited for NASWA for many years; Terry for NASWA and DXSF; and Dave for Fine Tuning and OMDC for 6 years.

CONCLUSIONS:

It is very easy to say that each decade is unique and that each is also the clear precursor of the one that follows. True, we can see the attributes of the 1950s clearly gathering steam in the postwar '40s. Likewise we can find the seeds of the 1960s in the 1950s. However, our historical vision is made much clearer by having perspective on the following decades as well.

Our close look at the 1980s leads us to a number of questions as we peek over the edge of the last decade of the millennium. In Asia, the Chinese and Russian Empires have fostered a full half century of shortwave broadcasting. Will the Southern Republics of the USSR remain within the Soviet umbrella? If not will we see six or eight small islamic republics strung down the Silk Road or will there be an Eastern Turkistan stretching from Ulaan Bator to Baku? We will be among the first to know! Will China remain one or will Manchuria, Xinjiang and even Sechuan spin out of Beijing's orbit? Whither Tibet? Multi-cultural semi-totalitarian polyglot nations seem suddenly out of fashion. Can Indonesia and Malaysia maintain their "Unity in Diversity"? Tune in at dawn!

Disease, exploding populations, long-term armed conflict and other deep social problems made the 1980's very difficult for much of Africa and Latin America. Will decolonization and emerging democracy finally allow these peoples the quality of life they so clearly deserve? Whatever the future, it will not be achieved without struggle and conflict or without shortwave radio!

As the decade closed, the most promising area economically and from a hobby point of view was the Pacific. The US and Canada seemed suddenly to discover the "Pacific Rim" and the peoples of the Pacific seemed to be gaining confidence in their new statures as citizens of a vibrant region of the planet. Surely new radio countries will follow! Fiji? Samoa? Tuvalu? Pohnpei?

What of the major international broadcasters? At the end of the 1980s cable TV systems in the North America were "grabbing BBC and DW off the satellite" and piping their studio quality audio into millions of homes. Is this the

future of international radio in the "developed world???" Many think so...

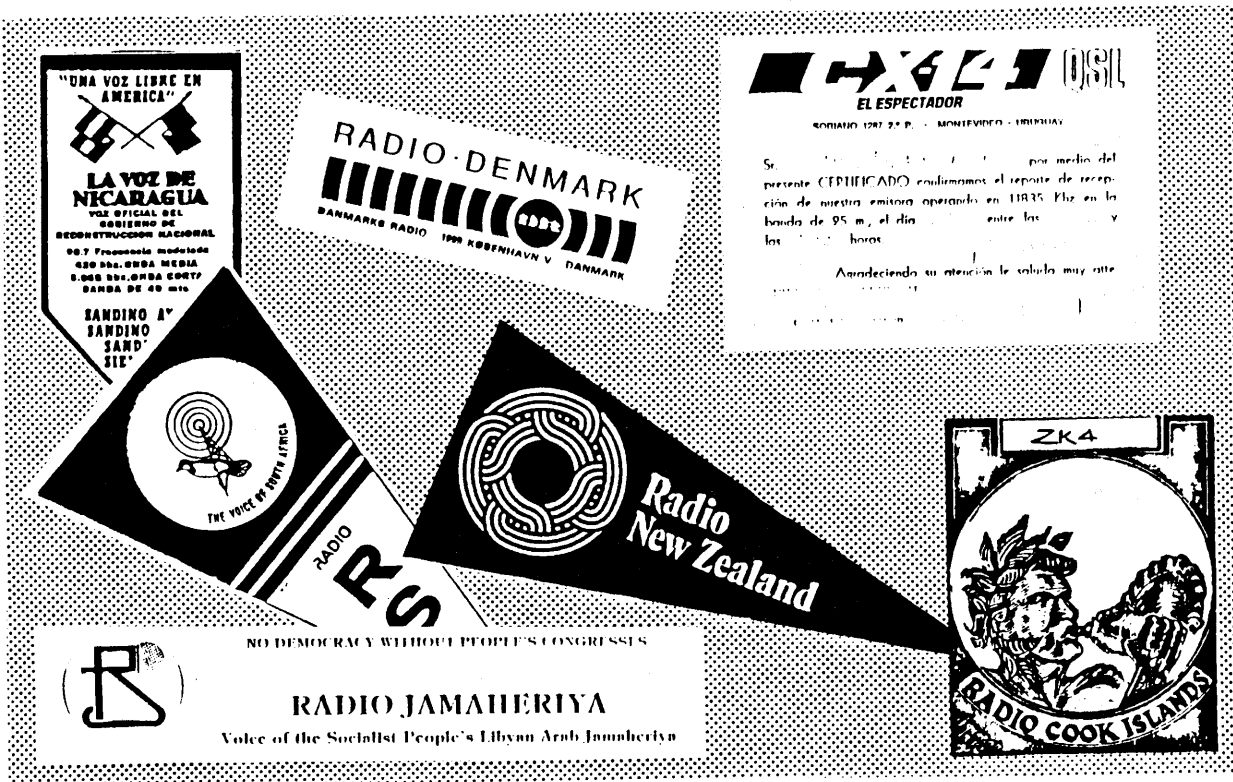
What of international broadcasting directed to the large populations of the emerging world? Some predict direct radio broadcasting from satellites to inexpensive PORTABLE radios. Others predict a shift of the majors to single side band transmission. Many in the hobby expect neither of these, but do see more satellite-based transmitters swapping and satellite feeds to local AM and FM broadcasters in target countries. No one really knows the answers, but the 1990s WILL be different.

