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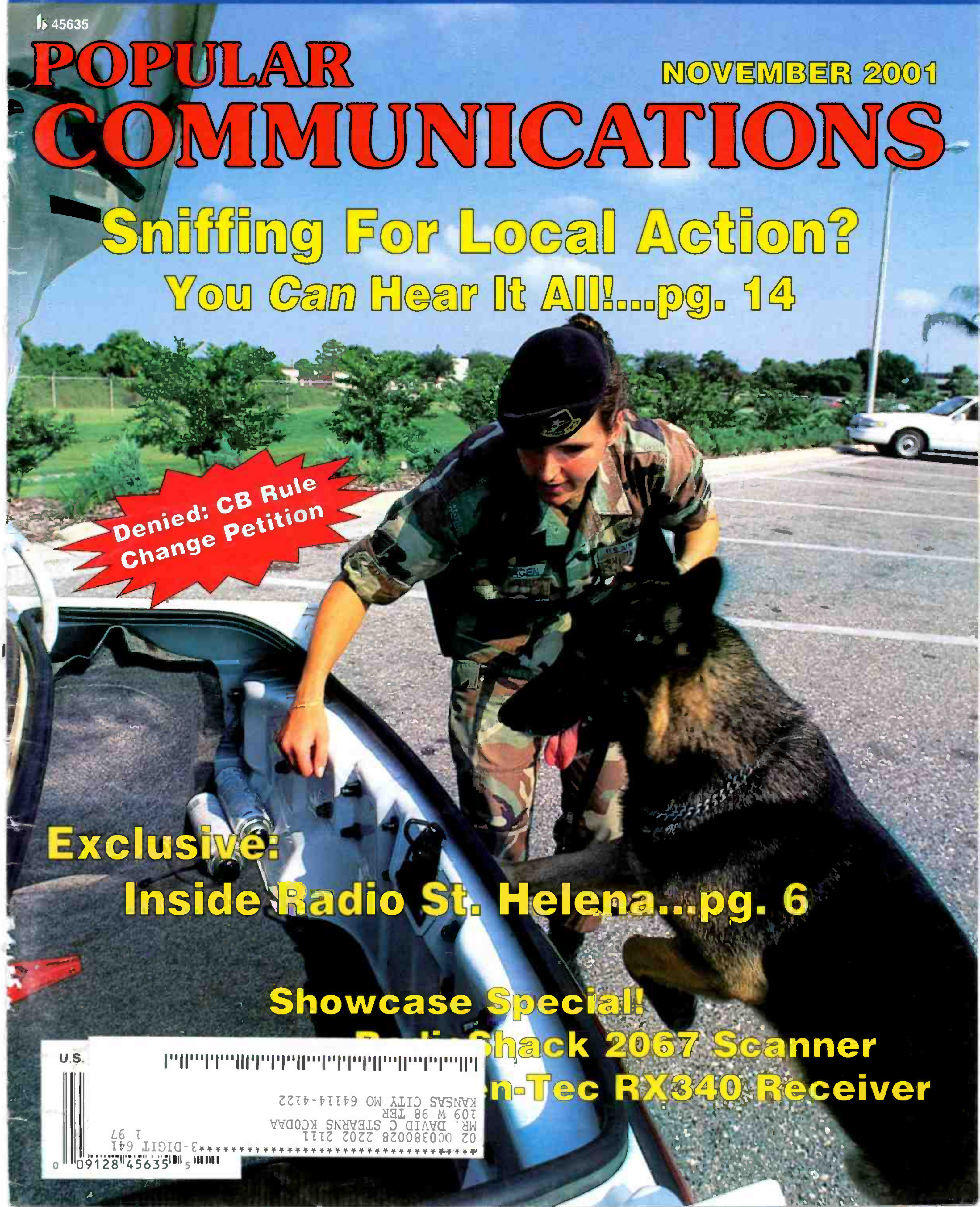

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Denied: CB Rule Change Petition

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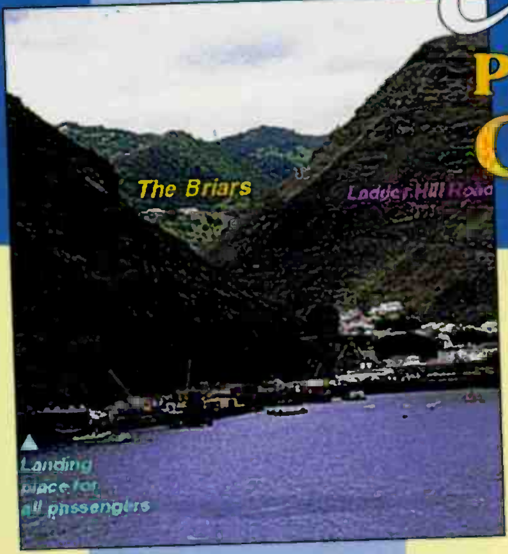
Contents

POPULAR COMMUNICATIONS
Volume 20, Number 3 *November 2001*


The Briars
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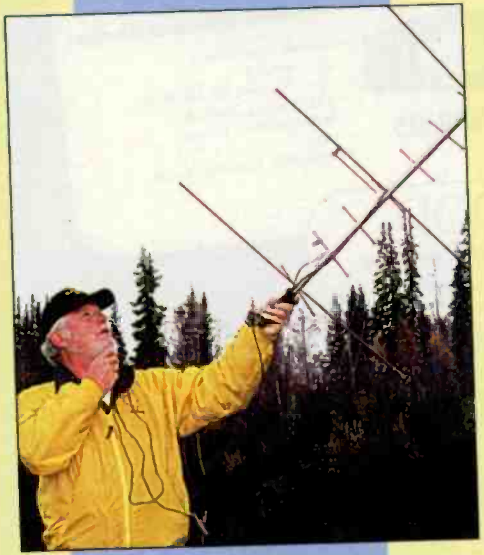
6

6 A Radio Service For Saints
An Exclusive Look Inside Radio St. Helena
by Manfred Rippich

10 Scan The FM Satellites For Voice And Pictures
by Gordon West, WB6NOA

22 Technology Showcase: Ten-Tec's RX340 Receiver
by Ken Reiss

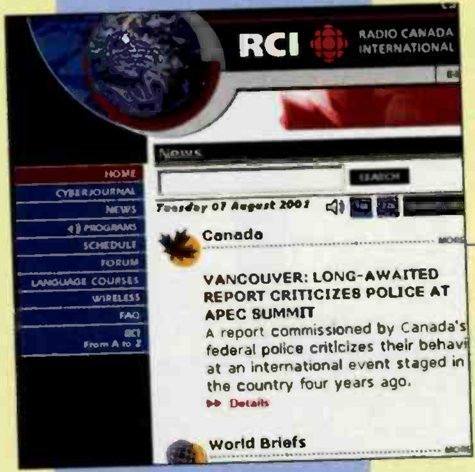
14 *Listing For Content* Overheard
18 *Laptop PCs For Every Shack* Ham Discoveries
24 *Monitoring Satellites On Your Scanner* Space Monitor
26 *Inside Alaska: Special Use Airspace Information Service* Plane Sense
32 *Summer "DX Clams" Expedition Dispels Winter Mediumwave DX Season Myth* Broadcast Technology
38 *A Tough Catch From Europe: Radio Kavkaz* Clandestine Communiqué
40 *Navigating International SW Bands The Easy Way* World Band Tuning Tips
44 *Letters And Calls Pour Into BBC Offices* Global Information Guide
53 *The MK484 ICs Are Here–Let's Build The Receiver!* Wireless Connection
58 *Bureaucratic Fools!* On-The-Go Radio
60 *FCC Denies Dixon's RM-9807 Petition For Reconsideration* Washington Beat
62 *The "Black Box" Radio—Ten-Tec's RX320, And 240+ Loggings!* Utility Radio Review
73 *Special Edition: Focus On International Radio* iWaves
77 *Archeologists Discover New Dinosaur Species In Downtown Los Angeles* Loose Connection



10

Departments

4 *Tuning In* — An Editorial
37 *VIP Spotlight*
42 *Power Up: Radio & High-Tech Gear*
61 *Our Readers Speak Out* — Letters
76 *Readers' Market*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World Briefs
MORE

VANCOUVER: LONG-AWAITED REPORT CRITICIZES POLICE AT APEC SUMMIT
A report commissioned by Canada's federal police criticizes their behavi at an international event staged in the country four years ago.

73

On The Cover

Air Force SSgt. Buffie Verhaggen's explosive sniffing dog, Kalvin, checks out vehicles entering MacDill AFB, Florida. If you're ready to sniff out more scanner action and need some help, read Ken Reiss' Overheard column on page 14. (Photo by Larry Mulvehill).

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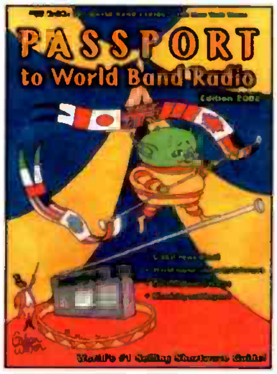

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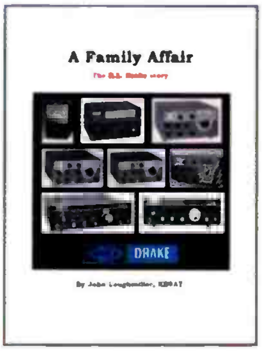

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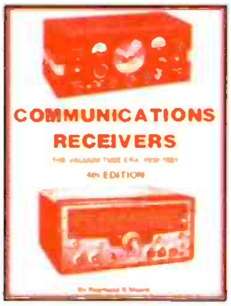

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tuning in

by Harold Ort, N2RLL, SSB-596

an editorial

FCC Thumbs Nose At CB Volunteers

Alan Dixon wasn't born yesterday. He's been around radio for dozens of years, is a licensed amateur operator (N3HOE) and is certainly qualified to be an FCC commissioner — frankly, probably more so than some I've seen in the recent past. Alan also frequents CB from time to time, and being a big boy, knows right from wrong.

I say all of this because there are still those old curmudgeons who are not only still hanging on to the day back in the late '50s — yes, '50s! — when amateur radio lost 11 meters to the rest of America who *indeed* use those frequencies. True, CB has had its ups and downs, but so has amateur radio. Think CB is the only place where Americans with microphones act with impudence? Listen to 20 meters some night. These are *licensed hams*, folks — most running higher power than necessary to maintain a QSO, as few ranting and raving about the fellow a few kHz away, and a few more anti-everything groups spewing forth their mindless garbage for the world to hear. Point is, give someone the floor — license or no license, Morse code at 20 wpm or not, and people will be people. Hanging onto the day when hams lost 11 meters to CB is a lot like still crying about the day Captain Kirk died. It happened, so let's get on with business.

It's no secret that most CBers, at one time or another, have talked beyond 150 miles. Some used linear amplifiers. Some still do. Still other operators are generously giving their time to monitor CB Channel 9 for emergency calls, and many, at one time or another, have found themselves in the unusual — and illegal — predicament of assisting a CB operator calling for help from hundreds of miles away. What to do? Assist the caller and violate FCC rules, or ignore the call and remain legal-to-the-letter? What we're talking about here is good old common horse sense.

RM-9807 Defeated

Dixon's petition for reconsideration, RM-9807, which was recently denied by the FCC, had absolutely nothing to do with giving CBers a green light to modify their radios, use linears, or get involved in freebanding. On the contrary, it actually sought to get the Commission to recognize what they've failed to see since 1958: the way signals behave on 11 meters (remember, it was a former amateur frequency band used for long-distance communication in the first place) is subject to the laws of nature and the state of the ionosphere. (Even some Advanced Class hams know about it, but forget they don't need a kilowatt to talk from Texas to New York). CBers, either deliberately or by the laws that govern radio, will always make long-distance contacts on 11 meters. I have, and chances are so have you. So lock me up and throw away the key. Send me to Siberia without cable TV and AOL. Harold's Second Law Of Human Behavior, that I learned in the Army, says that people will be people regardless of social status, income, degrees earned, jobs held, number of people supervised, Morse code learned, rank worn on a uniform, class of license held, number of contests won, religion, sex, height, weight, hair length, tattoos, body adornment, or frequencies used to enjoy radio.

I thought Dixon's petition for reconsideration, and his original 9807, was pretty straightforward. He asked the Commission to repeal their rule that prohibits any CB station from communicating with or attempting to communicate with another station beyond 155.3 miles on the basis of common sense and removing a regulation that clearly has no place in a Commission that supposedly desires to eliminate over-regulation. Here was its chance to look at a stupid rule and say, "Whoa, this is really almost as dumb as some Congressional representatives." Instead, they took the low road and said on August 1: "For the reasons discussed below, we deny the Petition . . . the request was inconsistent with the purpose of the CB Radio Service and could fundamentally alter the nature of the service." It continued, "Specifically, the Bureau noted that the Commission's rules prohibit long-distance and international communications in order to ensure that the

(Continued on page 78)

POPULAR COMMUNICATIONS

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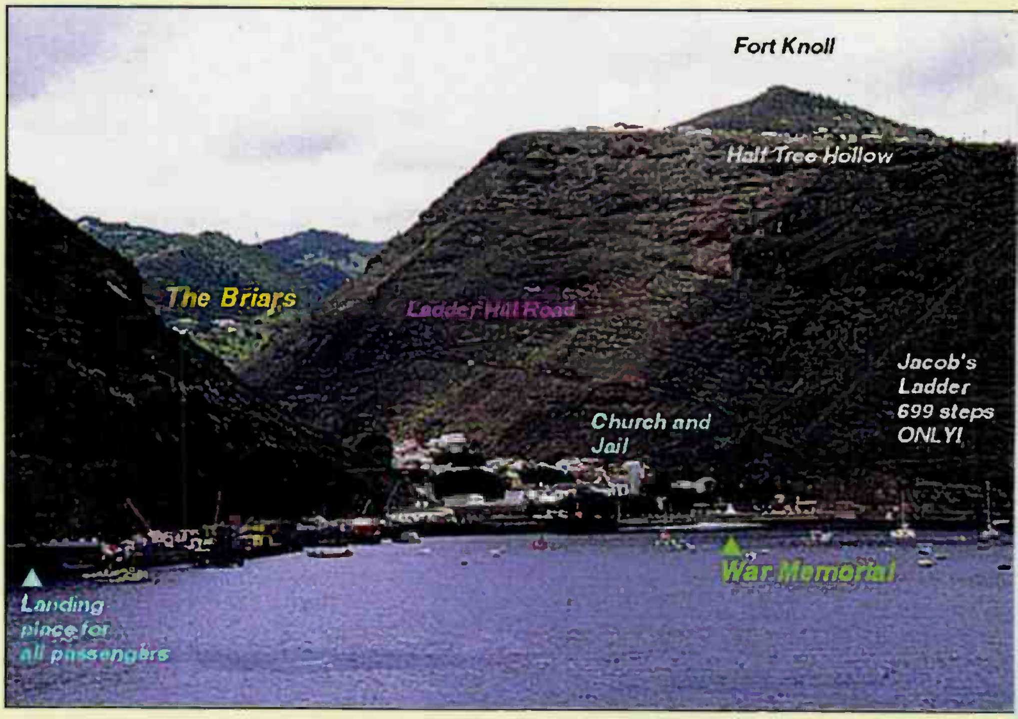
An Exclusive Look Inside Radio St. Helena

By Manfred Rippich



A fascinating view of St. Helena and the port at Jamestown.

Broadcasting on Saint Helena is relatively young, compared, for example, with the island's far flung neighbor to the southwest: As early as 1928 a cable service called Rediffusion was introduced in Stanley and was soon extended to other parts of East Falkland. On the Island of Internment however, a regular broadcasting service for the public was introduced only in 1967.

In the first part of this century, people on St. Helena who were fortunate to own a radio set, or wireless, as it was called, depended on stations other than their own because there wasn't a single one on the island. The official report for the year 1931 states: "There are few wireless reception sets from which good results to be obtained." And, a year later: "The Empire Shortwave Broadcasting Service is received well in the island." As well-known islander Jessica March recalls her youth of the late 1940s ". . . we didn't have electricity yet so we used a 12-V battery to power our radio set [a true luxury at that time]. The voice in the receiver was fading so my parents tried to improve things by hanging up an aerial wire in the open. By that we managed to follow the news from the outside world — from overseas [literally] — by means of the BBC." The Colonial Report for 1947 puts the situation like that: "There are about 150 radio sets but there's no local radio station nor electricity supply."

Electricity eventually took to the houses, first in Jamestown, the tiny capital, in about 1953. One of the above mentioned, approx 150 sets, entails a good piece of local history.

Expressing their gratitude to the islanders for their kind hospitality, the survivors of the City of Cairo-disaster [NB: ship sunk by German U-boat] presented a fine radio set to the hospital. That Empire Made model PYE with a shortwave band, ranging from 13 meters to 31 meters, was in use for many years to come. As the Information Officer of the time remarked in 1984 about the set, made at Wembley: "Although not in a very good condition the radio set still enables the patients to listen to the local radio station." The set is still there and I have personally suggested it be taken to the museum, and the sooner the better. As insiders are aware, various valuable pieces of history have met a pitiful fate in the past: Just to name the town gates and the Rock Fall Fountain.

As anywhere else on the globe, certain people develop a special, keen interest in technical matters. St. Helena experienced various homemade, short-lived amateur radio programs. Mr. A. J. Davies made a radiotelephone transmitter for which he used parts, imported by Percy Teale. Mr. Teale himself had obtained a temporary license in 1958 to broadcast to a public meeting, which was held in the cinema hall of those days. An islander, who was a remarkably active radio amateur at that time, was Mr. Freese. He had gained some useful knowledge after he had taken up an apprenticeship with Cable & Wireless at the age of 15. From the local newspaper *News Review* we learn that "[...] the St Helena Arts Club made a broadcast on January 3, 1960. It contained varied programmes and the secretary, Mr. Freese, will be glad to get comments from different parts of the island." A bit later on, Mr. Bill Stevens — who was also Philip's agent — used to broadcast his own programs that consisted mainly of musical requests, played from records. Some of his equipment is still displayed in the island's cramped museum.

Sooner or later — even visitors realized — that there was something "in the air," as Mrs. Jean Johnson noted in one entry of her diary, dated 27 January 1962: "We discover that there is a local broadcasting station — The Ham of Half Tree Hollow." [Neighboring settlement of Jamestown]. Two from the pioneer-ham-generation of St. Helena, Barry Dillon, and Mike Francis, once had the chance to work Tristan da Cunha. Fellow American hams made funds of some thousands of pounds available, but the dream didn't come true due to the lack of a license, which couldn't be obtained at that time.

D.W.R.S. And Schooling

The 1960s saw the arrival of a body, which was at the time, and is still today, a kind of a mystery, covered under a classified cloud. Around 1965, the Diplomatic Wireless Relay Station, D.W.R.S., called sometimes just D.W.S., erected high-rising steel masts on Prosperous Bay Plain and Deadwood Plain. The men who serviced the wireless station were housed in prefabricated bungalows, which were built at a place called Piccolo Hill in Longwood, not very far from the house, once occupied by the exiled Emperor. Little is known about that service. However, it was with the help of their expertise, manpower, and equipment, that the public of St Helena finally got their own broadcasting station as the News Review announced in March 1966 that "[...] Beginning Friday 11 March there will be a local experimental transmission to test reception throughout the island. It can be heard on 200 meters, 1511 kilocycles in the medium wave band." A year afterwards, the same paper heralded in its issue of April 8th the following, more detailed news item: "A Government Broadcasting Station is being constructed in the grounds adjacent to the Country Senior School and should be in operation by mid-1967. The costs for this station are expected to be £5,500. The sum does not include the transmitter and technical equipment, which will be lent free by the D.W.R. The D.W.R. has also offered to maintain the station free of charge.

The Colonial Development and Welfare Fund met the entire expense for construction. The radio station will be in operation on the wavelength of 200 meters medium wave. The main purpose of the station is to broadcast educational programmes as well as occasional government announcements, news, and announcements of local interest.

The programme consists mainly of BBC transcription records. To be able to gather experience, the Education Officer, who was currently staying in the UK, had been attached to the BBC Schools of Broadcasting Department for a short time."

Regular test transmissions followed for the rest of the year. They had a more or less fixed pattern, broadcasting on Fridays for schools and on Saturdays for the entertainment of the public. The names of the programs aired were Variety Hour or Weekend Special, respectively; the latter hosted by Rex. Programs aimed at schools were on alternate Fridays: Story for Infants, Story for Juniors and even from time to time a section for Seniors like Great Moments in Science — Galileo's Telescope, and Your Question Answered.