And finally, whether receiving technology? At the end of the decade, it seemed that the industry had thoroughly refined the PLL, synchronous detection, selectable SSB and digital read out technologies introduced at the start of the 1980's. Three areas seem to shine brightly in our crystal ball: A) Receivers designed to process normal analogue signals in a totally digital domain B) Receivers or peripheral equipment which uses speech recognition and other sophisticated signal processing software to finally eliminate all natural and man made noise from weak signal reception C) Total receiver automation. Will these technologies create the next 1010 or 525? Or can we dare think that they might be in the next Drake or Collins??

For those of us actively monitoring shortwave broadcast radio, throughout the 1980's, one thing is crystal clear: Shortwave broadcasting, as seen by hobbyists, is an amazingly accurate reflection of life as it is being lived in its countries of origin. SWBC programming is an excellent mirror of its producers whether they be local commercial stations in the Andes or strident and heavily controlled propaganda broadcasters from the remaining totalitarian regimes in the world. To the experienced listener, the technical quality and extent of service of shortwave broadcasting from a country is also an indicator of quality of life of the citizens of that area. Whether it be the deteriorating poorly modulated signals from an area struggling to deal with the difficulties for modern life or the wall-to-wall local strength signal sent our way via satellite by prosperous "developed" countries, each speaks clearly of its origins. The difference between the two signals speaks to us each, as well.

If the tumultuous years of 1988 and 1989 in Asia, Eastern Europe, Africa and Latin America are Precursors, the 1990s are almost sure to be an era of rapid change. Events in Eastern Europe, Africa and Asia in 1989 called into question the fundamental organization of whole societies. In Latin America and the Pacific borders and the definition of nationhood are not in question but systems of government and economic life continue to be a source of strife and change.

Those of us privileged to enjoy SWBC, a truly unique window on the world, will most surely find the 1990s fascinating!





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EMISOR DE LA C "EL COMER"
APARTADO QUITO-ECUA

TELEFONC 214-189-510-511-228

RADIO DUBLIN INTERNATIONAL

Q.S.L.



We are pleased to confirm your reception report of Radio Dublin on 814 between 01 and 072 to M7 on the 10/11/73

Studios: 58, INCHICORE ROAD, DUBLIN 8 (Visitors welcome)
Mailing Address: RADIO DUBLIN, DUBLIN 8, IRELAND.
Telephone: 01-758484



TRT
THE VOICE OF TURKEY



LRA 36
RADIO NACIONAL "ARCANGEL SAN GABRIEL"

BASE DE EJERCITO ESPERANZA
ANTARTIDA ARGENTINA
Comunicaciones de fecha 1-9-73
HECTOR LUIS REFFETTO
BUENOS AIRES

REPUBLICA ARGENTINA



Twas The Night Before Christmas
By Kevin Atkins

*Twas the night before Christmas, and all through the bands,
Not a signal was stirring from any foreign lands.
My headphones were nestled all snug on my head,
But 'twas for nought, for the bands were quite dead:
I reached for the "off" switch in quiet resignation
As I pondered the cause of poor propagation
When inside my head there arose such a clatter
And Polynesian music cross the bands did splatter!
I adjusted my passband and tweaked my notch,
Peaked my tuner and checked my watch...
The signal was strong, and the ID was clear,
And I knew in a flash Nibi-Nibi was here!
But the voice was familiar; the accent well known...
That scoundrel! That rascal! His cover was blown
Thoughts of vengeance raced through my mind
As I dashed out the door, knowing well what I'd find:
A demon prankster with eyes all aglitter--
'Twas John Tow in my yard with a mobile transmitter!
In My bathrobe I looked quite disheveled at best
And he laughed when he saw the effect of his jest.
But his laughter stopped short as I quickly spun 'round
And shouldered my weapon and chambered a round
He let out a shriek like a heterodyne whistle
And flew down the driveway like an unguided missile
The muzzle blast from my Browning pump
Gave a lustre of mudday to his retreating rump
As over the shotgun's roar he did yell
'Merry Christmas to all...BUT I DONT QSL!'*

COMUNICACIONES
SEM L'UONIO ESPERANZA



TIME LINE

The following is a listing of events, year by year.