Not all programs went on the air as announced in the weekly paper: "Due to problems with electricity, no 'Weekend Special' will be broadcast today [Saturday Nov 4th 1967]." Again, the D.W.S. lent a helping hand — this time to solve the problem at the powerhouse: "Help has been offered by crew of RFA Wave Baron and the D.W.S. Longwood. It is hoped that within the next five days 75% of the consumers will be supplied properly again."

The worldwide studios of Radio St. Helena.

A Christmas Present

On Christmas Day, Monday 25th of December 1967, His Excellency, Governor Field, officially opened the radio station. At 9:45 a.m. Sir John read his Christmas message, which was followed by bells and carols at 9:55. Various other program items followed that morning and in the afternoon, an uninterrupted Musical program, produced by Mr. Roland Whiting of D.W.S. Longwood, entertained keen listeners for the rest of the day. Radio St. Helena, as it is known today, was born.

The following year went by, maintaining a Friday-Saturday-Sunday broadcasting pattern. Then, in January 1969, Messrs Gary Price and Peter Gamble "[...] made a generous offer. They will air a programme every fortnight. This program will mainly consist of light music. Listeners can submit their musical requests and hand in their greetings to be aired. This programme will be on the air up from January 8th 1969 from 5 to 6 p.m. every other Wednesday. Your written musical requests are to be handed in no later than noon on Monday each week, before the airing date. To be submitted to G C Lawrence, c/o St Helena News Review, The Castle."

A further step was then taken. Things improved through the years to come, although nobody was fully responsible for the service, as Tony Leo recalls those days when he used to produce programs on a voluntary basis. In early 1973 the Information Office, which had been in charge of the station since July 1969, finally realized the need of a full-time manager and approached Tony who agreed to face the challenge. He took over for Eric M. George, Information Officer at the time, eventually became a radio self-made man and Jack-of-all-trades at Pounceys [location of both studio and TX]. Only once, in 1982, Tony was sent overseas to attend a training course.

A proper schedule came into being which allowed the Saints — people of St Helena — to listen to their own station every afternoon during weekdays, later to be supplemented by BBC World Service relays – which was a result of the Gulf War. The station was equipped with an old-fashioned Marconi transmitter, actually two of them: one in service and one on stand-by. Built in 1945, it performed, however, a good service. It was replaced by a more up-to-date model in 1991. The current output is 1 kW on a frequency of 1546 kHz, while until October 1978, the frequency 1511 kilocycles was used.

Finance is a problem on St Helena: The island depends on millions of Pounds pumped in from London, as there are neither natural resources nor any light industry, not even enough arable land to feed the people, let alone to export agricultural produce. For that reason, there has always been a shortage of funds allocated to Radio St. Helena. The Department's expenditure for broadcasting in 1968 was £289 while the total costs for the upkeep of the service was stated as being £881. That's why the hours of broadcasts could never cover the whole day. Many, many volunteers have put in their spare time to educate and entertain the listeners of Radio St Helena. Government money allocated for wages allows only a more or less full time staff of five. They are, beside the station manager Anthony Leo, Ralph Peters — the Dutchman, Joy Lawrence as Studio Organizer, Cyril Gunnell as News Editor and Verona Phillips as clerk. While most European countries levy a license fee on everybody who has access to the public radio service, this is not the case in St. Helena. In 1980, the estimated overall cost for broadcasting stood at £5,000. To ease the financial hardships at the radio station, as visiting fiscal adviser, Mr. C. E. Condrington, suggested in his final report: "It is a little surprising that no contribution is made by the beneficiaries of the local broadcasting service. I suggest that an annual licence fee of £1 for each household owning a radio would be a reasonable charge for the start. A running check on radio ownership could be maintained by customs records of radio imported by individuals and by requirement for shops to notify the Treasury of the names and addresses of customers to whom radios have been sold." This proposal, fortunately, never came into being.

For various reasons, those valuable supporters in the form of volunteers changed as the years went by; so did many items. Dome, however, proved very popular, and hence survived on the schedule for many years, a number of them are still part of Radio St. Helena. To name a few: Police Five, Let's Sing and Listen, Evening Shuttle and Airwaves Command. Christmastime is always something special, because the hours are extended. This, however, means an extra load of work for those who are behind the microphone. (A very special thanks to them). It's also a time when on-air greetings are exchanged by those who have to win their own, and the bread for the family abroad, on the Falklands and Ascension. Fellow radio people at FIBS in Stanley and Volcano Radio on Wideawake Island send in the recorded greetings to be aired by Radio St. Helena.

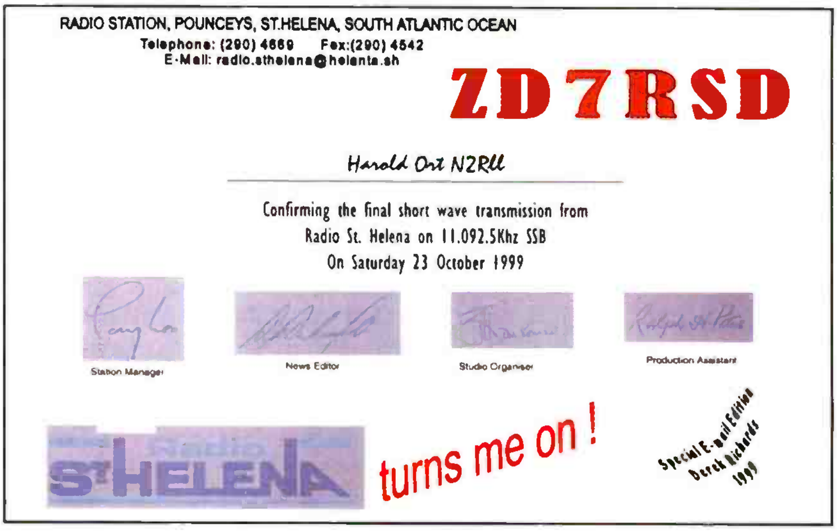
Until the establishment of the Media Board in 1999, of which the Swede Mikael Olsson became CEO in 2000 [He had married a local] Radio St. Helena used to be a government run and financed body and it was their responsibility to keep the program "clean." This may explain the following note, dated 1995, and displayed in the studio: "Instructions to all presenters and voluntary producers. The following records are banned from transmission: French Kiss; Leap up and down with your knickers in the air; Push it; My Ding-A-Ling; J'taime...; failure to comply with this request will result in further action being taken. Thanking you. Anthony Leo, Station Manager."

Another note has its reason in an incident, which took place on Plantation lawn [where the Governor resides] when a certain man was called by his nickname over the loudspeakers, asked by Tony — who was there with the OB van — to collect his bumper prize. The notice in question, also hung up in the studio, reads: "With immediate effect please refrain from using nicknames on the air. Please ask for correct name before using it in requests, announcements etc."

The lucky winner, nicknamed Peanut, who wasn't really happy at that very moment, has left the island by now. [NB: It was an Expat, the Chief Secretary, so named because of his head shape]. Nicknames on St Helena are very popular since family names, some, such as "Yon," "Thomas" and "Benjamin" — are very widespread.

Nordic Supporters

In early 1990, an Outside Broadcast Vehicle had been purchased. It made it much easier to do outside recordings as well as live broadcasts of council meetings and sports events. However, as early as February 1974, live broadcasts were made and much appreciated by those who couldn't be on the field to watch themselves. The News Review commented that milestone as follows: "Knockout competition on Francis Plain, live coverage 14:45-16:35 hrs. According to the various reception reports, it would appear that the sports commentary on the football match relayed direct from Francis Plain last Saturday afternoon was a great success. The quality of the actual relay, together with the graphic picture of the game portrayed by the commentators, was well above expectations, thanks to the combined efforts of the Broadcasting Officer, commentators and members of the D.W.S. staff who made such a historic event possible. It is hoped, that similar radio coverages on sporting



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ZD7RSD

Harold Ort N2RU

Confirming the final short wave transmission from
Radio St. Helena on 11.092.5Khz SSB
On Saturday 23 October 1999

Station Manager
News Editor
Studio Organiser
Ralph Peters
Production Assistant

Radio St HELENA turns me on !

Special E-mail Edition
Derek Richards
1999

An E-mail QSL received for Radio St. Helena's "final" shortwave transmission in October 1999.

activities and other noteworthy functions will be made possible in the not too distant future. On this occasion it was also possible to make a direct appeal over the radio for the assistance of a doctor, who arrived on the scene within half a hour after the call went out but unfortunately was unable to save the life of the spectator who had collapsed at the sports ground."

This live-broadcast was a noteworthy achievement, no doubt, but none of the station staff involved would have spared a single thought on live broadcasts for the outside world. However, this became reality, thanks to the efforts of some radio enthusiasts from Sweden. While on a holiday in The Gambia in the 1980s, John Eckwall had the idea of relaying a mediumwave service of the local station via a Cable & Wireless transmitter, which was done. Having established quite sound relations with the authorities of C&W in London afterwards, John made it possible that a similar broadcast could be made on St Helena by using a C&W shortwave transmitter.

Strange Things Happen

The first special transmission took place on October 6, 1990. Joy Lawrence' soft and distinctive voice had gone round the globe when she took to the micro on that special Saturday. Though few radio enthusiasts knew about it, some 500 reception reports reached the lonely island. The one-hit wonder, proved to be so successful that later broadcasts were to follow, becoming longer in duration — usually three hours. Hundreds of reception reports filled up the mailbags carried by RMS St. Helena in November, December, even January after the actual event. 1992's broadcast brought a harvest of 1,014 reports. In that very year, the two Swedes first came to the island to be at the scene. They liked it so much, that they returned five years later.

Prior to the actual 1992 broadcast, something extraordinary happened. Tony Leo recalls that unbelievable occurrence: "The day before the actual broadcast, a 15-minute test transmission was broadcast, mainly for our friends in Sweden to check reception quality. The propagation conditions seem to have been excellent, since a lady from New York called our station telling us that she had picked up the signal in her car radio! She had, precautionary, fixed the frequency dial for the Day X."

Besides promoting the island by means of Radio St. Helena Day, John Eckwall puts in also a lot of time to enlarge and update the Website he has set up, so anyone can browse through the information provided. Interestingly, John's homepage had been available long before the local newspaper, various merchants and even the St Helena government, had managed to provide online access to island information.

Radio St. Helena's 30th anniversary was celebrated without loud trumpets and parties. Instead, a reception was hosted by Governor David Smallman, who honored the two gentlemen from Sweden for their engagement and almost tireless efforts to promote St Helena. They had arrived from Cape Town on 11 December 1997 and I had the pleasure to meet them personally for the first time. More strangely, we three traveled back to the Cape and on to the loneliest island in the world, Tristan da Cunha. More on that unusual place, the hardy stock of people there, and their attitude to broadcasting in a future issue.

If you ever go to Saint Helena, tune into, and stay, on 1548 kHz. Just to follow the jingle's advice: "Now that you found us — keep us." Through that, you'll learn more about what's going on in St Helena. Maybe then you'll agree, that "Radio St. Helena turns me on!" ■

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radio resources

radio tips and solutions to maximize your hobby enjoyment

by Gordon West, WB6NOA

Scan The FM Satellites For Voice And Pictures

You won't need a direct satellite dish to capture voices and imagery coming from ham satellites UO-14 and AO-27. Two passes almost every morning will get your heart pounding when your handheld scanner goes from noise to clear FM audio for about fives minutes of unbelievable reception.

These two low-power amateur radio satellites utilize a low-earth orbit (LEO) about 1,000 kilometers above the Earth in a polar orbit completing their circle about every 90 minutes. As the Earth rotates below, every orbit puts these satellites in a different part of our sky. On some mornings you may luck out and get a pass to the east, while another pass will be well off to the west.

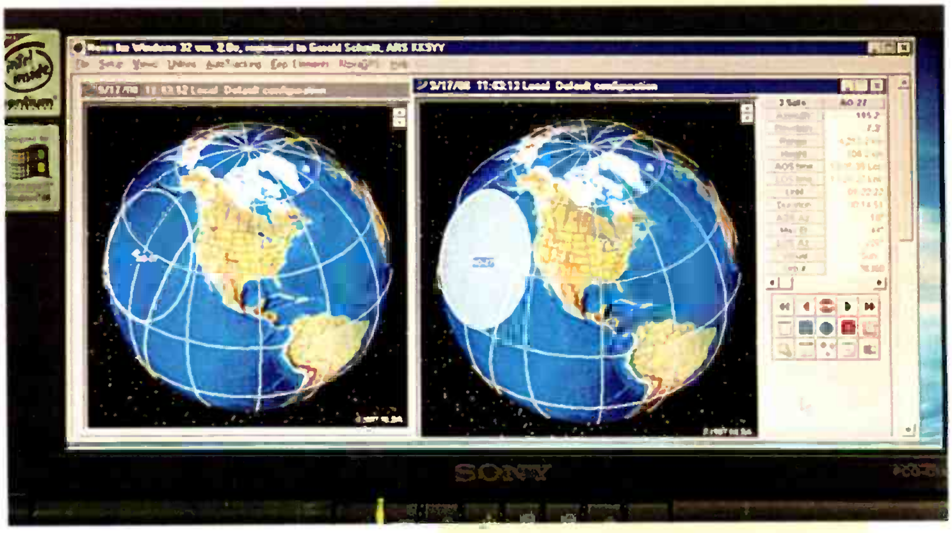
The University of Surrey UO-14 satellite and the AMRAD-OSCAR 27 satellite each operate as an FM repeater, taking 2-meter FM signals on their input and retransmitting them on their 435–436 MHz (approx.) output. Take a look at these *output* frequencies for each satellite:

UO-14	AO-27
435.080	436.805
435.075	436.800
435.070	436.795
435.065	436.790
435.060	436.785

These outputs are centered on U0-14 at **435.075**, and AO-27 at **436.800**. Start with these two frequencies at first to get into the swing of receiving a low-earth orbiting ham radio conversation on your handheld scanner. These two satellites are so popular that I *guarantee* you will begin to hear activity as soon as they come up over the horizon. Start with your pocket scanner scanning **435.075** and **436.800 MHz**. Spend a morning outside with your scanner and a minimum of a good rubber duck antenna. Better yet is a simple telescoping whip antenna. Begin your search of these two frequencies with the antenna straight up. Keep your squelch right at the threshold, because the incoming signals will not necessarily be very strong.

I usually set my scanner in the delay mode, which allows me to check the frequency of anything that might break the squelch that sounds like voices. But you've got to be fast — the satellite signals will build and fade. You first need to figure out which frequency is active. OK, you're now picking up some voices coming from AO-27 on 436.800 MHz. Now start moving your handheld around so that

Jerry, KK5YY, talks to the lower 48 from Alaska using an Arrow



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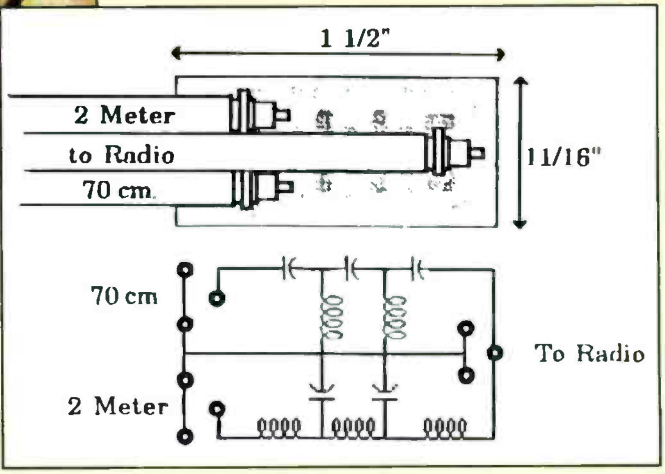
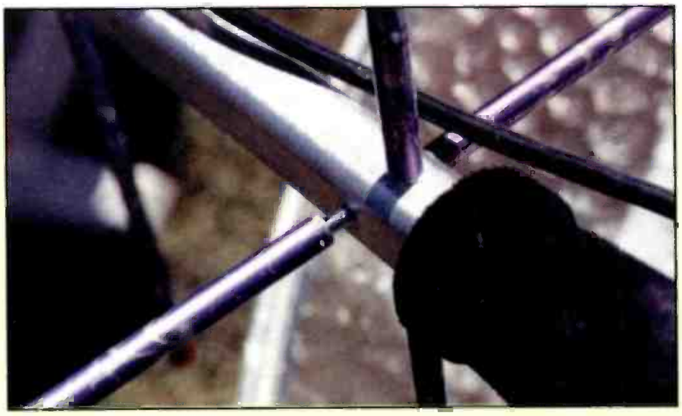
The duplexer slides up into the handle with pre-assembled coax cables and connectors.



the antenna is at a different angle than just straight up. Do this quickly as if you were trying to swat a fly with a flyswatter. If you do this really fast, you'll find a spot where reception becomes crystal clear with full quieting. Continue to listen. Interesting, isn't it? You're picking up a station about 1,000 miles away.

Most amateur operators transmitting through the satellite will routinely give their geographic area by saying the state and town, or giving a grid square number. Free ICOM America grid square charts are available at your local amateur radio dealer. Log onto www.icomamerica. com to find a dealer with grid square maps near you.



The Arrow antenna elements screw into place

Doppler Shift

As you're listening to the satellite, the signal will remain strong, but will then become distorted. This is because of Doppler shift. As the satellite approaches you, the receive frequency will be 5 kHz higher. As it passes overhead and heads toward the horizon, the receive frequency will be 5 kHz *lower*. This is why it's a good idea to load in five channels of UO-14 and five channels of AO-27, in addition to the two center frequencies that will help you get started discovering the excitement of satellite monitoring. Once you get the feel for the relatively simple reception of these two amateur radio FM repeater satellites, you'll next want to log onto the AMSAT web page to download orbital predictions at www.amsat.org/amsat/sats.

You should also E-mail my friend, Jerry, KK5YY, at kk5yy@arrl.net and he'll give you some additional up-to-date sites for orbital predictions, and tell you how exciting it is to see these passes graphically on a Palm Pilot. Jerry was one of the first to introduce low-earth-orbit satellite communications to the state of Alaska.

Trying Another Antenna

Now that you're really getting into listening in on these satellites, you may wish to switch from your little telescopic whip to the more powerful handheld, dual-band 2-meter/400 MHz satellite antenna. The most popular is the Arrow antenna (arrow146@

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SCAN
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The Arrow antenna coax terminates to a BNC connector for use on your handheld scanner.

aol.com). The model I like is the 146/437-10 Arrow satellite antenna that weighs only 19 ounces and is the perfect match for your handheld scanner. I also suggest you buy the duplexer that fits inside the handle which gives you a single 45-inch coax cable feedline with attached BNC for simultaneous VHF high-band and UHF reception. Jerry designed the duplexer, so we know it's going to work well!

The Arrow antenna assembles in seconds, using lightweight aluminum Arrow shafts as elements. You'll immediately be amazed how much it improves your scanner reception, bringing in those stations you could barely hear with the rubber duck or telescopic whip. Once you zero in on the origin of the signal with the Arrow antenna, swing the elements either vertical or horizontal and reception will boom in!

Once the satellite comes up over the horizon, and you begin to hear signals, not only will you aim the antenna at the approaching (or departing) satellite, but you'll also rapidly rotate the Arrow antenna polarization for best reception. This gets exciting with the radio in one hand and your antenna in the other! You'll be amazed how much sooner, and how much longer you can track the satellite as it comes up, reaches maximum elevation, and then begins to pass beyond the horizon.

Hams Do Much More!

Not only do amateur operators talk FM over these two satellites, but they can also send ***slow-scan television pictures*** with the Kenwood VCH1 visual communicator. The transmission lasts about 40 seconds, and a full-color, high-resolution picture may be captured by anyone up to 1,000 miles away with SSTV reception capabilities. Down in the lower 48, you'll pick up the sounds of SSTV every now and then, but up in Alaska KK5YY indicates there are a lot of pictures being sent and received. We suggest one 40-second image per satellite pass, giving others on the frequency an opportunity to share this resource with voice operators, too.

Finally, it only takes the amateur radio Technician no-code license to get full satellite privileges on both 2-meters and 435 MHz. If you're into scanning and want to add uplink capabilities to your station with a ham ticket, one simple Technician Element 2 multiple-choice ham test is all it takes to earn your callsign. Thirty-five questions — 70 percent — is the requirement. It takes most people about two weeks of home study to prepare for the no-code Technician class license, and there's no code test either!