NEW/DEPARTING STATIONS	STATION ACTIVITY	MISC.
1980: Africa #1 R. Southwest Africa Capital Radio, Transkei Antigua relay UAE Radio WRNO hi-power for Lesotho	HCJB on 26020 Cape Verde 3930 introduced. Guinea Buiassau 5474 Andorra 6215, 15045 starts Maldives 4754 El Salvador 9553 starts R. Lebanon 15170 Franceville, Gabon 4830 Sao Tome 4807 Polish Pathfinders 6195 Paraguay new on 9735 Guinea with English on 15308 Afghanistan with English on 15077 Mexico & Tahiti have English	Sony ICF-2001 Ozark Mt. DX Club DX South Florida Vanuatu = New Hebrides
1981: Swazi Music 6155 Israel Defense 18128 Luz y Vida, 3250 Lebanon 6215 Venceremos LV de Mosquitia 4910 R. Truro, South Africa 6155 Rumbo, Costa Rica 6078 R. Triunfo, Ecuador 3252 Pat. Chilena 6080 BBC Lesotho Kiribati 16432 Andorra gone R. Nat. del Continente, Costa Rica gone English svc from Chile gone	Not. del Cont. 9615 Zanzibar 3339 Pt.Noire, Congo 4843 Mauritius 9709 Saudi Arabia with English on 11855 Falklands 2370 Cook Islands on 11760	Rudy Espinal Beijing=Peking Last Com World NRD-515
1982: "Liberty" Atlantico del Sur KYOI hi-power for Botswana Consentida, Mex 18395 Maldives gone	Nac. Guat. EE 6180 Somalia 6790 Lux, Honduras 4890 Comores 3331 Citadelle, Haiti 6155 Variedades, Hond. 6000 Valles del Tuy, Ven VOFC via WYFR Libya in English Nacional Guatemala 9760, 6180 R. Nacional, Peru bombed off the air New Caledonia English 7170, 11710 Bassacongong, Angola 4885	Icom R-70 Pop Comm Loudenboomer USDXA Falkland war New 22 mb Satellite feeds for BBC ACE is new
1983: Miskut 6920 Parakou, Benin 5025 Moundou, Chad 5290	Sudan 11938 Nac. Ven. 11695 Falklands 3958	White's R. Log Grenada war R-2000

R. Earth (Jeff White)
Soviet Mayak 4765
KNLS Alaska
KFBS Saipan
Columbia, Costa Rica 4825
Kiribati 16431

SRS Surinam 4850
Guyana 5950
VO Nicaragua, English 5950
Jordan 11923
4VEH, Haiti 4930

Tiare Publications startup
Hobby computer bulletin boards
become popular

1984:

Gonzanama, Ecuador 4271
Panamericana, Ecu. 3290
Syria gets 500 kw
R. France, Fr. Guiana
LV del Upano, Ecu. 5040
WMLK
DW Sri Lanka
R. Surinam Int'l via Brazil

Santiago 9778
Landia, Hond 4965
Uganda 5027
Saudi 2350
Libya 3200//17930
R. Phillipines 9579
R. Apintie, Surinam 5005
Nac. Equ. Guinea 7998
R. Syd Gambia
Cape Verde 7155
Flevoland site for Holland

"Woodpecker"
Icom R-71A
RDI
Int. List. Guide
NDXE

1985:

R. Apintie gone
Rebelde, 5025
La Q de Mex. 9681
KCBI
VO UAE
AWR Forli
R. Marti
R. Caiman, cland 9960
WHRI
R. Marguetalia, Col. cland 10543
HCJB 26020 experiment ends

New Caledonia English
Zinica, Nicaragua 6121
Zambia 3346

R. Apintie gone
PNG to 90 mb
DXLD
Ray Briem show

1986:

Sani Radio 4755
R. Discovery (Jeff White) Dom. Rep.
ABC Alice Springs, Australia
ABC Katherine, Australia
ABC Tennant Creek, Australia
KVOH
AWR Gabon
LV de Libertad, Col. cland 6092.3

RTV Hong Kong 3940
R. Antilles 5955
Zanzibar 11734
Ivory Coast 500 kW on 15350

Sony 2010
NRD-525
R-5000
CPRV
OZDX
HAP USA gone
Voyager flight

Botswana QSLs

1987:

WSZO Marshall Isls 4940
WCSN
Liberian Rural Comm 3975
Encarnacion, Paraguay
AWR Costa Rica & Guam
TWR Sri Lanka
RFPI Costa Rica
R. Amanecer, Dom. Rep. 6025
R. Altura, Peru 3340
BBC Hong Kong
R. Buenos Nuevas 4800

Zanzibar 6015
LV de El Tigre 3254
R. Free Afghan.
R. Caroline 6220
Burmese Army 6570
R. NY Int. 6240
Niger high power on 5020
Yugoslavia gets 500 kW

Bill Plum stamps
DX Spread
Laos via USSR
BLANDX
Beijing relays

1988:

KUSW
 VO Pujiang, China 3990
 Or Sor, Thailand 6148
 LV del Rio Arauca, Col. 4895
 BBC Seychelles
 VO Mediterranean,
 MaltaContinental, Ven. 4939
 Kossuth R., Hungary 6025
 R. Kekchi, Guatemala 4845
 Italian R. Relay Svc 7160
 Hargeisa, Falklands, AFRTS,
 FEN Japan gone.

Nat. Unity, Sudan 9435
 Ngia Binh, S. Viet 4797
 RTV Hong Kong 7290
 Togo 7265
 Chad 7121
 Burkina Faso 7230
 2 MHz N. Koreans move to 3 MHz
 Switzerland via Gabon
 U. of S. Pacific 9070
 Canada via Japan

1st Winter Fest
 PROCEEDINGS

1989:

Mundial, Ven. 5049
 Tonga 5030
 Andaman Isls, India 4760
 AIR-Shillong, India 3255
 WSHB, WWCR, KHBI
 KJES Vado, New Mexico
 Clube do Angra, Azores 13585
 R. Caroline, KYOI gone

Bukavu, Zaire 4846
 Sierra Leone 3316
 WMR, Scotland 15045
 Bhutan on new 5023
 Jordan gets high power
 Mauritania 7244.8
 R. Norte, Dom. Rep. 4800
 Em. Meridiano 70, Colombia 4925
 Ecos del Atrato, Colombia 5025
 Garoua, Cameroon 7240 ex-5010

Pop Electronics
 Soviet jamming ceases
 Zeller's "Pirate R. Directory"

CREDITS:

In addition to the Proceedings review panel I would like to thank the following individuals for their inputs: Joe Farley, Sheryl Paszkiewicz, Jerry Berg, Peter Bunn, Aurthur Ward, George Zeller, Don Jensen, Bill Matthews, John Bryant, Guy Atkins and Don Moore.

Thanks to Kevin Atkins and John Bryant for providing finishing touches and seeing this project through to the end.

RADIODIFFUSION NATIONALE TCHADIENNE

REPUBLIQUE DU TCHAD

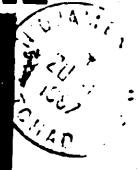
RADIO VANUATU
FORMERLY RADIO NEW HEBRIDES
ANCIENNEMENT RADIO NOUVELLES HEBRIDES



Head of slit Gong (Tam Tam) from Ambrym Island; used in village to village communications and in custom ceremonies.

9074

J.S.A.



REPUBLIC OF THE MARSHALL ISLANDS
MAIURO, MARSHALL ISLANDS 96960



الجمهورية العربية السورية
AN ARAB REPUBLIC




سوريا

His Majesty's Government
Ministry of Communications
Department of Broadcasting
(Radio Nepal)
Singha Durbar, P. O. Box 634
Kathmandu, Nepal.



THE
FALKLAND ISLANDS BROADCASTING
STATION

We are pleased
to verify your
report of reception



on 12th May 83
0959-1029 (MT)
3952 kHz

2370 kHz 3958 kHz 96.5 mHz FM

QSL
No 219

A.R. Davies
BROADCAST SECRETARY

In Memory

Oliver Perry Ferrel. Head of Gilfer shortwave, and a hobbyist himself. He died in an Easter morning car accident in 1984. His wife Jeanne carried on the Gilfer business.

Alan Roth. A well liked DXer who was active during the '70s died in 1986.

Ron Schatz. Of Florida. Well known Cuban broadcast expert, died in 1988.

Mac Leonhardt. Former executive director of NASWA. Died March 2nd, 1988.

Larry Brookwell. President of the San Diego Dxers Club and an excellent equipment reviewer.

C. M. Stanbury II. An accomplished author and tropical band DXer. Some of his work appeared in "Elementary Electronics".

Marge Witte. Accomplished Asian DXer, from California. Active in SPEEDX died in 1989.