So tune in to the low-earth-orbiting satellites soon. Start off with just your regular scanner antenna, and see what you can hear on 435.075 and 436.800 MHz any morning. Be patient because the satellites are only in view for about five minutes, then take about 90 minutes to come around again. But, if you're outside scanning these two channels, you're bound to get a hit! ■

Mobile DXer

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by Dave Mangels, AC6WO

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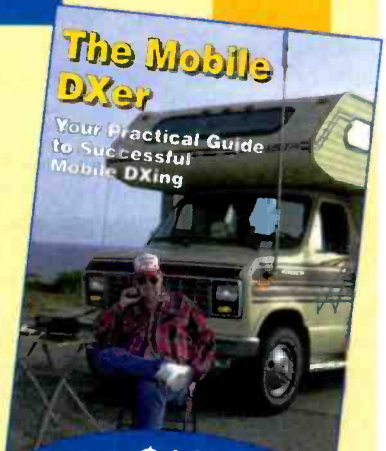
- ✓ Tools, Tactics & Techniques. . . **and more!**



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strategies and techniques to keep YOU informed

Listening For Content

These days, it's hard to find a scanner with less than 100 channels, but 200, 500 and even 1000 channel units are quite common. Trunking scanners are becoming standard equipment for many hobbyists, and many are finding a need to scan multiple trunked systems to monitor all the stuff they're interested in monitoring. Keeping track of all that can get to be quite a challenge. Tracking what's going on in one place or another at any given time can be almost impossible on a busy night, or in a busy area.

One of the critical factors for each of us to determine is exactly what we want out of listening to the scanner. If you're interested in listening to a busy radio, then fill it up and let it run. You'll hear lots of traffic, but my guess is you won't really know what's going on anywhere. On the other hand, you might be more interested in why sirens are going down your street. Then some focus on the local area for content is probably more important. That's what we'll focus on this month.

The reason I mention all this is because I see a lot of people who get into this hobby with 200 or 400 channel radios. Great! And why not, since they're so affordable these days. The pitfall is that a lot of novices fall into the trap of thinking they're not getting their money's worth if the radio's not full. So they find things to fill it up.

They wind up listening to a busy radio. The scanner probably doesn't make it through any one bank without stopping a few times, particularly in a metropolitan area of almost any size. And while it's stopped, action that's taking place on other channels is lost. So, you wind up with a busy radio that talks a lot, but with little or no understanding of the conversations you're listening to. And after a while, I fear that those people quit listening.

At the average of 25 to 40 channels per second that most of our scanners run, a fully loaded 400 channel radio will take 10 to as many as 16 seconds to run through, even if the antenna's disconnected. Try sitting still and timing 16 seconds — it's tough! Think of how many words could be spoken in that time.

That's a lot of time just for a dry run, and of course, the idea is to have the radio stop now and then for something we're interested in hearing. So hopefully you've programmed in some channels with traffic on them. Sure, your radio stays busy, but what's really going on? Odds are, you probably don't know if you're listening to a scanner programmed like this. You'll hear a lot of activity, but putting the details together gets a bit tough. For most of us (besides "Well, gee, I don't know" Harold) the reason we scan is to keep up with the action. So how can we scan and still maintain a focus on important activity?

Take Inventory

One of the things you can do is to have a look at your situation. What's around you that's important to you? One of the

PATROLMAN-8
REALISTIC

We don't need no stinking banks — in the old days this wasn't a problem. When you can only listen to four channels at a time (front) or one channel at a time (rear), you get very familiar with the operation of the frequency you're monitoring.

This receiver has two banks of banks. Ten banks of 50 channels make up the A side, and 10 more for the B side. You can only listen to A or B at one time, so you'll have to group carefully, but at least it has the option. It also has talkgroup ID banks within trunk groups, making it a very good trunktracking scanner for general use.

RadioShack
PRO-2052
DUAL TRUNKING
1000 CHANNELS

JRC NRD-545

Legendary Quality. Digital Signal Processing. Awesome Performance.

JRC
DSP
999
14.250.00 -240
NRD-545 DSP RECEIVER

Japan Radio Raises the Standard by which High Performance Receivers are Judged.

Starting with JRCs legendary quality of construction, the NRD-545 offers superb ergonomics, virtually infinite filter bandwidth selection, steep filter shape factors, a large color liquid crystal display, 1,000 memory channels, scan and sweep functions, and both double sideband and sideband selectable synchronous detection. With high sensitivity, wide dynamic range, computer control capability, a built-in RTTY demodulator, tracking notch filter, and sophisticated DSP noise control circuitry, the NRD-545 redefines what a high-performance receiver should be.

- LSB, USB, CW, RTTY, FM, AM, AMS, and ECSS (Exalted Carrier Selectable Sideband) modes.
- Continuously adjustable bandwidth from 10 Hz to 9.99 kHz in 10 Hz steps.
- Pass-band shift adjustable in 50 Hz steps.
- Tracking notch filter, adjustable within ± 2.5 kHz in 10 Hz steps.
- Continuously adjustable AGC between 0.04 sec and 5.1 sec in LSB, USB, CW, RTTY, and ECSS modes.
- Built-in RTTY demodulator reads ITU-T No. 2 codes for 170, 425, and 850 Hz shifts at 37 to 75 baud rates. Demodulated output can be displayed on a PC monitor through the built-in RS-232C interface.
- High sensitivity and wide dynamic range achieved through four junction-type FETs with low noise and superior cross modulation characteristics.
- Optional wideband converter unit enables reception of 30 MHz to 2,000 MHz frequencies (less cellular) in all modes.

NRD-345 JRC

Japan Radio Quality. Synchronous Detection. Great Price.

- Synchronous AM, AMS, CW, SSB, and FAX modes.
- 0.1 to 30 MHz coverage.
- Dual IF filter bandwidths.
- High sensitivity and wide dynamic range. The RF amplifier and first mixer in the front-end incorporate four low-noise junction-type FETs with excellent cross modulation characteristics to ensure both high sensitivity and high dynamic range.
- Noise blanker.
- Clock/Timer.
- Memory scan and frequency scan functions.
- Personal computer control with optional RS-232C interface cable.

JRC
14.250.00 kHz
NRD-345 HF RECEIVER
AP GAIN
TONE

Only the NRD-345 offers Japan Radio Performance and Quality at a Surprisingly Affordable Price.

The NRD-345 delivers hour-after-hour of listening pleasure with synchronous AM detection to help tame fading, dual IF filter bandwidths (with a third optional), and high dynamic range. Compact, light, and refined, the NRD-345 offers advanced multifunctions, 100 memory channels, and even personal computer control. The NRD-345 brings shortwave listeners an outstanding value in a high-performance receiver for under $1,000.

JRC

Japan Radio Co. Ltd., Seattle Branch — 1011 Klickitat Way #B-100 Seattle, WA 98134 Voice: 206 654-5644 Fax: 206 264-1168
Japan Radio Company, Ltd. — Akasaka Twin Tower (Main), 17-22, Akasaka 2-chome, Minato-ku, Tokyo 107, JAPAN Fax: (03) 3584-8878

RadioShack
500 CHANNELS
PRO-2067
MULTI-SYSTEM
P000- -D-+FM
154.8450 MHz
Bank 0 Ch 00

This excellent trunktracking receiver has no facility for groups of ID's, but instead has one list of 100 for each bank. You'll have to use additional frequency banks (there's only 10) and re-program the same system so you're able to separate your talk-group ID's.

AR8600 COMMUNICATIONS RECEIVER
AOR
2VFO NFM 5.00k
V-A 154.8450
V-B 11.1750

This 1000-channel receiver has 20 banks of 50 channels each. This allows much more versatile programming than a 10-bank arrangement. Look for a full review of this exciting AOR-8600 coming soon!

most difficult transitions to make in your thinking is that you'll have to get comfortable with the idea that you're not going to hear everything. So what do you really want to concentrate on? What's of interest? And how much of that is likely to be happening at once? Can you get some mileage by separating agencies into banks or geographic areas that need to be on and off as traffic dictates? Can you create a bank of "Got to scan all the time" frequencies and add and subtract from there by turning banks on and off? Is it reasonable to think you're going to listen to maritime or railroad traffic mixed in with your local police and fire departments? Do you really want to listen to everything all the time, or is it reasonable to turn various things on and off depending on what's happening and what mood you might be in at the time?

A radio with a priority system can really help quite a bit here. If you can program your number-one frequency into a priority channel, and use it, you'll find that the radio goes back to that channel when there's activity. That should make sure you hear more of the traffic on that critical channel.

I used to program my local police channel in there thinking that it was the thing I was most interested in, and didn't want to miss anything. But what I found was that the "priority" interrupted lots of other traffic that was interesting with routine calls and license plate checks. The fire department channel works much better. They don't talk nearly as often, and what they have to say is much more likely to be a major event than the police.

Many newer radios have an entire priority bank that can be programmed separately from the other channels in the scanner. Some radios use one frequency from each bank as a priority. This makes for an excellent way to keep an eye on several channels at once, but it does take some time for the system to cycle through the entire lot. It's kind of a personal preference as to what will work best for your listening tastes.

Beyond the priority system, look at your bank structure. Can you turn on and off groups of frequencies quickly that are related to each other? Can you quickly get to a bank of just the local stuff if something happens around you? If so, then you're using the bank system to your advantage. Here's another place where your radio may dictate just how much flexibility you have. Most scanners have 10 banks or so, others have more or less. And of course, the number of channels per bank can be a problem. It's much more important to use those banks to your advantage than it is to fill up every available frequency. You want to be able to switch them in and out quickly as activity dictates.

Of course, all this means that your 400, 500, or 1000 channel radio may not be full. And it may also be necessary to duplicate a few things. You want to use the banks as on/off switches for activity. Don't worry about a duplicate frequency or talkgroup ID.

In fact, it's not at all out of the question to need to program the same trunking group into the scanner more than once. This is particularly true in some of the newer trunk tracking scanners that do not offer "banks" of talkgroups or scan lists as they are called in Uniden radios. You'll need a duplicate bank of frequencies with different ID's if you want to be able to turn on and off various sections of the trunked system depending on activity.

Multi Radio Systems

Today's bazillion channel trunked systems and scanners with 500 or 1000 channels make it difficult to keep track of just what's in the radio, much less what's going on. Programming your radio with judicious use of banks is the first step. Put frequencies together that belong together, and turn off the rest. It makes sense to put a local police and fire department together for dispatch operations, so you can tell what's happening on both, but it's also nice to be able to switch through a bank's structure to all fire or all police should an event occur. Banks quickly become prime property!

Here's one of the main arguments for multi-radio scanning: If you have more than one scanner at your disposal, you can have more banks pre-programmed for the big stuff. Or, if you're comfortable listening to the squawking from two or more receivers, you can actually segregate important departments or channels in the different radios and run them both at the same time. Eventually, you develop an ear for what's important and what's not. You'll get used to the fact that if the sound came from the left it's the fire department or the police if it was on the right. And you'll have that many more banks available to pre-arrange for things you might want to focus on when they happen, or to put in other services that you don't want to listen to all the time, but only when the mood strikes you. Get creative!

Enter The Computer

One of the most important functions computer control has added to our scanning arsenal of tricks is the ability to have some intelligence behind the software to make the scanner do things the stock radio can't. One of the places where this is painfully obvious is this issue of listening for content.

At the simplest level, being able to reprogram the radio in a hurry is a big asset. You can have pre-programmed memory arrangements all ready to go for different kinds of events, or various special events that occur on a regular basis. I have a set for "winter storms" programmed into mine so that when that kind of weather threatens, I can listen to the snowplows and other highway department operations that I usually don't care much about. It's funny how the little things can affect your hobby interests.

Most of you know, if you've been reading this column for any length of time, that I'm a big fan of computer-controlled scanning. The computer is a great tool for logging and finding new frequencies, but it is also an excellent tool for daily use (depending on software functions). Programs like Probe and ScanStar are particularly adept at controlling the scanner and offer features that the radio by itself does not have.

A good example is our state's highway patrol. They dispatch on one of two frequencies, depending on the time of day, and the cars respond on one of two different channels. It's a very large area that's covered even by the local troop, so your chances of hearing the car's callback transmission is fairly low. But as you know, just by hearing the dispatcher's reply to the car, you can often develop a feel for what's happening.

In a normal scanner, you have to scan all four of the frequencies and hope that you're in the right place at the right time to hear the dispatcher. Once you hear something, the radio takes off again, and unless you get very lucky and there's a long delay before the reply, or there's not much other traffic on the scanner, you'll never hear the follow-up. By using the four frequencies as a trigger, the radio can be forced to stay focused on just the highway patrol for several seconds. If any of the frequencies goes active, the software shuts off all other banks except the highway patrol and concentrates on those four channels waiting for more activity, or a timer to expire. Once the exchange has finished, the timer will eventually run out (I usually use about 15 seconds) and normal scanning resumes. I must say that since I've been using this system, I have a much better feel for just how busy the highway patrol is and the immense area they try to cover.

Give It A Try!

If you're game to reprogram your scanner (and if you have a computer programmable receiver, what's to lose?) you can do some experiments on your own. Think about it for a bit and watch your scanner as it is programmed now. Where is it spending time, and what channels are of primary interest to you? Can you perhaps mix them together into banks that will help you focus on particular things instead of listening to everything at once?

Some experimentation is required, but I think you can find a mix that will leave you with the feeling that you are hearing more follow-up information, and not missing too much of the action as a result. It's an excellent way to control the focus of your scanning. I believe we are just beginning to see the tip of the iceberg in what computer-control systems will do for us. What they already can do with the right software and some experimentation takes scanning to a whole new level. Let me know what works for you!

Frequency Of The Month

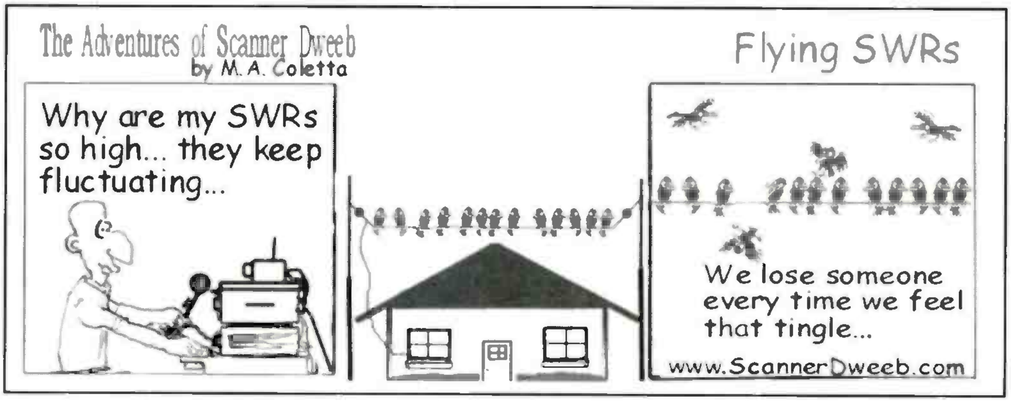
Based on our topic this month, let's do something a little different for our "frequency entry" this month. Send in a list of your banks and how you use them. I don't need actual frequencies (although you're welcome to send those if you like) but just a list of the 10 or 20 banks in your radio and what you expect them to do for you.

If you're not up to that, we'll also listen to a frequency. Let's try **450.550** this month and see what you hear. Write and let me know what you hear!

And, it's time for another winner! Our lucky random drawing this time goes to **Klaus S. of Streamwood Illinois**, just west of Chicago. Congrats Klaus, your subscription is on its way!

Your Input Needed

This is your column. Please don't hesitate to write in with questions or suggestions. And, of course I'm always looking for photos of interest to the scanner listener, so don't forget those, too. If you send an SASE, I can return the photos to you after they're scanned, so you won't lose them. Send things via regular mail to Ken Reiss, 9051 Watson Rd. #309, St. Louis, MO 63126, or questions and suggestions via E-mail to armadillo1@aol.com. Until next month, good listening! ■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by Kirk Kleinschmidt, NT0Z

ham discoveries

connecting as a radio amateur

Laptop PCs For Every Shack

Yes, this is the "Ham Discoveries" column. If you're startled by the fact that I'm writing about laptop PCs in a radio column, you've probably been asleep for a decade or so. Today, computing technology and ham radio are inseparable. Scope out any shack and you'll almost certainly see a computer or four!

Computers enhance ham radio in every way imaginable.From Packet Radio, to PSK31, to logging, to DSP, to contesting, to moonbounce, to whatever, computers make radio more fun and add capabilities that wouldn't otherwise exist.

Desktop computers handle these tasks with aplomb, of course, but I've always found laptop PCs to be a lot handier for Amateur Radio applications and, not only in the field. Even in your shack, laptop PCs are smaller and generally produce less radio-frequency interference when compared to their desktop cousins. They take a lot less power, too

Until recently, however, laptops have always had one strident mark against them: they were expensive! Thanks to recent cataclysmic price drops, however, those days are over. Although new laptops aren't exactly casual purchases, machines built only a few short years ago are practically free for the taking.

Remember the Old-Timers pictured in earlier ham magazines who had radios for every band? That's a step backward nowadays, but you can be the first ham on your block to have a laptop PC for every radio, plus a few spares!

Although some do-everything logging packages and graphical propagation suites require major league PC horsepower, there's a lot of useful Amateur Radio software that will run just fine, day in and day out on yesterday's laptops. This month's column is about where to find them and how to make them work in your shack.

What To Look For In A Laptop

The laptops we're mostly interested in are those with Intel 386, 486, and lower-end Pentium-class CPUs manufactured approximately between 1990 and 1996. A few models may have Cyrix or AMD CPUs, but most use Intel microprocessors. Fans of Apple, Commodore, Tandy, and other "unusual" brands will have to seek expert advice elsewhere.

Although memory modules for modern laptops are somewhat standardized, in the early days it was a free for all. Slower, older machines sometimes have a fixed amount of RAM and may not be upgradeable. Most 486 PCs can accept RAM beyond the "base" amount, although some use arcane and obsolete modules that you'll probably have to find online at eBay or in a USENET newsgroup. Whatever your laptop, the more RAM the merrier.

Every now and then a product comes along that solves a perennially annoying problem in an elegant fashion. When it comes to making LAN cables, putting the connectors on each end iseasy with the EZ-45 crimping tool (with matching connector bodies). For information on making LAN connectors as easy to install as modular telephone connectors, check out the Action Electronics web site at www.action-electronics.com/ez45.htm.

Most laptops have floppy drives, although some newer models use external drives to save space and weight. Hard drives are almost always built-in and come in a variety of sizes and speeds from 20 MB to 2 GB or more, depending on the machine's age. Laptop hard drives are slow when compared to desktop drives and often fail. Scroungers may have to replace them on laptops of any vintage.

CD-ROM drives aren't necessary, but because most software is distributed via CD, they can sure be handy. Most 486 machines have slow, fixed units. Late-model 486s and many Pentium machines have CD drives that fit into bays or ports and can be removed. That's a good thing because, like hard drives, laptop CD drives are quite failure-prone! If your machine doesn't have a built-in CD drive, several external types are available.

In general, passive-matrix laptop LCDs look "chunky" and washed out (low contrast), while active-matrix (TFT) screens look rich and sharp, whether color or monochrome. I have always greatly preferred TFT LCDs for color displays and anything that runs Windows.

Unfortunately, the batteries that usually accompany low-budget laptops are usually junk. Older machines use NiCds, while newer models use nickel-metal-hydride and lithium-ion power packs. Laptop batteries are also expensive, so shop around if you absolutely need one and can't come up with a workaround.

Big Savings on Radio Scanners

Uniden® SCANNERS AOR

Bearcat® 780XLT Trunk Tracker III with free deluxe scanner headset

Manufacturers suggested list price $529.95

Less -$205 Instant Rebate / Special $324.95

500 Channels • 10 banks • CTCSS/DCS • S Meter

Size: $7^{5/8}$" Wide x $6^{15/16}$" Deep x $2^{13/16}$" High

Frequency Coverage: 25.0000-512.0000 MHz., 806.000-823.9875MHz., 849.0125-868.9875 MHz., 894.0125-1300.000 MHz.

When you buy your Bearcat 780XLTGV Trunktracker package deal from Communications Electronics, you get more. The GV means "Great Value." With your BC780XLT scanner purchase, you also get a **free deluxe scanner headphone** designed for home or race track use. Headset features independent volume controls and 3.5 mm gold right angle plug. The Bearcat 780XLT has 500 channels and the widest frequency coverage of any Bearcat scanner ever. Packed with features such as Trunktracker III to cover EDACS, Motorola and EF Johnson systems, control channel only mode to allow you to automatically trunk many systems by simply programming the control channel, S.A.M.E. weather alert, full-frequency display and backlit controls, built-in CTCSS/DCS to assign analog and digital subaudible tone codes to a specific frequency in memory. PC Control with RS232 port, Beep Alert, Record function, VFO control, menu-driven design, total channel control and much more. Our CEI package deal includes telescopic antenna, AC adapter, cigarette lighter cord, DC cord, mobile mounting bracket with screws, owner's manual, trunking frequency guide and one-year limited Uniden factory warranty. For maximum scanning enjoyment, operate your scanner from your computer running Windows. Order Scancat Gold for Windows, part number **SGFW** for $99.95 and magnetic mount antenna part number **ANTMMBNC** for $29.95. Not compatible with AGEIS, ASTRO or ESAS systems. For fastest delivery, order on-line at www.usascan.com.

Bearcat® 895XLT Trunk Tracker

Manufacturer suggested list price $499.95

Less -$320 Instant Rebate / Special $179.95

300 Channels • 10 banks • Built-in CTCSS • S Meter

Size: $10^{1/2}$" Wide x $7^{1/2}$" Deep x $3^{3/8}$" High

Frequency Coverage: 29.000-54.000 MHz., 108.000-174 MHz., 216.000-512.000 MHz., 806.000-823.995 MHz., 849.0125-868.995 MHz., 894.0125-956.000 MHz.

The Bearcat 895XLT is superb for intercepting trunked analog communications transmissions with features like TurboScan™ to search VHF channels at 100 steps per second. This base and mobile scanner is also ideal for intelligence professionals because it has a Signal Strength Meter, RS232C Port to allow computer-control of your scanner via optional hardware and 30 trunking channel indicator annunciators to show you real-time trunking activity for an entire trunking system. Other features include Auto Store - Automatically stores all active frequencies within the specified bank(s). Auto Recording - Lets you record channel activity from the scanner onto a tape recorder. CTCSS Tone Board (Continuous Tone Control Squelch System) allows the squelch to be broken during scanning only when a correct CTCSS tone is received. For maximum scanning pleasure, order the following optional accessories: **PS001** Cigarette lighter power cord for temporary operation from your vehicle's cigarette lighter $14.95; **PS002** DC power cord - enables permanent operation from your vehicle fuse box $14.95; **MB001** Mobile mounting bracket $14.95; **EX711** External speaker with mounting bracket & 10 feet of cable with plug attached $19.95. **CAT895** Computer serial cable $29.95. The BC895XLT comes with AC adapter, telescopic antenna, owner's manual and one year limited Uniden warranty. Not compatible with AGEIS, ASTRO, EDACS, ESAS or LTR systems.

Bearcat® 245XLT Trunk Tracker II

Mfg. suggested list price $429.95/**CEI price $189.95**

300 Channels • 10 banks • Trunk Scan and Scan Lists
Trunk Lockout • Trunk Delay • Cloning Capability
10 Priority Channels • Programmed Service Search

Size: $2^{1/2}$" Wide x $1^{3/4}$" Deep x 6" High

Frequency Coverage:
29.000-54,000 MHz., 108-174 MHz., 406-512 MHz., 806-823.995 MHz., 849.0125-868.995 MHz., 894.0125-956.000 MHz.

Our Bearcat TrunkTracker BC245XLT is the world's first scanner designed to track Motorola Type I, Type II, Hybrid, SMARTNET, PRIVACY PLUS and EDACS® analog trunking systems on any band. Now, follow UHF High Band, UHF 800/900 MHz trunked public safety and public service systems just as if conventional two-way communications were used. Our scanner offers many new benefits such as Multi-Track - Track more than one trunking system at a time and scan conventional and trunked systems at the same time. 300 Channels - Program one frequency into each channel. 12 Bands, 10 Banks - Includes 12 bands, with aircraft and 800 MHz. 10 banks with 30 channels each are useful for storing similar frequencies to maintain faster scanning cycles or for storing all the frequencies of a trunked system. Smart Scanner - Automatically program your BC245XLT with all the frequencies and trunking talk groups for your local area by accessing the Bearcat national database with your PC. If you do not have a PC simply use an external modem. Turbo Search - Increases the search speed to 300 steps per second when monitoring frequency bands with 5 KHz. steps. 10 Priority Channels - You can assign one priority channel in each bank. Assigning a priority channel allows you to keep track of activity on your most important channels while monitoring other channels for transmissions. Preprogrammed Service (SVC) Search - Allows you to toggle through preprogrammed police, fire/emergency, railroad, aircraft, marine, and weather frequencies. Unique Data Skip - Allows your scanner to skip unwanted data transmissions and reduces unwanted birdies. Memory Backup - If the battery completely discharges or if power is disconnected, the frequencies programmed in your scanner are retained in memory. Manual Channel Access - Go directly to any channel. LCD Back Light - An LCD light remains on for 15 seconds when the back light key is pressed. Autolight - Automatically turns the backlight on when your scanner stops on a transmission. Battery Save - In manual mode, the BC245XLT automatically reduces its power requirements to extend the battery's charge. Attenuator - Reduces the signal strength to help prevent signal overload. The BC245XLT also works as a conventional scanner. Now it's easy to continuously monitor many radio conversations even though the message is switching frequencies. The BC245XLT comes with AC adapter, one rechargeable long life ni-cad battery pack, belt clip, flexible rubber antenna, earphone, RS232C cable, Trunk Tracker frequency guide, owner's manual and one year limited Uniden warranty. Not compatible with AGEIS, ASTRO, ESAS or LTR systems. Hear more action on your radio scanner today. Order on-line at www.usascan.com for quick delivery. For maximum scanning satisfaction, control your Bearcat 245XLT from your computer running Windows. Order Scancat Gold for Windows, part number **SGFW** for $99.95 or the surveillance enhanced version with audio recording part number **SGFWSE** for $159.95.

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Save even more on radio scanners when purchased directly from CEI. Your CEI price after instant rebate is listed below:

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Bearcat 278CLT 100 ch. AM/FM/SAME WX alert scanner	$159.95
Bearcat 245XLT 300 ch. Trunktracker II handheld scanner	$189.95
Bearcat 248CLT 50 ch. base AM/FM/weather alert scanner	$89.95
Bearcat Sportcat 200 alpha handheld sports scanner	$169.95
Bearcat Sportcat 180B handheld sports scanner	$149.95
Bearcat 80XLT 50 channel handheld scanner	$99.95
Bearcat 60XLT 30 channel handheld scanner	$74.95
Bearcat BCT7 information mobile scanner	$139.95
AOR AR8200 Mark II Wide Band handheld scanner	$539.95
AOR AR16BO Wide Band scanner with quick charger	$209.95
ICOM PCR1000 computer communications receiver	$379.95
ICOM R10 handheld wideband communications receiver	$279.95
ICOM R3 handheld wideband receiver with video display	$379.95
Uniden WX100 Weather Alert with S.A.M.E. feature	$49.95

AOR® AR8200 Mark IIB Radio Scanner

AOR8200 Mark IIB-A wideband handheld scanner/**SPECIAL $539.95**

1,000 Channels • 20 banks • 50 Select Scan Channels
PASS channels: 50 per search bank + 50 for VFO search
Frequency step programmable in multiples of 50 Hz.

Size: $2^{1/2}$" Wide x $1^{3/8}$" Deep x $6^{1/8}$" High

Frequency Coverage:
500 KHz to 823.995 MHz, 849.0125-868.995 MHz, 894.0125-2,040.000 MHz
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The AOR AR8200 Mark IIB is the ideal handheld radio scanner for communications professionals. It features all mode receive: WFM, NFM, SFM (Super Narrow FM), WAM, AM, NAM (wide, standard, narrow AM), USB, LSB & CW. Super narrow FM plus Wide and Narrow AM in addition to the standard modes. The AR8200 also has a versatile multifunctional band scope with save trace facility, twin frequency readout with bar signal meter, battery save feature with battery low legend, separate controls for volume and squelch, arrow four way side rocker with separate main tuning dial, user selectable keypad beep/illumination and LCD contrast, write protect and keypad lock, programmable scan and search including LINK, FREE, DELAY, AUDIO, LEVEL, MODE, computer socket fitted for control, clone and record, Flash-ROM no battery required memory, true carrier reinsertion in SSB modes, RF preselection of mid VHF bands, Detachable MW bar aerial. Tuning steps are programmable in multiples of 50 Hz in all modes, 8.33 KHz airband step correctly supported, Step-adjust, frequency offset, AFC, Noise limited & attenuator, Wide and Narrow AM in addition to the standard modes. For maximum scanning pleasure, you can add one of the following optional slot cards to this scanner: **CT8200** CTCSS squelch & search decoder $89.95; **EM8200** External 4,000 channel backup memory, 160 search banks. $69.95; **RU8200** about 20 seconds chip based recording and playback $69.95; **TE8200** 256 step tone eliminator $59.95. In addition, two leads are available for use with the option socket. **CC8200A** personal computer control lead $109.95; **CR8200** tape recording lead $59.95. Includes 4 1,000 mAh AA ni-cad batteries, charger, cigarette lighter adapter, whip aerial, MW bar antenna, belt hook, strap and one year limited AOR warranty. For fastest delivery, enter your order on-line at http://www.usascan.com.

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Online Resources

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www.batteryzone.com and www.batteriesplus.com (new laptop batteries);
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www.dxzone.com/catalog/Software/Collections and www.ac6v.com/software.htm (collections of ham software);
www.ebay.com> and www.ubid.com (online auctions);
www.pricewatch.com and www.pricegrabber.com (low-price search engines); www.73.com/a/index1.shtml (surplus laptop parts galore);
www.google.com and www.deja.com (best search engines on the web);
rec.radio.swap, comp.sys.laptops, www.easynews.com and www.newsguy.com (USENET news sites of interest).

Unlike desktop PCs, laptops have fixed video hardware that usually performs well below the benchmarks set by desktop PC video cards. There's not much that can be done about that, either. Thankfully, most ham programs don't require too much in the way of video performance or 3D acceleration. Better models support external monitors, sometimes at higher resolutions than the internal LCD.

Sound systems, useful for many ham applications, are usually limited to 486 and Pentium-class machines. Better machines have mic inputs and speaker- or line-level audio outputs. Sometimes these work with "soundcard-based" ham programs (RTTY, PSK31, SSTV) and sometimes they don't. I've had good luck with Toshiba and IBM laptops in this regard, but your mileage may vary.

Most laptops have a decent array of ports, usually at least one serial port, one parallel port, and a PS/2 mouse/keyboard port. Hams prize units with two serial ports and a VGA connector.

No Problem!

If your old laptop has a dead battery, you're not alone. The easiest solution is to run your machine from the AC supply, using it in locations that already have power. If you need to buy a new battery, shop around online, because prices vary widely. Some PCs can be adapted to use 12-V car batteries or gel cells. Be careful to observe correct power polarities and search the Internet for suggestions before flipping the switch

If your machine lacks a CD-ROM drive, consider picking up a docking station (usually free or only a few bucks) and installing a standard CD-ROM drive in it. That way, when the laptop is

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docked you can load software and operating systems without having the extra weight of the internal drive when mobile. If you don't want to wrangle with a bulky docking station, external CD-ROM drives come in parallel port and PC Card varieties. Although slow, I prefer parallel port models. Simply connect them to the serial port, boot the laptop, and install the "no-brainer" drivers from a single floppy.

To find user manuals and device drivers for your older laptop PC, first try the manufacturer's web site. Because these companies really want to sell you a new laptop, their "old-machine" resources can be difficult to find, so be persistent. Surprisingly, many hobbyists have web sites devoted to "glorifying" their favorite old PCs (desktop and laptop). These folks can be an excellent source of specific information. Send them some E-mail if the info isn't on their web sites.

You can try the same thing on eBay: Find someone selling your specific laptop and drop him or her a line. They may have drivers, info, and tips just for the asking. At any one time there are several thousand laptops for sale, so chances are good that you'll find someone selling your very machine, even if it takes a few weeks. The eBay community generally shares a ham-like camaraderie. I've never been hassled when approaching sellers for information.

You can also post a query on the USENET laptop newsgroups. Sometimes you can get lucky!

Have a broken laptop screen? Consider stripping the chassis and throwing the thing in the trash (or selling it on eBay as a parts machine.) Replacement screens are usually too expensive to be useful, so it's usually easier to find an identical laptop that's being sold for parts on eBay or other online sources.

Bargain Laptop PCs

So where can you find free or inexpensive laptops? Most large- and medium-size companies have piles of desktop and laptop computers stacked up in the back corner of the IT department. The trick is getting a few stacked up in your shack! Persistence and a few telephone calls will usually produce results, especially if you make your efforts on behalf of your radio club.

You can also place a classified ad in your local shopper: "Local Amateur Radio Club needs your old laptop computers. Will pick up, clean up, and haul away. Call Joe at . . ." Two years ago similar ads in my rural Minnesota Shopper produced four large satellite dishes and the 48-foot Rohn tower I use today. It never hurts to ask.

The www.ebay.com, rec.radio.swap, and conventional ham radio flea markets are great places to find inexpensive older laptops and related parts. Yahoo Auctions is another. Make sure you don't overpay, because not every auction deal is a sweet one. With the right deal, a decent 486 laptop should cost between $30 and $75, with early Pentium-class machines weighing in at $75 to $200.

This month's column is hardly comprehensive, but I hope I've motivated you to acquire a few inexpensive laptop PCs as opportunities and needs arise. Nowadays, laptop PCs are definitely within everyone's reach, and they're so handy for so many ham radio pursuits. Be sure to check out the URLs in the Resources Sidebar, and if you hear me running PSK31, ask me about the little Toshiba 486 that's "powering" my end of the QSO!

Send your questions, comments, and QSLs to me at "Ham Discoveries", c/o *Pop'Comm*, 25 Newbridge Road, Hicksville, NY 11801. See you next month! ■

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SSB			●	●
2-Color Transmit/ Receive Indicator	●	●	●	●
External Speaker Jack	●	●	●	●
PA Jack	●	●	●	●
Tone Switch	●		●	
Clarifier Control			●	●
RF Gain/SWR Cal Switch	●		●	
RF Gain Control		●		●
RF Power Control		●		
Roger Beep Switch	●	●		●
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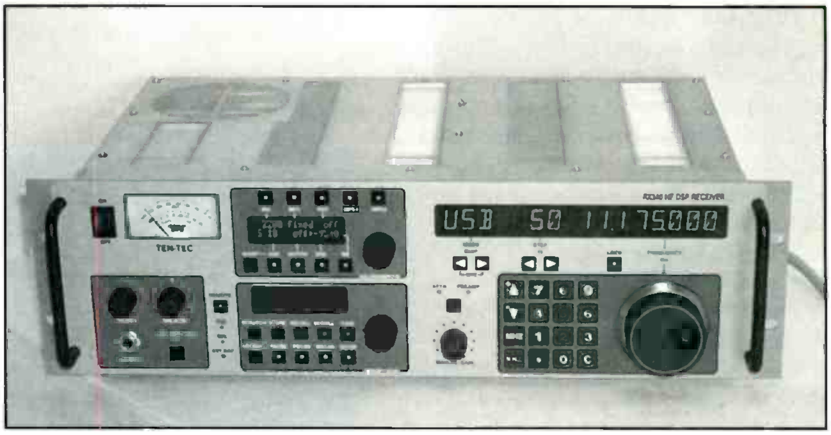
technology showcase *new product performance analysis*

by Ken Reiss, <armadillo@aol.com>

Ten-Tec RX-340 Receiver



It's certainly an impressive receiver. You can almost picture about a dozen of them mounted in racks on some military base, but this state of the art receiver could be in your shack. You could mount a dozen of them too, but you'll need a very big checkbook!

If you've been around Shortwave Listening for any length of time, you've seen several super receivers come and go. Ten-Tec has made their RX-340 available to the consumer market, and with the virtual disappearance of the Watkins Johnson HF-1000 receiver (although you can still get the 8610 for an additional $1000), Ten-Tec has the high-end of the consumer market all to themselves. Let's take a look at this high-end receiver and see what it offers that your Sony 7600 doesn't.

First of all, that's not even a fair comparison. Putting portables and desktop receivers in the same category just isn't fair to either receiver. Yes, they both receive shortwave signals, but that's about where the similarity ends. If you're asking yourself "what's this thing going to do that my $200 receiver won't?" then you probably shouldn't get one. This is a communications receiver built for the government's high demand applications. I'm quite sure it will meet the needs of most shortwave listeners quite admirably.

However, it may not be for everyone, even if price is no object. Many people who listen primarily for program content find they prefer the simplicity, and sometimes the sound of a receiver that's built for that purpose. The government application for these receivers involves mostly data and point-to-point or "utility" transmission. Most of the time the receiver is used in the SSB mode. If you also like to listen to these types of signals, you'll love this receiver.

The very military looking user's manual starts off: "Purpose and Function: The Ten-Tec RX-340 is an all-mode general-coverage receiver that delivers military-grade performance at off-the-shelf commercial pricing. Powerful digital signal processing (DSP) and over 60,000 lines of intensive code provide a level of performance and flexibility unattainable with conventional analog circuitry." I'd say that pretty well sums it up!

Features

Frequency coverage runs from 50 kHz to 30 MHz, so this is what most hobbyists will consider a shortwave only communications receiver. Tuning can be done at 1 Hz rates, although 10 step rates are available for faster and more practical operation if you're just tuning the dial. Remember, the military is the intended target for this receiver, so 1 Hz operation makes sense for fine-tuning delicate data channels and other modes that they use on a regular basis.

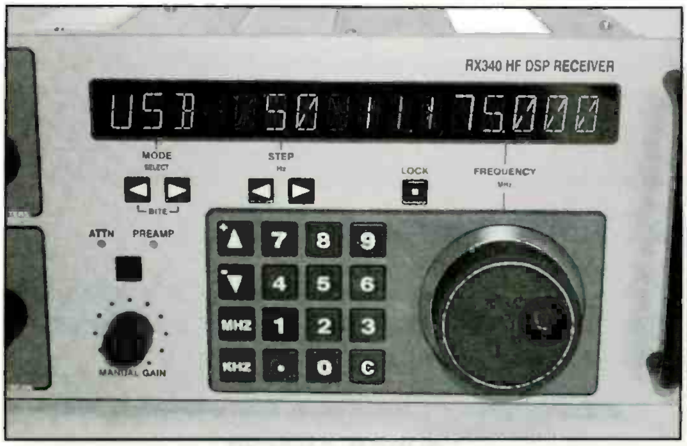
One hundred memories are available for storage of frequencies and other settings so that the receiver is ready to go as soon as the memory is selected. Also available are one hundred frequency lockouts so that undesired frequencies can be skipped during a "programmable scan" from one frequency to another. This is a very convenient feature if you use this type of scan in your listening.

In fact, the RX-340 is one of few receivers that perform as well as a scanner for shortwave operation. All sorts of controls are available to determine which memories are included in the scan, and how long each channel should be listened to for activity. Individual squelch setting for noise levels that vary across the band (and make scanning almost impossible on many receivers) makes for a very functional receiver.

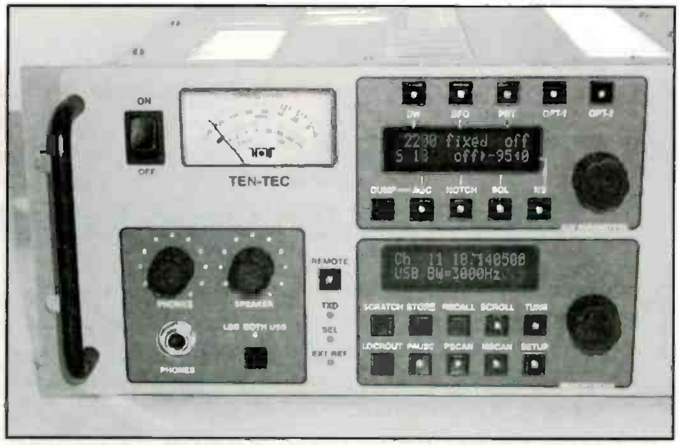
Ten-Tec claims a "signal handling range" of 140 dB, which is an incredible range. We did not put the receiver through any kind of technical tests to verify this, but I did not experience anything that would give any reason to doubt this claim. Its dynamic range is quite excellent, and the entire time I was using the receiver it was interference free (except for interference on the bands themselves, of course). The RX-340 also includes a built-in automatic tracking pre-selector. This was available as an option on the Watkins Johnson HF-1000, and it really made a difference in the amount of local interference the receiver was subjected to handling.

To help deal with the interference on the shortwave bands — for example, two signals right next to each other, the RX-340 offers no less than 57 DSP bandwidth filters ranging from 100 Hz to 16 kHz. By switching to a slightly narrower filter and using the notch and pass band tuning controls (PBT), or moving off frequency just a bit, the interfering signal can often be eliminated completely.

One of the far-too-many-features of the RX-340 is the availability of separate audio controls for headphones and speaker


RX340 HF DSP RECEIVER
MODE
SELECT
STEP
Hz
LOCK
FREQUENCY
MHz
BITE
ATTN
PREAMP
MANUAL GAIN
MHZ
KHZ

Bright and easy to read is the first impression of the lighted display sections on the RX-340. Information is easy to find, and even my fat fingers had no trouble with the keys!


ON
OFF
TEN-TEC
REMOTE
TXD
SEL
EXT REF
PHONES
SPEAKER
LSB BOTH USB
2200 fixed off
Ch 11 18.140500
USB BW=3000Hz
SCRATCH
STORE
RECALL
SCROLL
TUNE
LOCKOUT
PAUSE
PSCAN
MSCAN
SETUP

The left side of the receiver features the memory and operating sections, as well as the signal strength meter. Note the dual volume controls for speaker and headphones.

levels. In addition, there is a USB/LSB BOTH switch for the AUDIO portion of the signal as one last line of defense against an interfering signal that makes it all the way through. I did find a few occasions where this control was very useful.

What Makes It Different?

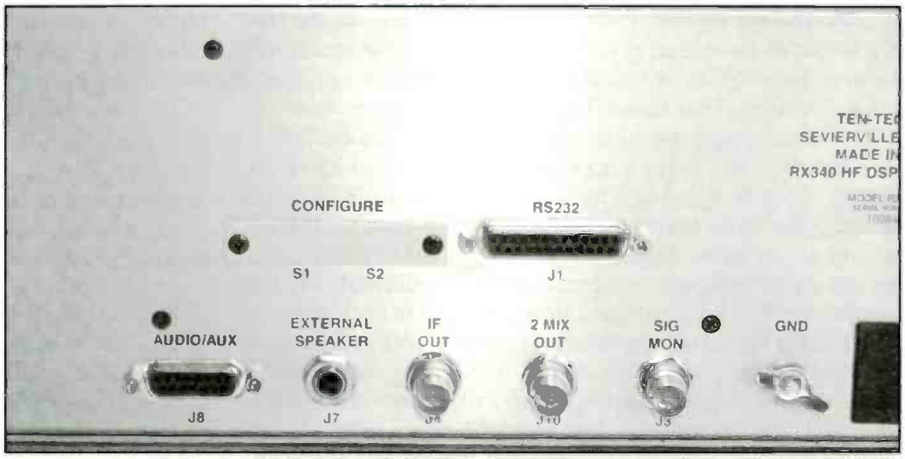
For the technically minded, the way the RX-340 works is very similar to other DSP receivers. As the signal is received at the antenna, the front part of the receiver looks pretty much like any other high quality communications receiver. Signals are run through three IF stages where they are amplified and filtered to a form that is usable by the rest of the receiver. This "triple conversion front end" is completely analog.

After exiting from the third IF stage, the signals are then converted to digital, and that's where the magic happens. With digital processing of the IF signal, a lot more versatility can be introduced into the receiver than those receivers which apply DSP to the analog audio signal that's at the end of the receiver's processing stages. An excellent example of this can be seen in the notch filtering that's available on a receiver like the Ten-Tec RX-340 versus something like the notch on an ICOM PCR-1000 which features an excellent audio DSP option. The audio DSP unit (and this would include add on DSP units like the Timewave and others) sees the heterodyne or whistle on the audio and blocks those audio frequencies from the audio that is passed on to the speaker. If you've ever used one of these type filters, you'll know that they are amazing and can do wonderful things for the readability of weak and interference-ridden signals.

DSP in the IF, however, means we can recognize the heterodyne and remove it before the receiver ever gets a look at the audio signal. This results in a much cleaner signal, and in many instances one that is easier to listen to as well. This is just one very simple example of the type of power that full DSP receivers like the Ten Tec 340 and Watkins Johnson receivers utilize to get the absolute most out of every ounce of received signal.

The Bottom Line

Performance of the RX-340 is absolutely wonderful, and it proved to be a delightful receiver to use. For the utility listener, I would say that the RX-340 is probably the ultimate receiver, and I would add that the program listening I did with the 340 was also very good. It might be slight (only slight) overkill for a program only listener, however.


TEN-TE
SEVIERVILLE
MADE I
RX340 HF DSP
CONFIGURE
RS232
S1
S2
J1
AUDIO/AUX
EXTERNAL SPEAKER
IF OUT
2 MIX OUT
SIG MON
GND
J8
J7

Watkins Johnson owners will appreciate the more traditional external speaker jack among the various connectors on the 340's rear panel.

The price range will, unfortunately, put this receiver out of range for most listeners. However if that doesn't scare you off, then you seriously should look at this receiver as the ultimate shortwave communications receiver on today's market. It's available from many of your favorite shortwave equipment dealers for about $3799. Check it out!

For more information, contact Ten-Tec at 800-833-7373 Monday to Friday 9 a.m. to 5:30 p.m. EST or visit their website at tentec.com. Be sure to tell them you read about it in *Popular Communications*. ■

by Keith Stein <kstein@erols.com>

space monitor

how to hear voices from the Cosmos

Monitoring Satellites On Your Scanner

Now that we have talked about weather FAX transmissions on HF shortwave receivers in a past issue, let's move into actually monitoring satellite signals.

Some of easiest satellites to monitor on your scanner are the U.S. National Oceanic and Atmospheric Administration (NOAA) and Russian Meteor, Okean, and RESURS satellites. There are currently three NOAA satellites operational, one Russian Okean, and one RESURS.

NOAA 12 — 137.500 MHz
NOAA 14 — 137.620 MHz
NOAA 16 — 137.620 MHz [very weak]
OKEAN O — 137.400 MHz [quite active recently]
RESURS O 1-4 — 137.850 MHz

Okeans and Sich transmit infrequently and normally only when within range of Russian or Ukrainian ground stations. Both the U.S. and Russian signals sound nearly the same. Their signals sound like a series of "pings," or "beep, beep, beep." This is known as their Automatic Picture Transmission signal, or APT signal. The APT signals transmitted by these satellites are very strong and distinctive. An APT signal can easily be distinguished by listening for the timing tone, which is transmitted at a rate of two "beeps" per second. Each timing beep represents the start of a sweep of the scanning radiometer on board the spacecraft. Between each timing beep is the modulated data for visible and infrared images of the terrain beneath the spacecraft.

This is very important since several satellites can operate on the same frequency. It's important that you get to know the weather satellite signal just by hearing it. And that's just what we are going to do in this month's column — monitor the signal and get to know it. Too many people want to jump in and buy the image reception equipment and software, and pull it all together at once. I like to take a slow approach to each element.

So plug in those frequencies above and flip your receiver into scan mode and spend a day or two monitoring each satellite pass. Record a few passes on tape. Mark the time you first heard the signal, and the time you last heard the signal. There is free satellite tracking software available that can provide a schedule of each pass. We will get into that in a future issue.

In addition to the above APT signal frequencies, you could also try and catch each satellite's beacon signals from the NOAA satellites (sounds like a very fast light "buzzing") which can be found on **136.77 and 137.77 MHz**. The NOAA beacons are quite a bit weaker than the APT signals. The transmitters are one-watt as opposed to five-watts for the APT.

Remember from our discussion in the past WEFAX article about weather satellites. They fall into two groups, Low Earth Orbit (LEO) and Geosynchronous Earth Orbit. The NOAA, Meteor, Okean, and RESURS are LEO satellites. The GOES satellites are GEO satellites. GEO satellites remain in a fixed position in the sky; LEOs pass over the whole surface of Earth.

In a future issue, we will go into detail on how you can easily display APT weather pictures on your own PC at home. But, for now, let's focus on monitoring those satellite radio signals and get to know them.

NASA Dryden Research Receives B-52H Launch Aircraft

A replacement "H" model B-52 Stratofortress for NASA Dryden Flight Research Center arrived at Edwards Air Force Base, Calif., over the summer. The B-52H will be used as an air-launch aircraft supporting NASA's flight research and advanced technology demonstration efforts.

Dryden received the B-52H from the U.S. Air Force's (USAF) 23rd Bomb Squadron, 5th Bombardment Wing (Air Combat Command), located at Minot AFB, ND. A USAF crew flew the aircraft to Dryden.

"We have been seeking a replacement aircraft for our existing B-52B-model for some time — it is great to see the H-model finally arrive," says Dryden Center Director Kevin Petersen. "It should provide us an excellent launch platform for the future."

The new air-launch aircraft will boost both NASA and USAF efforts in researching and demonstrating technologies for future access to space vehicles. The Air Force Flight Test Center (AFFTC) and Dryden have a mutual alliance that serves as a bilateral, cooperative relationship to improve service and lower cost to the internal and external customers of both.

The Office of the Secretary of Defense and the USAF, along with NASA, are partially funding a flight research instrumentation package to be installed on the aircraft, as well as other modifications to the aircraft.

The aircraft, USAF tail number 61-0025, will be loaned initially, and then later transferred from the USAF to NASA.

The B-52H is scheduled to leave Dryden Aug. 2 for de-militarization and Programmed Depot Maintenance (PDM) at Tinker Air Force Base (AFB), Oklahoma. The depot-level maintenance is scheduled to last about six months and includes a thorough maintenance and inspection process.

The fabrication shop at the U.S. Naval Air Warfare Center at China Lake, Calif., will build a new Dryden-designed pylon for the B-52H for carrying aerospace vehicles aloft during the next year. The new pylon will be a "one-pylon-fits-all" design enabling the B-52H to literally "carry-out" its mission. In the past, most new aerospace vehicles taken up by Dryden's B-52B required their own new pylon.

According to Dryden B-52H project manager Bob Jones, construction of the new pylon is designed to accept different adaptors for the variety of aerospace vehicle shapes and sizes each new Dryden project represents. Initially, the new pylon will be rated to carry a load weighing up to 25,000 pounds. Later modifications are planned to allow a load-carrying capability of over 70,000 pounds.

The newly arrived B-52H is slated to replace Dryden's famous B-52B "008," in the 2003–2004 timeframe. It will take about

A B52H on loan to NASA's Dryden Research Center makes a pass down the runway prior to landing at Edwards AFB, California.

one year for the B-52H to be ready for flight research duties. This time includes PDM, construction of the new pylon, installation of the flight research instrumentation equipment, and aircraft envelope clearance flights.

Versatile B-52 Stratofortresses served as the backbone of Strategic Air Command (SAC) during the Cold War. As one leg of the United States' nuclear "triad" defense strategy, B-52s, able to be recalled in-flight, offered the most flexible weapons delivery platform.

Delivery of the first B-52H model aircraft to SAC occurred in May 1961 and the last was delivered in October of 1962. A total of 102 H models were built; 94 of the workhorse aircraft remain on active duty with the USAF today. Stratofortresses participated in the Vietnam War, Desert Storm, and most recently in the Kosovo conflict.

What would you like "Space Monitor" to do for you? What articles and information would be of particular interest to you? Let us know. We look forward to hearing from you.

Monitoring Reports

All times in UTC. All voice transmissions in English unless otherwise noted.

5810: U.S. Coast Guard Drummond heard on station for space shuttle launch support, USB mode. Also heard on **157.075**, NFM mode. (Alan Stern — Satellite Beach, Fla.)

10780: FISHER with CANAVERAL CONTROL, 1910, USB mode. (Duke Rumley).

119.550: NASA7 cleared to land Moffett Federal Field 1423, then departs for Edwards Air Force Base, Calif., AM mode. (Craig Rose — Santa Clara, Calif.) *(Have no idea what type of aircraft this is, never heard callsign before — Keith).*

121.000: NASA966 (T-38N, based at Ellington Field, TX) landed, then left for Midland International. (Sandy — Denver, Colo.).

125.100: NASA906 (T-38N, Ellington) with Seattle Center requesting another victor frequency (VHF), AM mode. Female pilot. (Colin M.— Victoria, British Columbia).

128.550: NASA910 (T-38N) lands at NASA Shuttle Landing Facility (SLF) runway 15 at 1545, AM mode. Also heard on **134.950**, and **133.325**. NASA907 (T-38N) cleared to Homestead at 1750. Returned to SLF at 2000. Also heard on **132.650** and **124.100.** (Stern — Fla.).

133.750: NASA919 (T-38N) and NASA105 performing touch and goes at Patrick AFB then return to SLF, AM mode. (Mike Comer — Titusville, Fla.)

235.400: NASA105 (T-38N), arrival of mission STS-105 shuttle crew. Performed the customary launch pad fly-by and landed on runway 15 at 1715, AM mode. (Stern — Fla.).

255.400: NASA901 (T-38N), opening flight plan from Campbell AAF, AM mode. Few days later heard NASA907 opening flight plan. (Dave Norton — Lake Logan Martin, Ala.). At 1552, NASA926 (WB-57 Canberra based at Ellington Field, TX) heard requesting thunderstorm information. (Russell Hall — Missouri). NASA926 heard again talking with Kankakee Radio Flight Service Station. He was at 49,000 feet and requested weather for Ellington Field and Kelly AFB, coming from Oshkosh, WI. (Mike Hein —WI).

258.155: Very strong signal monitored from USA 81. (John David Corby — Ontario, Canada).

259.700: Monitored voice communications from shuttle mission STS-105 during launch, AM mode. (Steve Kramer).

261.750: KING4 and KING5 heard performing radio checks with Cape for space shuttle launch support, NFM mode. (Oil King).

291.750: NASA907 (T-38N) with Atlanta Center requesting direct Langley AFB, Va., AM mode. (Ken Litton — Central, NC).

372.200: SPACE-1 (C-21A, Learjet based at Peterson AFB, Colo.) landing at Colorado Springs (Sandy — Denver, Colo.), *AM mode. U.S Space Command, North American Aerospace Defense Command aircraft — Keith*

Keith Stein is the editor of Space-Cluster.Com (http://www.spaceluster.com). ■

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Inside Alaska: Special Use Airspace Information Service

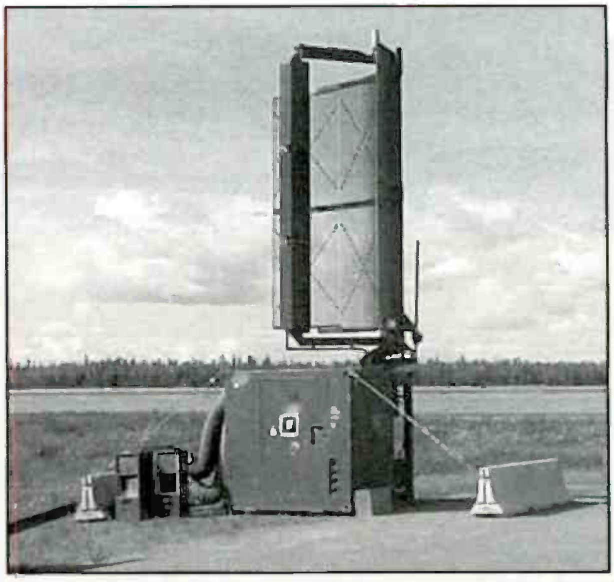
Happy Thanksgiving. Just because there's a lot of football games and feeding your faces on Thanksgiving Day doesn't mean you need to ignore your radios. Thanksgiving eve is one of the busiest times of flying during the year, as is the Sunday following Thanksgiving. Keep those radios on!

When I entered training here in Alaska this past April I was presented with something I've not seen anywhere else — the Special Use Airspace Information Service (SUAIS), referred to as Eielson Range Control located on Eielson AFB, just 20 miles southeast of Fairbanks. I was fortunate to interview Rick Barnett, the contractor in charge of SUAIS.

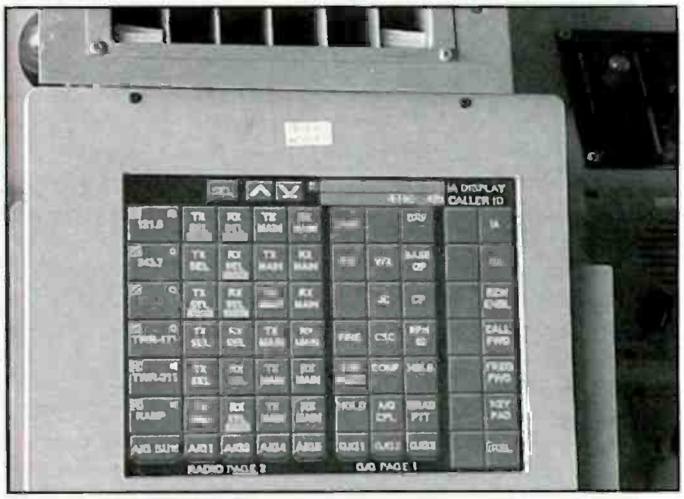
The formation of SUAIS is due to a volcanic eruption in the Philippines in 1991 — Mount Pinatubo. Before its eruption, and the subsequent closure of Clark Air Base, the U.S. Air Force and its allies practiced much of their mountain flying during the "Cope Thunder" exercises at Clark. After the Pinatubo eruption it was determined that to repair Clark AB would be economically unfeasible, and thus Clark was closed. However the need for mountain flying training persisted, and in 1992 "Cope Thunder" was relocated to Eielson Air Force Base (EIL).

However, a new problem arose with the relocation. Alaska has more pilots and aircraft per capita than any other state. A good atlas will show numerous towns and settlements throughout Alaska, but nowhere near the roads to access them. So, small aircraft are the primary mode of transportation for much of the wilderness. And although there is plenty of airspace, many of the settlements and villages are located in the middle of the various Military Operating Areas (MOA's). Super Cubs flying at 75 knots and F-16 Fighting Falcons flying low level at 450 knots in the same area are a dangerous mix. But this time instead of the general aviation public standing on one side of the fence yelling about their rights and the Air Force on the other side standing up for theirs, all interested parties sat down peacefully to see how things could be worked out. From a series of meetings with the DOD, AOPA, FAA, local pilots and others, SUAIS was formed. SUAIS is located on Eielson AFB and utilizes Air Force TPC-63 Radar sets, but is strictly run by civilians from Lockheed Martin. Many of these contracted personnel are retired military fighter pilots.

Currently there are two TPC-63 RADAR systems in use; one 25 miles east of Fairbanks (FAI) and the second at Fort Greely (BIG) at Delta Junction, Alaska. By the end of the year a third TPC-63 should be installed and operational at Gulkana, (GKN) Alaska, effectively covering all of the MOA's associated with Eielson AFB. Unlike many of the air traffic control radar systems that rely on primary target reflections (the actual return of radar energy off the aircraft fuselage) and secondary radar (the codes pilots "squawk" in order to identify them from others) SUAIS utilizes strictly secondary radar. Secondary radar is not subject to precipitation or false echoes that primary, or raw, radar is. However, if a pilot does not have a transponder for use with the secondary radar SUAIS cannot see him. Pilots need to be aware of this and other limitations of the SUAIS radio frequency, such as location in relation to certain cities and terrain.



The SUAIS Radar system that will be installed at Gulkana, AK. Identical radar units found at Fort Greely, Alaska, and east of Fairbanks.



The touch-screen radio control panel used by the air traffic controllers at Eielson AFB.

SUAIS is normally manned from 7 a.m. to 5 p.m.Monday through Friday. However, any time military aircraft are flying

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Here's what's featured this year:

Collins 75S-3 Receiver, 1961; Lakeshore Bandhopper VFO, 1957; Gonset Commander II Mobile HF Transmitter, 1955; Gonset 913A 6 meter amplifier, 1964; Technical Materiel Corporation (TMC) GPR-92 Receiver, 1964; Hammarlund HQ-170 Receiver, 1958; McElroy Model 100 Straight Key, 1941; Sonar XE-10 Modulator, 1947; National NC-300 Receiver, 1955; Hallicrafters S-85 Receiver, 1954; Heathkit SB-500 VHF Transverter, 1969; Sideband Engineers SB-34 Transceiver, 1965; Swan 400 Transceiver, 1964; Drake TR-3 Transceiver, 1963; Utah UAT-1 Transmitter, 1937.

How many do you recognize? How many did you own? How many did you wish you owned?

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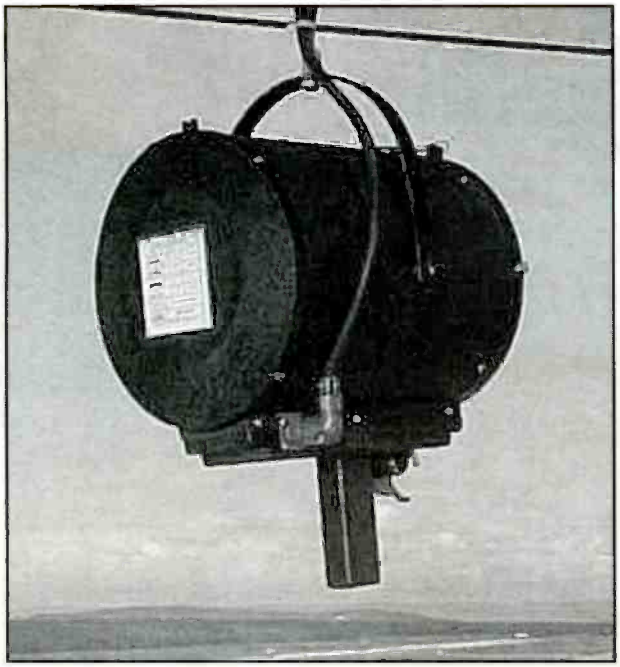
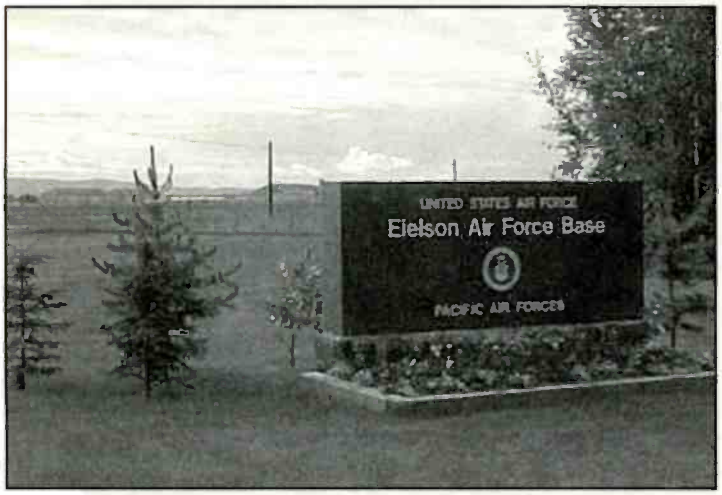


Looking northwest out of the control tower up the flight line. Hanging from the ceiling is the "light gun" that is used to communicate with aircraft and ground vehicles without radios.



Outside the main gate of Eielson AFB looking southeast toward the base flight line.

in the interior Alaskan MOA's and Restricted Areas. SUAIS is active. When airborne pilots are recommended to contact Eielson Range Control on 125.3MHz. Pilots on the ground with Internet access can get the latest information on http://www.eielson.af.mil/suais/suais.htm . Eielson Range Control does not provide air traffic control. They can provide information on the status of airspace and the approximate locations of military aircraft in the area. Vectoring, processing of flight plans, etc., are not provided. The Aircraft Owners and Pilots Association (AOPA) were so impressed with their work that SUAIS has been given special recognition by AOPA.

Cope Thunder 01-4 just finished at the end of July. Involved in this exercise from the USAF and USANG were F15's, C130's, HH60's, E3C's, and A10's. The Navy brought in some EA6B's. The British Royal Air Force had VC10's, E3D's, Jaguars and Tornados. Japan, Singapore, and South Korean forces brought in some of their C130's. Even the U.S. Army's 22nd Special Tactics unit took part in this exercise. All told 76 aircraft were involved with 51 flying out of Eielson and 25 flying out of Elmendorf AFB (EDF), Alaska at Anchorage.

Bring Your Scanner!

SUAIS is a very successful program that all pilots flying in Alaska need to know about. Should you visit this beautiful state I recommend you bring your scanner for use near Fairbanks. I also recommend you bring a tent or camper to see the state adequately. Just remember to bring you insect repellant. There are no snakes or gators here like in Florida where I'm from, but they do grow the skeeters a little large here in the summer. I'm not saying they're big, but I've heard stories that at least one or two have landed at Eielson and they were loaded with 100 gallons of jet fuel before the refuelers realized they weren't jets.

As you can see I've got a new E-mail address. Send me your reports at this new one. Have a great holiday season. See you next month.

Frequency Changes

New/Commissioned

AK
Fairbanks — Chena Marina Airport
CTAF 118.3
Fairbanks — Lakloey Airpark Airport
CTAF 125.0
Fairbanks — Metro Field Airport
CTAF 118.3
Kodiak — Trident Basin Seaplane Base
Unicom 122.8

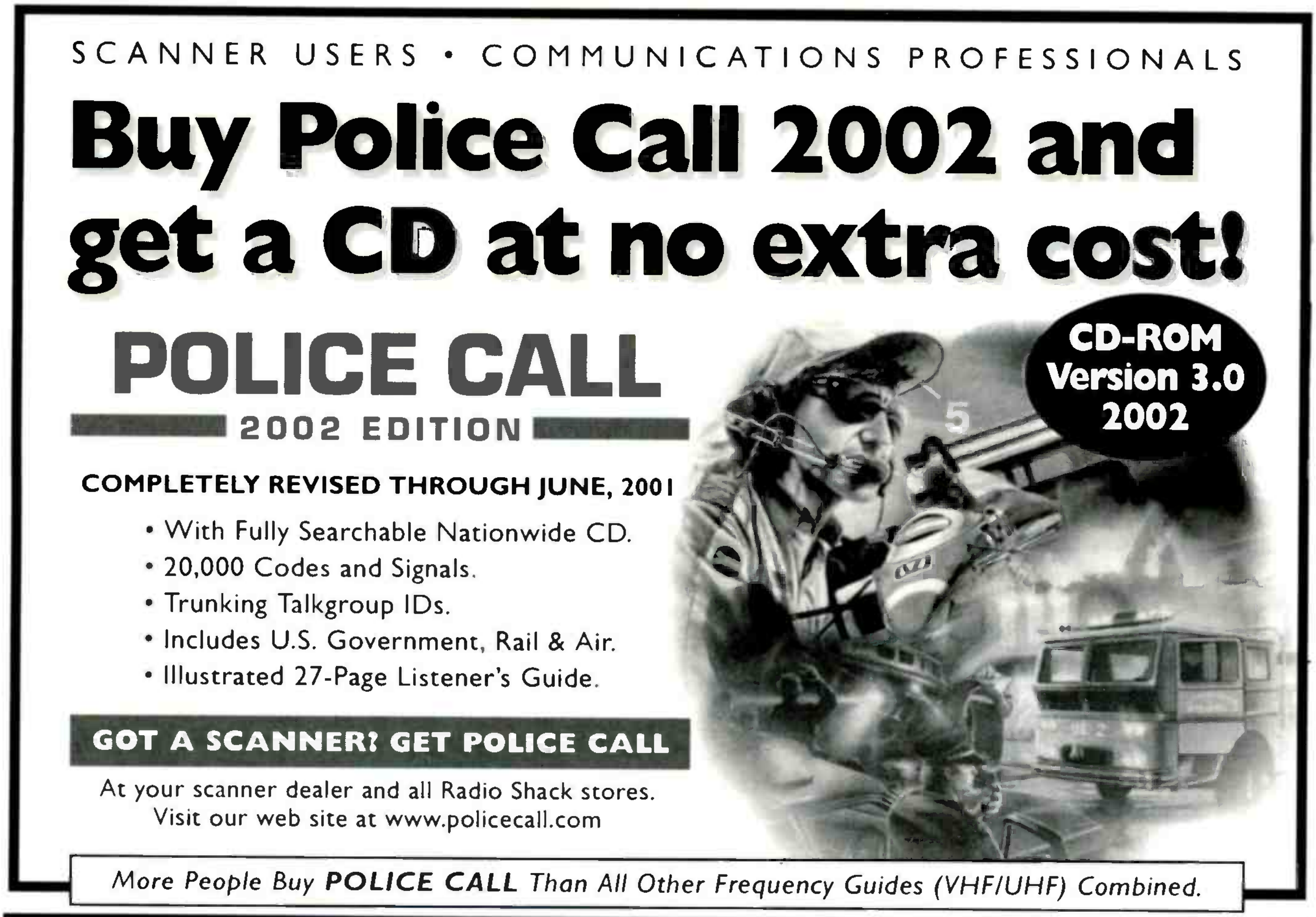
AR
De Queen — J. Lynn Helms Sevier County (DEQ)
ASOS 134.075

CA
Auburn Municipal (AUN)
AWOS-3 119.375
Jackson — Westover Field Amador County (O70)
AWOS-3 121.125

CO
Denver ARTCC (ZDV)
La Junta Low 128.37
379.95

GA
Hinesville — Fort Stewart/Wright AAF (LHW)
Marne RDO 281.475
Savannah — Hunter AAF (SVN)
CTAF 279.575

MS
Diamondhead Airport (66Y)
Unicom 123.0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NC
Pollocksville — Oak Grove MCOLF (13NC)
LC 124.1

NE
York Municipal (JYR)
AWOS-3 124.175

NV
Las Vegas — McCarran International (LAS)
Apch 379.15

An Alaskan Air National Guard A-10 Thunderbolt II (aka the Warthog) flying in the pattern at Eielson AFB.

NY
Glens Falls — Floyd Bennett Memorial (GFL)
ASOS 119.25

OH
Urbana — Grimes Field (I74)
AWOS-3 118.325

OK
Guymon Municipal (GUY)
ASOS 119.925

PA
Finleyville Airpark Airport (G05)
Unicom 122.8

Deleted/Decommissioned

KY
Louisville Intl — Standiford Field (SDF)
GC 119.825, 121.7
LC 124.2, 133.2, 257.8, 381.65

OH
Louisville — Yoder Airport (1OA7)
CTAF 122.9

SD
Rapid City — Ellsworth AFB (RCA)
LC 236.6

Changed

AZ
Fort Huachuca Sierra Vista — Libby AAF (FHU)
Apch was 234.4, now 254.35

AR
Fort Smith Regional (FSM)
Apch was 124.55, now 120.175

CA
Lemore NAS/Reeves Field (NLC)
Apch was 279.2, now 322.45
San Diego International — Lindbergh Field (SAN)
LC was 270.9, now 338.225

CO
Denver ARTCC (ZDV)
Sterling RCO was 125.95, now 135.925

GA
Hinesville — Fort Stewart/Wright AAF (LHW)
LC was 231.8, now 269.275
GC was 234.4, now 273.575
Marne RDO was 247.0, now 279.625
Savannah — Hunter AAF (SVN)
LC was 229.6, now 285.425
LC was 241.0, now 279.575
GC was 248.2, now 291.675
ATIS was 257.65, now 323.125
ANG OPS was 126.25, now 139.4
PMSV was 344.6, now 309.0

KS
Kansas City ARTCC (ZKC)
Emporia Low was 269.2, now 270.25
was 127.72, now 127.725

ME
Portland International Jetport (PWM)
CD was 121.65, now 123.975

MS
Biloxi — Keesler AFB (BIX)
LC was 320.1, now 269.075

ND
Grand Forks International (GFK)
LC was 388.8, now 350.35
GC was 121.75, now 124.575

NV
Las Vegas — North Las Vegas (VGT)
Apch was 353.7, now 282.2
was 133.95, now 119.4
was 119.4 and 133.95, now 125.02
was 380.05, now 353.7

NY
Poughkeepsie — Dutchess County (POU)
LC was 357.4, now 269.15

OH
Youngstown (YNG)
Apch was 381.2, now 322.3
was 118.9, now 133.95

TX
Del Rio International (DLF)
Apch was 298.875, now 296.7

Airport ID Changes

AL
Foley — Styron Airport was 8J0, now AL15
Harvest — Epps Airpark Airport was 3Mr, now 00AL
Huntsville Field Airport was M92, now 0AL0
Robertsdale — Wallace Field Airport was 9J0, now AL81

AR
Caddo Gap — Williams Ranch Airport was 4F6, now 4AR6
Clarksville — Johnson Farm Lines Airport was 0B3, now 30AR
Clinton — Van Buren County Memorial Hospital Heliport was 0D3, now 31AR
Conway Regional Hospital Heliport was 0E3, now 4AR3
Cotter — The Valley Airport was 61M, now 61AR
Driver — Lowrance Airport was 64M, now 64AR
Dumas — Reedville Airport was M90, now 90AR
Earle — Bernard Manor Airport was 65M, now 65AR
Earle — McNeely Airport was M63, now 63AR
England — Moore Farm Airport was M45, now 45AR
Fayetteville — Wedington Wood Airport was 67M, now 67AR

AZ
Camp Verde — Montezuma Airport was 7E7, now 19AZ
Piacho — Newman Peak Ranch Airport was 21E, now 17AZ
Show Low — White Mountain Lake Airport was E79, now 21AZ
Skull Valley — Quarter Circle J Ranch Airport was 28E, now 16AZ
Wickenburg — Moreton Airport was 43E, now 23AZ
Young — Pleasant Valley Airstrip was 49E, now 24AZ

CA
Galt — Vetters Sky Ranch Airport was 9Q3, now 51CL
Grass Valley — Service Center Heliport was 9Q8, now 48CL
Lakewood — L A County Sheriff Lakewood Heliport was 36L, now 50CL
Los Angeles — Transamerica Center Heliport was 63L, now 46CL
Madera — El Peco Ranch Airport was 29Q, now 49CL
Red Bluff — Big Bluff Ranch Airport was 73Q, now 47CL
Zenia — Hell'er High Water Airport was 2Q4, nor 45CL

FL
Alachua — Santa Fe River Ranch Airport was 9J2, now FA62
Alamana — Leffler Airport was X76, now FA63
Arcadia — Montgomery Ranch Airport was 0X2, now FA64
Lakeland — Little's Heliport was 8X2, now 40FD
Summerland Key Cove Airport was X20, now FD51

IA
La Porte City — Nichols Airport was 6C8, now IA97
Montezuma — East Field Airport was 7C4, now 03IA

Packwood — Middlekoop Airport was 7C8, now 04IA
Pella — Vermeer Airport was 7C9, now 08IA
Waterloo — Flyers Airport was 8C8, now 10IA

ID
Boise Cascade Heliport was 99U, now ID89
Boise — St. Alphonsus Heliport was 56U, now ID91
Keuterville — Spencer Ranch Landing Strip Airport was 0S3, now ID90

IL
East Moline — McNeal's Field Ultralight was C95, now 2IL3
Lincoln — Logan County Airport was 3LC, now AAA
Rantoul National Aviation Center — Frank Elliott Field Airport was 215, now TIP

KS
Beaumont — Summit House Airport was 7K9, now SN07
Derby — Beyer Farm Airport was K14, now 06SN

LA
Intracoastal City Heliport was 7R4, now 7LS4
New Orleans — Avondale Heliport was 7R6, now 7LS6

MO
Cape Girardeau — St. Francis Hospital Heliport was M67, now MO50

MT
Havre — Sands Ranch Airport was 96U, now 00MT

NM
Playas Air Strip Airport was 86E, now NM86

NY
South Dayton Airport was D89, now NY27
Watkins Glen — Schuyler Airport was D94, now NY29
Westerlo Airport was 4B5, now NY33
Wolcott — Hill Top Airport was 0D5, now NY34

OH
Louisville — Yoder Airport was 6B2, now 1OA7

PA
Berwick Airport was 2N4, now 6PA7
Burnham — Shangri LA Airport was 8N3, now 6PA9
Carbondale — Clifford Airport was 8N6, now 9PA1
Ceres Airport was 04D,now 06PA
Cherryville — Dieters Airport was 8N5, now 07PA
Eighty Four — Gregg Airport was 5G5, now 16PA
Forrest Grove — Slack Airport was 9N6, now 18PA
Freedom — Kindelberger Landing Strip Airport was 6G2, now 24PA
Gettysburg — Waltz Airport was 70W, now 34PA
Middleburg — Roadcap Airport was 31N, now 37PA
New Oxford — Lamberson Airport was 80W, now 51PA
Newmanstown — Hurst Stolport was 65N, now 69PA
Quarryville — Little Britain Airport was 81W, now 79PA
Stewartstown — Marsteller Airport was 82W, now PN17
Troy — McClure Airport was 75N, now PN21

TX
Alpine — 02 Ranch Airport was E46, now 46TE
Georgetown — Hilde-Griff Field Airport was 05T, now 05TE
Houston — NE Police Station #2 Heliport was 35T, now 35TE
Houston — NW Police Station #5 Heliport was 36T, now 36TE
Houston — Police HQ Heliport was 43T, now 43TE
Houston — Police Helicopter Patrol Heliport was 24T, now 24TE
Houston — SW Police Station #4 Heliport was 33T, now 33TE
Jarrell — Sybert Farm Airport was 40R, now 40TE
Kerrville — VAMC Heliport was 42R, now 41TE
Lone Star Steel Company Airport was 4F0, now 4TE0

VA
Ashland — Mayers Airport was 91W, now VG24
Bedford — Robinson Airport was 93W, now VG25 ■

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terrestrial AM, FM–and satellite radio news

by Bruce Conti <BAConti@aol.com>

Summer "DX Clams" Expedition Dispels Winter Mediumwave DX Season Myth

The northeast United States has long been a hotbed of DX activity. Among the region's most active radio clubs is the Boston Area DXers (BADX), more fondly referred to as "The Bad Guys." Along with monthly meetings, BADX hosts organized and impromptu DXpeditions throughout the year. "DX Clams" is one annual summer event in particular that focuses on international mediumwave DX. BADXers meet at a local seafood restaurant for a pre-expedition dinner, and then reconvene at a prime location overlooking the Atlantic Ocean for what often becomes a transatlantic DX feeding frenzy.

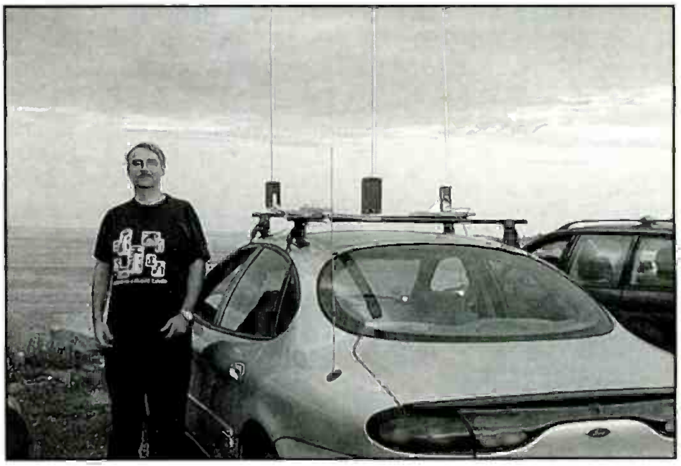
This year's DX Clams expedition took place at the Granite Pier in Rockport, Massachusetts. It proved once again that mediumwave DXing can be a year-round activity, dispelling the myth of a DX season. Low to very low solar activity through most of the summer set the stage for some outstanding transatlantic reception. BADXer Mark Connelly, WA1ION, summarizes; "The 2001 effort was, perhaps the best DX Clams outing so far in terms of propagation. By sunset at 8 p.m. local (0000 UTC), the AM dial was rocking with European and North African DX. Interestingly, spot openings to certain areas seemed to be the order of the evening: an eastern Mediterranean/Middle East run would put stations such as **Egypt-864** and **Greece-981** on top of their channels for a while, eastern Europe (**Slovakia-1098**, etc.) would then crank in, and the Ireland/UK/Netherlands/Germany region would take over, before more typical conditions favoring Spain, Portugal, France, and northwest Africa returned."

DX Clams is also an opportunity to showcase new receivers and antenna technology. Gary Thorburn set up a homebrew air core loop antenna on a tripod and stretched out an antenna wire on the rocks along the edge of the pier, switching between the two antennas on a Drake R8 receiver. The loop is remotely tuned using a variable DC voltage to control the capacitance of varactors mounted on the loop. A low-noise RF amplifier powered by AA batteries is also installed at the antenna. The loop outperformed the wire, pulling in mediumwave signals from Croatia, England, France, and Spain with ease.

Mark Connelly used a broadband loop versus a whip phased antenna array mounted on the roof of his car and a Drake R8A receiver. The broadband phasing technique results in a unidirectional cardioid antenna pattern that's stable over a wide frequency range (+/- 100 kHz) to maximize logging efficiency. Once the phased array is peaked for transatlantic reception, signals are picked off a number of channels with little or no readjustment of antenna control settings. A Wellbrook amplifier was used to boost signal strength off the broadband loop. The loop versus whip configuration and low-noise RF amplifiers mounted at the antennas allow for the compact size of the phased array.

Yours truly also joined the Bad Guys for DX Clams. I decided to try a large-scale version of the loop versus whip phased antenna array into a Drake R8B receiver. A 3-by-3-meter square loop of wire was mounted on top of the car, connected via a Mini-Circuits 1:1 RF transformer and coax. A 6-meter tall tower constructed of half-inch PVC pipe was used to support a wire that was run vertical to the top of the tower and then sloped off the top to the ground. The wire was simply connected at the base of the tower via coax. The two antennas were phased through a tuned LC-tank circuit and phase-reversal transformer. All this was designed to try to maximize signals from the desired direction with minimal loss or noise introduced.

BADX vehicles in position and ready for action on Granite Pier in Rockport, Massachusetts.



Mark Connelly and his loop versus whip phased antenna array mounted on the roof of his car. The loop is aimed east over the Atlantic Ocean.

Tom Walsh listened on a Collins-filterized Palstar R30 receiver with a wire antenna. Tom wraps up the DXpedition experience; "A great time was had by a bunch of clam stuffed DXers. Clams followed by arrival at Rockport one hour before sunset, what a glorious evening. The sunset was spectacular and so was the DX. Europeans were pounding in on mediumwave on my borrowed Palstar radio with just a 40-foot wire and no phasing. I couldn't believe the signals from France on 1206 and 945; Croatia on 1134 kHz. Nice shortwave signals too like 3366 (Ghana) blasting the meter until 0002 sign-off."

Bruce Conti and his makeshift tower made of half-inch PVC pipe and car-mounted big loop deployed for transatlantic mediumwave DX.

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Scott Walch, Foster City PD. Address: 1030 Hillsdale Blvd,, Foster City, CA 94404. (Jackson, CA)

1640 KBJA Sandy, Utah, now has its own QSL card, signed Kristin Perry. Address: 10348 S. Redwood Rd,, South Jordan UT, 84095. (Jackson, CA)

1650 KWHW Fort Smith, Arkansas, received verification letter signed Gary Elmore, Program Director. Address: 423 Garrison Ave., Fort Smith, AR 72901. (Jackson, CA)

1660 KAXW Merced, California, "La Rancherita" is interested in reception reports. Write to Lorelei Mouillesseaux, Clarke Broadcasting at KAXW, 514 E Bellevue Rd., Atwater, CA 95301. (Jackson, CA)

Broadcast Loggings — And Getting BBC Shortwave

Max Lapierre of St. Felicien, Quebec, sends along information about **CHRL** Roberval on **910 kHz**; "CHRL is affiliated to Radiomedia and Antenne 6, a small network of six stations from around Lac St. Jean: CHRL 910 Roberval, CHVD 1230/FM 92.1 Dolbeau/St-Félicien, CFGT 1270 Alma, CFED 1340 Chapais, another one from Chibougamau (CJMD 1240, but I'm not sure) and a sister musical FM station, CKYK 95.7 which is not affiliated with the networks, but owned by Antenne 6. The two stations from Chapais and Chibougamau are just rebroadcasting the CHRL 910 signal. Regularly, CFGT rebroadcasts CHRL signal for some programming, while CHVD is usually independent. You'll hear a two station ID while listening to CHRL, typically as 'CHRL 910 Roberval, CFGT 1270 Alma, membres du groupe radio Antenne 6.' Sometimes they'll name all the stations from the radio network."

For those who may find that local AM and FM broadcast of BBC programs aren't enough after the BBC suspended shortwave service to North America, Richard Statfield, KA2KDQ offers this suggestion; "I have discovered it is still possible to receive the BBC every evening on **5975 kHz** and every morning from 6–7 a.m. on **6195 kHz**. I believe that both frequencies are broadcast from Antigua and are directed to Central and South America. However, I receive them loud and clear here in Brooklyn, New York. I hope this information will be helpful to your readers who may be suffering from BBC shortwave withdrawal."

Thanks for the tip! This month's selected logs feature reports from the DX Clams expedition. All times are UTC.

549 United Christian Broadcasters, Monaghan, Ireland, at 0033 tentative; Christian/gospel music on strong fade-ins. (Conti, MA) At 0023 almost surely this with English language pop-religious style vocals. It was not parallel to Germany-756 or to the Algerians. I'll be checking for this again on future beach DXpeditions. (Connelly, MA)

576 Mega Radio, Wobbelin, Germany, at 0040 German talk, weird sound effects, and house/club music over Spain. (Connelly, MA)

594 R. Renascenca, Muge, Portugal, at 0147 parallel 963 kHz with an old-fashioned sentimental Portuguese vocal; good, getting through the VOCM/WEZE slop. (Connelly, MA)

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New Call	Location	Freq.	Old Call
WHLM	Bloomsburg, PA	930	WCNR
WTRB-FM	Sylacauga, AL	98.3	WAWV
KICR	Couer D'Alene, ID	102.3	KBIH

Changes

New Call	Location	Freq.	Old Call
KXEG	Phoenix, AZ	1280	KTKP
KXEM	Tolleson, AZ	1010	KXEG
KSFB	Palo Alto, CA	1220	KBZS
WFNS	Blackshear, GA	1350	WXRB
WLBB	Carrollton, GA	1330	WBTR
KQYX	Joplin, MO	1450	WMBH
WMBH	Joplin, MO	1560	KQYX
WFHM	Warren, OH	1440	WHKW
WBTK	Richmond, VA	1380	WVBB
KTFH	Seattle, WA	1680	KAZJ
KPUB	Flagstaff, AZ	91.7	KNAQ
KNAQ	Prescott, AZ	89.3	KPUB
KBGR	Beebe, AR	101.5	KPIK
KDFO-FM	Delano, CA	98.5	KDFO
KHRD	Weaverville, CA	103.1	KAWX
KKAS	Julesburg, CO	96.5	KEGK
WJCB	Clewiston, FL	88.5	New
WZMQ	Key Largo, FL	106.3	WRAU
WMFM	Key West, FL	107.9	WRLA
KSXZ	McCall, ID	106.7	New
WDQZ	Lexington, IL	99.5	WCSO
WHLP	Hanna, IN	89.9	New
KJRL	Herrington, KS	105.7	KDMM-FM
KFXN-FM	Houma, LA	104.1	KUMX
WJZQ	Cadillac, MI	92.9	WKJF-FM
WSAG	Pinconning, MI	104.1	New
KLCH	Lake City, MN	94.9	New
KTBG	Warrensburg, MO	90.9	KCMW-FM
KIKF	Cascade, MT	104.9	New
KINX	Great Falls, MT	107.3	New
KURK	Imperial, NE	102.9	New
KWYL	Sun Valley, NV	93.7	KGVN
KOAS	Wendover, NV	102.3	KDMK
WCSO	Southampton, NY	92.9	New
WAKS	Akron, OH	96.5	WKDD
WKDD	Canton, OH	98.1	WAKS
WODB	Delaware, OH	107.9	WXST
KWKL	Grandfield, OK	89.9	New
WHKF	Harrisburg, PA	99.3	WWKL-FM
WMWX	Philadelphia, PA	95.7	WEJM
KUQL	Wessington Springs, SD	98.3	KGGK
WLQK	Livingston, TN	95.9	WUSV
KTCJ	Centerville, TX	105.9	KUZN
KQBU-FM	Galveston, TX	106.5	KQQK
KBET	Smithfield, UT	103.9	KGNT
WSMY-FM	Alberta, VA	103.1	WAQD
WRHH	Petersburg, VA	99.3	WPZE-FM
WWHV	Virginia Beach, VA	102.1	WANN
KIXZ-FM	Opportunity, WA	96.1	KNFR
WVKF	Bethlehem, WV	105.5	WZNW-FM
KWYW	Lost Cabin, WY	99.1	KSXZ

783 R. Mauritanie, Nouakchott, Mauritania, at 0007 good; African drum and vocal parallel 4845 kHz. (Conti, MA)

819 RTM Rabat, Morocco, at 0034 parallel 612 kHz with a pop-style Arabic female vocal; fair, over Egypt. (Connelly, MA)

864 Holy Koran Radio, Santah, Egypt, at 0042 a Koranic male vocal; huge, killing France. (Connelly, MA)

890 KBBI Homer, Alaska, at 0858 very good on top with Blues music and ID at 0458, "This is KBBI, Homer, serving the Southern Kenai Peninsula." Best signal off a new EWE antenna. (Martin, OR)

970 KBUL Billings, Montana, at 0400 heard very good on top of the channel with the end of "Mustang Baseball" and a long list of local sponsors, followed by C&W music. This station wasn't heard here for many years, until 1995. Lately I have heard KBUL twice during local sunset. (Martin, OR)

981 ERA, Athens, Greece, at 0109 Greek bouzouki music with male group vocal; good. (Connelly, MA)

1035 R. Comercial/Nacional, Porto Alto/Lisboa, Portugal, at 0220 good; ad/promo string with a man and woman in Portuguese, pop music. (Conti, MA) At 0220 a man and woman in Portuguese; good with WBZ phased. (Connelly, MA)

1120 KMOX St. Louis, Missouri, with soft jazz and adult standards, IDs as "News/talk 1120 KMOX" and "The Voice of St. Louis." Haven't heard this in a while and especially not this clear. The station sounds much like it did 30 years ago. Not needed but nice to hear. (Martin, OR)

1134 Hrvatski Radio, Zadar, Croatia, at 0001 Slavic-language news by a man; huge, way over Spain. During the BADX "Clams" DXpedition outing, I showed Tom Walsh this station hitting S9+25 while adjacent WBBR 1130 NYC was only at S9+20. (Connelly, MA)

1179 Romania Actualitata, Galbeni-Bacau, Romania, at 0111 tentative with a moody Balkan style folk vocal that seemed to be parallel 1152 kHz. I also checked 855 kHz, but it was all Spain there, and on 1053 kHz was a UK/Spain mix. (Connelly, MA)

1206 France Bleu, Bordeaux, France, at 0042 an outstanding signal, local-like reception with continuous pop vocals. (Conti, MA)

1296 Sudan National Broadcasting Corp./R. Omdurman, Reba, Sudan, at 0159 a strong fade-in with interval signal, later with Koranic recitations heard under Spain and an unidentified station. The interval signal was recorded and later per the suggestion of BADXer Gary Thorburn compared with R. Omdurman, Sudan on www.intervalsignals.com to verify reception. (Conti, MA)

1512 ERA, Chania, Crete, Greece, at 0133 parallel 981 kHz with Greek music; poor in WWZN slop. (Connelly, MA)

Thanks to Mark Connelly, Gary Jackson, Max Lapierre, Patrick Martin, Richard Statfield, Gary Thorburn, and Tom Walsh. 73 and good DX! ■

v.i.p. spotlight

Congratulations To Bart Nave Of Tennessee

Popular Communications invites you to submit, in about 150 words, how you got started in the communications hobby. Entries should be typewritten, or otherwise easily readable. If possible, your photo (no Polaroids, please) should be included.

Each month, we'll select one entry and publish it here. Submit your entry only once; we'll keep it on file. All submissions become the property of *Popular Communications*, and none will be acknowledged or returned. Entries will be selected taking into consideration the story they relate, and if it is especially interesting, unusual, or even humorous. We reserve the right to edit all submitted material for length, grammar, and style.

The person whose entry is selected will receive a one-year gift subscription (or one-year subscription extension) to *Popular Communications*. Address all entries to: "V.I.P. Spotlight," *Popular Communications*, 25 Newbridge Road, Hicksville, NY 11801 or E-mail your entry to popularcom@aol.com, letting us know if you're sending photos. If you're E-mailing photos, please send them in a separate E-mail with your name in the "subject" line.

November winner, Bart Nave sitting in the easy chair by his shack.

Our November Winner: Bart Nave Says: "Like Father, Like Son"

Reader Bart Nave says, "I live in a small town called Gray which is located in East Tennessee. I am 39 years old and my love for radio started back in the late '60s and early '70s. It all started with a publication called *Communications World*. My friend and I would stay up late at night and log medium wave stations on several old analog receivers we had lying around the house. We would use the White's Radio Log as our guide. I used to love looking at the pictures of the various radio shacks in each issue.

My first shortwave radio was a RadioShack DX-200. I later purchased a Panasonic 2600. After I got married I was holding down two jobs and I didn't have much time for SWLing. My wife and I have been happily married for 18 years now and we have three beautiful children. I have a little time now and I'm introducing my love for radio to my 12-year-old son, Brandon. He loves making reception reports and collecting QSL cards. Together we have over 30 countries. As Brandon gets older, I know he'll enjoy program listening as I do. I bought him a RadioShack DX-394 for Christmas. He is very proud of his newfound hobby and when his friends come to our house, he always takes them on a tour of our radio shack.

I have owned several receivers, a Kenwood R-5000, an AOR AR-3030, a Drake SW2 and my current receiver is a Drake SW8. Listening to my radio is a big stress relief for me. My enjoyment and wonder of radio hasn't changed since I was a child some 30 years ago. I'm still amazed at how that little box can bring the world into my bedroom. Oh, I forgot to mention that I really enjoy reading *Popular Communications*." ■

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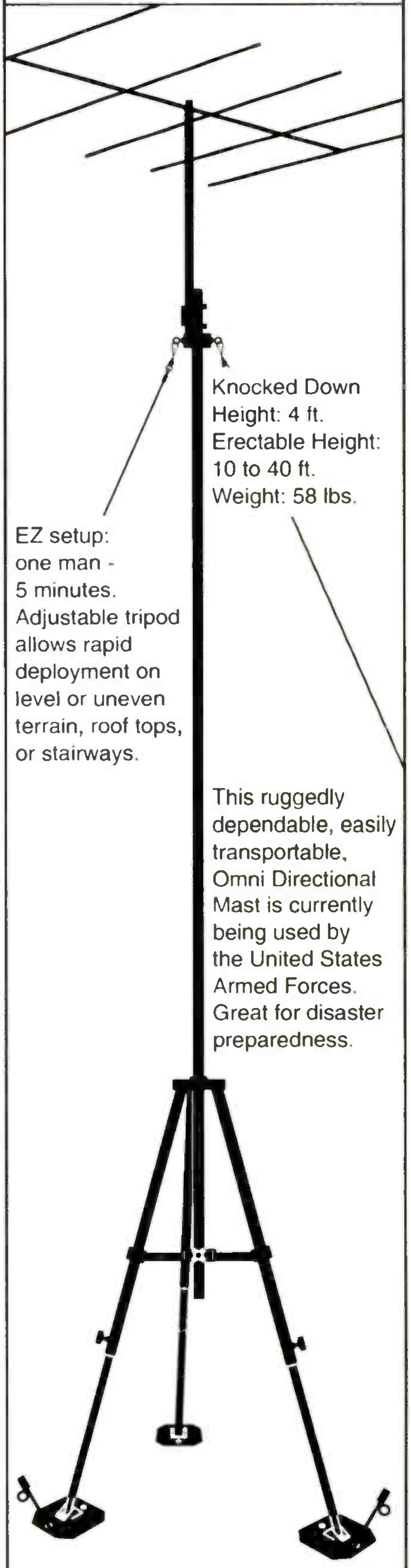
Old Stone Inc.
800•538•4977 or 800•685•2925
www.antennamast.com



Knocked Down Height: 4 ft.
Erectable Height: 10 to 40 ft.
Weight: 58 lbs.

EZ setup: one man - 5 minutes. Adjustable tripod allows rapid deployment on level or uneven terrain, roof tops, or stairways.

This ruggedly dependable, easily transportable, Omni Directional Mast is currently being used by the United States Armed Forces. Great for disaster preparedness.

Visa, MasterCard, and American Express accepted.

clandestine communiqué

by Gerry L. Dexter

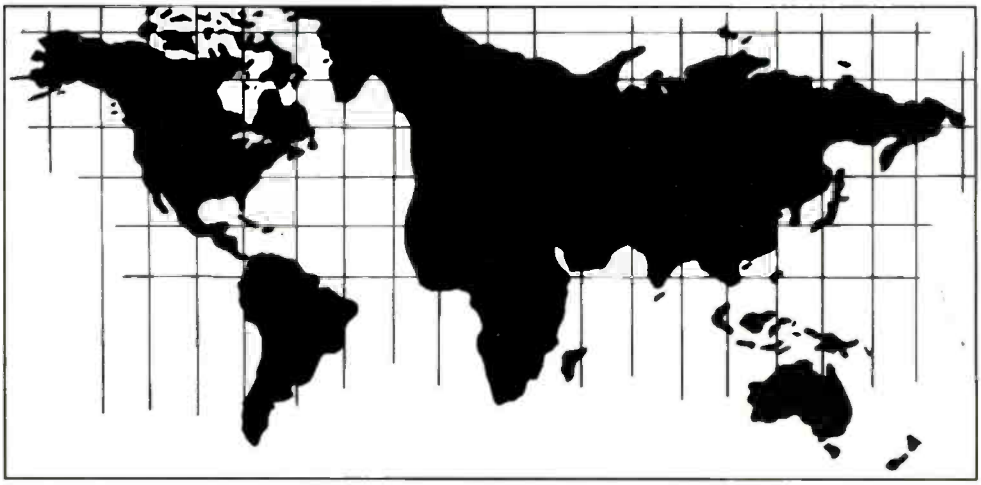
tuning in to anti-government radio

A Tough Catch From Europe: Radio Kavkaz

It's getting so we practically have a "Clandestine Station of the Month Club" going here, with something new to chase down each time. In this instance it's something called Radio Kavkaz, a station supporting Chechnyan rebels against the Russian forces and government. It is said to be located in the former Soviet Republic of Georgia, specifically the Pankissky district. The station, which is probably operating with very low power, has been noted just a fraction above **7143** and ditto **7350** with Russian language broadcasts. Unfortunately, their broadcast times are highly unfavorable for us.

They're noted in the 1500 to 1600 block, when 7 MHz isn't open to the U.S.. The word we get is that reception is poor even in Europe.

United Patriot Radio has reactivated its broadcasts, using **6900** for much of the evening hours (from 0200), but they would have you believe that things are touch-and-go, with operator Steve Anderson continually begging for funds and other forms of support, and liable to throw a tantrum at any moment. A lot of the content involves reports on the activities of various U.S. state militia groups, with contact information for each. The broadcasts also include some religious programming, possibly out-sourced. Keep an ear on this one, you never know, you might catch the last broadcast. The station is located in Somerset, Kentucky and has a no-QSL policy. Apparently Captain (Major? Lieutenant?) Anderson doesn't realize he could bring in a few extra bucks by demanding $5 with each reception report!



The **Voice of Democratic Eritrea** now uses **5925** on Saturdays from 1400–1459 and **15670** from 1700–1759 Mondays and Thursdays. Programming is in the Tigrinya language and transmissions are from the DTK transmitters in Julich, Germany.

Radio Rainbow – the Voice of Peace and Brotherhood, beams to Ethiopia on **6180** Saturdays from 0800 to 0859 and Fridays on **15565** from 1900–1959, also via Julich.

The Julich transmitters also carry the **Voice of Oromo Liberation** on Thursdays, Fridays and Sundays from 1700–1759 on **15715**.

The ever-fascinating **New Star Broadcasting Station**, which transmits music and Chinese number groups in several broadcasts each day was noted by Richard D'Angelo (PA) from 1115–1120 and 1159–1208 on **13750**. This station has been on the air regularly for many years and, to our knowledge, no transmitting site has ever been proven. Equally strong arguments can be made that it is an insidious operation of the Communist government in Beijing aimed at Taiwan or an instrument of freedom used by the Taiwanese against Beijing. All we can tell you for sure is that no address is known and that no one has ever managed a QSL. It has been picked up at one time or another by any number of North American-based listeners. Transmissions are intermittent, so you'll have to just park on the frequency and wait.

D'Angelo has also snagged **Radio Nacional de RASD** (Arab-Saharan Democratic Republic) on **7460** from 2255 tune, to closing at 0001 with Arabic talks and music, quick ID and sign off announcement came at 0000, followed by a "rustic marching band anthem."

The **Voice of Ethiopian Salvation** *(another of those Julich-sourced broadcasters – Ed)* was noted by D'Angelo from 1639 tune to close at 1659 on **15670** with talks by a man in Somali.

He's also managed to hear the relatively new **Netsanet Le-Ethiopia** (presumed) on **12110** with talk at 1756 and off at 1800.

The **Voice of Mesopotamia**, launched just a month or so ago, is already showing signs of instability, having failed to appear at its appointed hour on more than one occasion in recent weeks. It's supposed to air Fridays and Saturdays at 1400 on **15770** and Saturdays at 0800 on **15230**. The broadcasts — when they're on — are via transmitters in Samara, Russia.

That will be a wrap for this time. Please remember to pass along any information you turn up relating to clandestine broadcasts and its relatives. That includes any logs you are able to take, operating schedules, information on transmitting sites or station locations, mailing addresses — regular or E-mail, web site URLs and just plain whatever.

We can also make good use of copies of QSLs you've received or any other clandestine-related illustrative material. As always, a big thank you for your interest and support!

Until next month, good hunting! ■

Tap into *secret* Shortwave Signals

Turn mysterious signals into exciting text messages with the MFJ MultiReader™!

Plug this self-contained MFJ *MultiReader™* into your shortwave receiver's earphone jack.

Then *watch* mysterious chirps, whistles and buzzing sounds of RTTY, ASCII, CW and AMTOR (FEC) turn into exciting text messages as they scroll across an easy-to-read LCD display.

You'll *read* interesting commercial, military, diplomatic, weather, aeronautical, maritime and amateur traffic . . .

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Eavesdrop on the world's press agencies transmitting *unedited* late breaking news in English -- China News in Taiwan, Tanjug Press in Serbia, Iraqui News in Iraq -- all on RTTY.

Copy RTTY weather stations from Antarctica, Mali, Congo and many others. Listen to military RTTY passing traffic from Panama, Cyprus, Peru, Capetown, London and others. Listen to hams, diplomatic, research, commercial and maritime RTTY.

Listen to maritime users, diplomats and amateurs send and receive *error-free* messages using various forms of TOR (Telex-Over-Radio).

Monitor Morse code from hams, military, commercial, aeronautical, diplomatic, maritime -- all over the world -- Australia, Russia, Japan, etc.

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MFJ MULTI-READER
MODEL MFJ-462B
POWER

MFJ-462B
$\$179^{95}$

Printer Monitors 24 Hours a Day

MFJ's exclusive *TelePrinterPort™* lets you monitor any station 24 hours a day by printing transmissions on an Epson compatible printer.

Printer cable, **MFJ-5412**, $9.95.

MFJ *MessageSaver™*

You can save several pages of text in an 8K of memory for re-reading or later review.

High Performance Modem

MFJ's high performance *PhaseLockLoop™* modem consistently gives you solid copy -- even with weak signals buried in noise. New threshold control minimizes noise interference -- greatly improves copy on CW and other modes.

Easy to use, tune and read

It's easy to use -- just push a button to select modes and features from a menu.

It's easy to tune -- a precision tuning indicator makes tuning your receiver easy for best copy.

It's easy to read -- the 2 line 16 character LCD display with contrast adjustment is mounted on a brushed aluminum front panel for easy reading.

Copies most standard shifts and speeds. Has MFJ *AutoTrak™* Morse code speed tracking.

Use 12 VDC or use 110 VAC with MFJ-1312B AC adapter, $14.95. 5¹/₄Wx2¹/₂Hx5¹/₄D inches.

No Matter What™ One Year Warranty

You get MFJ's famous one year *No Matter What™* limited warranty. That means we will repair or replace your MFJ *MultiReader™* (at our option) *no matter what* for one full year.

Try it for 30 Days

If you're not completely satisfied, simply return it within 30 days for a prompt and courteous refund (less shipping). Customer must retain dated proof-of-purchase direct from MFJ.

Super Active Antenna

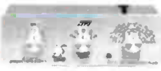
"World Radio TV Handbook" says MFJ-1024 is a *"first-rate easy-to-operate active antenna ...quiet... excellent dynamic range... good gain... low noise... broad frequency coverage."*

Mount it outdoors away from electrical noise for maximum signal, minimum noise. Covers 50 KHz-30 MHz.

MFJ-1024
$\$139^{95}$

Receives strong, clear signals from all over the world. 20 dB attenuator, gain control, ON LED. Switch two receivers and auxilary or active antenna. 6x3x5 inches. Remote has 54 inch whip, 50 feet coax. 3x2x4 inches. 12 VDC or 110 VAC with MFJ-1312, $14.95.

Indoor Active Antenna



MFJ-1020B
$\$79^{95}$

Rival outside long wires with this *tuned* indoor active antenna. *"World Radio TV Handbook"* says MFJ-1020B is a *"fine value... fair price... best offering to date... performs very well indeed."*

Tuned circuitry minimizes intermod, improves selectivity, reduces noise outside tuned band. Use as a preselector with external antenna. Covers 0.3-30 MHz. Tune, Band, Gain, On/Off/Bypass Controls. Detachable telescoping whip. 5x2x6 in. Use 9 volt battery, 9-18 VDC or 110 VAC with MFJ-1312, $14.95.

Compact Active Antenna

MFJ-1022
$\$49^{95}$

Plug this *compact* MFJ all band active antenna into your receiver and you'll hear strong, clear signals from all over the world, 300 KHz-200 MHz including low, medium, shortwave and VHF bands.

Detachable 20 inch telescoping antenna. 9 volt battery or 110 VAC MFJ-1312B, $14.95. 3¹/₈x1¹/₄x4 in.

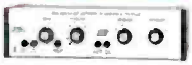
Eliminate power line noise!

MFJ-1026
$\$179^{95}$

New! *Completely* eliminate power line noise, lightning crashes and interference *before they get into your receiver!* Works on all modes -- SSB, AM, CW, FM, data -- and on all shortwave bands. Plugs between main external antenna and receiver. Built-in active antenna picks up power line noise and cancels undesirable noise from main antenna. Also makes excellent active antenna.

MFJ Antenna Matcher

MFJ-959B
$\$99^{95}$



Matches your antenna to your receiver so you get maximum signal and minimum loss.

Preamp with gain control boosts weak stations 10 times. 20 dB attenuator prevents overload. Select 2 antennas and 2 receivers. 1.6-30 MHz. 9x2x6 in. Use 9-18 VDC or 110 VAC with MFJ-1312, $14.95.

Dual Tunable Audio Filter

MFJ-752C
$\$99^{95}$

Two separately tunable filters let you peak desired signals and notch out interference at the same time. You can peak, notch, low or high pass signals to eliminate heterodynes and interference. Plugs between radio and speaker or phones. 10x2x6 in.

High-Gain Preselector

MFJ-1045C
$\$99^{95}$

High-gain, high-Q receiver preselector covers 1.8-54 MHz. Boost weak signals 10 times with low noise dual gate MOSFET. Reject out-of-band signals and images with high-Q tuned circuits. Push buttons let you select 2 antennas and 2 receivers. Dual coax and phono connectors. Use 9-18 VDC or 110 VAC with MFJ-1312, $14.95.

CW, RTTY, ASCII Interface

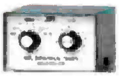
MFJ-1214PC
$\$149^{95}$

Use your computer and radio to receive and display brilliant full color FAX news photos and incredible WeFAX weather maps. Also RTTY, ASCII and Morse code. Frequency manager lists over 900 FAX stations. Auto picture saver.

Includes interface, easy-to-use menu driven software, cables, power supply, manual and *JumpStart™* guide. Requires 286 or better computer with VGA monitor.

High-Q Passive Preselector

MFJ-956
$\$49^{95}$



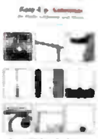
High-Q passive LC preselector boosts your favorite stations while rejecting images, intermod and phantom signals. 1.5-30 MHz. Preselector bypass and receiver grounded positions. Tiny 2x3x4 inches.

Super Passive Preselector

MFJ-1046
$\$99^{95}$

New! **Improves** any receiver! Suppresses strong out-of-band signals that cause intermod, blocking, cross modulation and phantom signals. Unique Hi-Q series tuned circuit adds super sharp front-end selectivity with excellent stopband attenuation and very low passband attenuation and very low passband loss. Air variable capacitor with vernier. 1.6-33 MHz.

Easy-Up Antennas

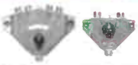


MFJ-38
$\$16^{95}$

How to build and put up inexpensive, fully tested wire antennas using readily available parts that'll bring signals in like you've never heard before. Antennas from 100 KHz to 1000 MHz.

MFJ Antenna Switches

MFJ-1704
$\$64^{95}$



MFJ-1702C
$\$24^{95}$

MFJ-1704 heavy duty antenna switch lets you select 4 antennas or ground them for static and lightning protection. Unused antennas automatically grounded. Replaceable lightning surge protection. Good to 500 MHz. 60 dB isolation at 30 MHz. **MFJ-1702C** for 2 antennas.

World Band Radio Kit

MFJ-8100K
$\$69^{95}$ *kit*
MFJ-8100W
$\$89^{95}$ *wired*

Build this regenerative shortwave receiver kit and listen to signals from all over the world with just a 10 foot wire antenna. Has RF stage, vernier reduction drive, smooth regeneration, five bands.

21 Band World Receiver

MFJ-8121
$\$39^{95}$

MFJ's new 21 Band World Receiver lets you travel the world from your armchair! Listen to BBC news from London, live music from Paris, soccer matches from Germany and more! Covers 21 bands including FM, Medium Wave, Long Wave and Shortwave. *Sony*® integrated circuit from Japan, multicolored tuning dial, built-in telescopic antenna, permanent silkscreened world time zone, frequency charts on back panel. Carrying handle. Operates on four "AA"s. Super compact size!

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world band tuning tips

your monthly international radio map

This listing is designed to help you hear more shortwave broadcasting stations. The list includes a variety of stations, including international broadcasters beaming programs to North America, others to other parts of the world, as well as local and regional shortwave stations. Many of the transmissions listed here are not in English. Your ability to receive these stations will depend on time of day, time of year, your geographic location, highly variable propagation conditions, and the receiving equipment used.

AA, FF, SS, GG, etc. are abbreviations for languages (Arabic, French, Spanish, German). Times given are in UTC, which is five hours ahead of EST, i.e. 0000 UTC equals 7 p.m. EST, 6 p.m. CST, 4 p.m. PST.

UTC	Freq.	Station/Country	Notes
0000	3280	La Voz del Napo, Ecuador	SS
0000	9525	Voice of Vietnam, via Canada	
0000	4965	Christian Voice, Zambia	
0030	6265	ZBC — Radio One, Zambia	
0030	12065	Vatican Radio	
0030	11870	Radio Yugoslavia	
0030	12040	Radio Ukraine Int'l	
0030	15295	Radio Tashkent, Uzbekistan	
0030	11840	Radio Ukraine Int'l	Ukr.
0030	7195	Radio Uganda	
0100	7210	Voice of Vietnam	VV
0100	3280	La Vos del Nappo, Ecuador	SS
0100	11885	Voice of Turkey	TT
0100	9605	Vatican Radio	
0100	11655	Voice of Turkey	
0100	7275	RTT Tunisienne, Tunisia	AA
0130	13650	Voice of America, Thailand	
0130	21660	BBC via Thailand	
0130	15395	Radio Thailand	
0130	15060	Family Radio, USA	CC
0130	15265	Radio Taipei Int'l, Taiwan	
0130	7260	Radio Vanuatu, Vanuatu	
0130	11710	Voice of Korea, North Korea	
0200	21715	Voice of Turkey	
0200	6245	Radio Radonezh, Russia	
0200	7170	Radio Singapore	unid
0200	3320	South African Broadcasting Corp.	
0200	7320	Radio Rossi, Russia`	RR
0200	15180	Radio Romania Int'l	
0200	9875	WSHB, USA, via Russia	
0200	9675	NBC, Papua New Guinea	Pidgin
0200	6458	Armed Forces Network, Puerto Rico	USB
0230	9405	Far East Broadcasting Company, Philippines	CC
0230	9785	Deutsche Welle, Germany, via Portugal	
0230	9760	Voice of America, Philippines	
0230	9900	Voice of Germany, via Russia	GG
0230	9520	Radio Veritas Asia, Philippines	
0230	5019	Radio Horizonte, Peru	SS
0245	15555	RDP Int'l, Portugal	PP
0300	4890	NBC, Papua New Guinea	
0300	3260	Radio Madang, Papua New Guinea	
0300	15240	Voice of America, Northern Marianas	
0300	4390	Radio Imperio, Peru	SS
0300	15315	Swiss Radio Int'l, via Germany	
0300	15160	Voice of America, Sri Lanka	
0300	9665	Radio Singapore	Malay
0300	15205	Deutsche Welle, via Sri Lanka	GG
0300	11740	Radio Romania Int'l	
0300	15555	Far East Broadcasting Assn., Seychelles Is.	unid
0300	4996	Radio Andina, Peru	SS
0300	6536	Radiodifusora Huancabamba, Peru	SS
0300	11635	Radio Norway Int'l	NN
0300	15140	Radio Sultanate of Oman	AA
0300	9465	Far East Broadcasting Company, No. Marianas	unid.
0330	15355	Radio Sultanate of Oman	
0330	15230	Broadcasting Service of Kingdom of Saudi Arabia	AA
0330	17690	Voice of Russia	
0330	17830	Voice of Turkey	AA
0330	9737	Radio Nacional, Paraguay	SS
0330	11990	Voice of America, Northern Marianas	CC
0330	11580	Far East Broadcasting Co., No. Marianas	CC
0345	17675	Radio New Zealand Int'l	
0400	15160	Radio New Zealand Int'l	
0400	11680	Voice of Korea, North Korea	KK
0400	9890	Radio New Zealand Int'l	
0400	7255	Voice of Nigeria	
0400	17810	Radio Japan/NHK	Malay
0400	6165	Radio Netherlands via Bonaire	
0400	12065	Radio Netherlands, via Russia	
0400	9895	Radio Netherlands	DD
0400	9575	Radio Medi-Un, Morocco	AA
0400	11770	Radio Mexico Int'l	SS
0500	4800	Radio Lesotho	
0500	9875	Radio Vilnius, Lithuania	
0500	6185	Radio Educacion, Mexico	SS
0500	6010	Radio Mil, Mexico	SS
0500	7275	Radio Malaysia	unid.
0500	17725	Radio Jamahiriya, Libya	AA/EE
0530	11990	Radio Kuwait	
0530	15495	Radio Kuwait	AA
0530	3925	Radio Tampa, Japan	JJ
0530	15220	Radio Japan, via Ascension Is.	JJ
0530	11730	Radio Japan/NHK	JJ
0600	11800	RAI International, Italy	SS

UTC	Freq.	Station/Country	Notes
0600	15590	Radio Japan/NHK	
0600	15615	Kol Israel	
0600	6110	RAI International, via Ascension Is.	
0800	11787	Radio Iraq Int'l	
0800	17545	Kol Israel	
0800	11970	Voice of Islamic Republic of Iran	
0830	7445	Voice of Asia, Taiwan	
0830	13605	All India Radio	
0830	11815	Radio Exterior de Espana, Spain, via Costa Rica	SS
0830	13610	Radio Damascus, Syria	
0900	15125	Radio Republik Indonesia	
0900	15255	Radio Sweden	
0900	15425	Sri Lanka Broadcasting Corp.	
0900	9590	Radio Netherlands	
0930	9650	Radio Korea Int'l, S. Korea	
0930	15120	Radio Pilipanas	FF
1000	9525	Voice of Indonesia	II
1000	15680	Radio Free Asia, USA, via Tajikistan	unid
1000	15410	Voice of America, Morocco	
1000	11920	RTV Marocaine, Morocco	AA
1000	13635	Kol Israel	HH
1000	9895	Voice of Islamic Republic of Iran	AA
1000	15110	Radio Exterior de Espana, Spain	SS
1030	15535	Far East Broadcasting Corp., Seychelles Is.	AA
1030	5970	Voice of America, Sao Tome	
1030	5020	Solomon Islands Broadcasting Co.	
1100	13735	Swiss Radio Int'l	
1100	15084	Voice of Islamic Republic of Iran	Farsi
1100	12020	Voice of Vietnam	
1100	9930	KWHR, Hawaii	
1100	13700	All India Radio	Hindi
1130	3250	Radio Luz y Vida, Honduras	
1130	17670	All India Radio	
1130	9950	All India Radio	
1130	11990	Radio Budapest, Hungary	
1130	9570	Radio Budapest, Hungary	
1200	15345	RTV Marocaine, Morocco	AA
1200	3360	La Voz de Nahuala, Guatemala	SS
1200	4052.5	Radio Verdad, Guatemala	SS
1200	15615	Adventist World Radio, Guam	CC
1200	9865	Trans World Radio, Guam	CC
1200	15630	Voice of Greece	Greek
1200	17860	Deutsche Welle, Germany	GG
1200	17605	Radio France Int'l	
1200	9775	Voice of Greece, via Delano, CA	GG
1200	13810	Radio Africa Int'l, via Germany	
1230	15515	Radio France Int'l, via French Guiana	FF
1230	11955	Radio France Int'l, via Gabon	FF
1300	9589	Africa Number One, Gabon	FF
1330	9445	Trans World Radio, Guam	CC
1400	11765	BBC, via South Africa	
1400	12050	Egyptian Radio	AA
1400	13745	Voice of Islamic Republic of Iran	
1400	15185	Radio Africa, Equatorial Guinea	
1430	21455	HCJB, Ecuador	USB
1430	15110	HCJB, Ecuador	
1500	4840	Radio Interoceanica, Ecuador	SS
1500	4780	Radio Oriental, Ecuador	SS
1530	4930	Radio Costena, Honduras	SS
1530	15545	Radio Prague, Czech Republic	
1530	9820	Radio Havana Cuba	
1530	5025	Radio Rebelde, Cuba	SS
1530	9170	China National Radio/CPBS	CC
1530	11590	Huayi Broadcasting Company, China	CC
1530	7280	Voice of the Strait, China	CC
1600	17860	Radio Canada Int'l	
1600	17880	Radio Canada Int'l	
1600	9925	Croatian Radio, via Germany	Croatian
1600	21550	Voz Cristiana, Chile	SS
1600	21740	Radio Australia	
1600	11100	China National Radio/CPBS	CC
1600	7120	BBC via South Africa	
1600	15565	Radio Vlaanderen Int'l, Belgium, via Bonaire	
1630	9565	Radio Tupi, Brazil	PP
1700	11900	Radio Bulgaria	
1700	6180	Radio Nacional da Amazonia, Brazil	PP
1700	9695	Radio Rio Mar, Brazil	PP
1700	4755	Radio Educacao Rural, Brazil	PP
1730	9645	Radio Bandeirantes, Brazil	PP
1730	6135	Radio Santa Cruz, Bolivia	SS
1800	9970	RTBF Int'l, Belgium	FF
1830	17865	Radio Austria Int'l	
1900	15195	Adventist World Radio, via Austria	FF
1930	21680	Christian Voice, Australia	
1930	12080	Radio Australia	
1930	11660	Radio Australia	
1930	6070	Voz Cristiana, Chile	SS
1930	11765	KNLS, Alaska	
2000	7160	Radio Tirana, Albania	
2000	11710	Radiodifusora Argentina al Exterior	
2030	21745	Radio Prague, Czech Republic	
2100	4950	Radio Nacional, Angola	PP
2100	4775	Trans World Radio, Swaziland	vern
2100	4820	Radio Botswana	
2100	4885	Radio Clube do Para, Brazil	PP
2130	4915	Ghana Broadcasting Corp.	
2130	4975	Ondas del Orteguaza, Colombia	SS
2200	6973	Galei Zahel, Israel	HH
2200	7365	Croatian Radio	Croatian
2200	9675	Radio Canaco Nova, Brazil	PP
2200	17485	Radio Sweden	
2200	9945	Trans World Radio, via Albania	unid
2200	11690	Radio Jordan	
2230	11720	Channel Africa, South Africa	
2230	11818	Broadcasting Service of Kingdom of Saudi Arabia	AA
2230	17670	Radio Finland Int'l	
2230	11855	Radio Aparecida, Brazil	PP
2230	13630	UAE Radio, Dubai, UAE	
2245	13640	Radio Telefis Eireann, Ireland, via Canada	
2300	13720	Radio Free Asia, USA, via No. Marianas	KK
2300	15100	Radio Pakistan	
2300	15095	Far East Broadcasting Company, Philippines	VV
2330	9475	Radio Cairo, Egypt	
2330	15525	Radio Liberty, USA via Germany	unid
2330	15545	Radio Ecclesia, Angola, via Germany	PP
2330	17860	Channel Africa, South Africa	

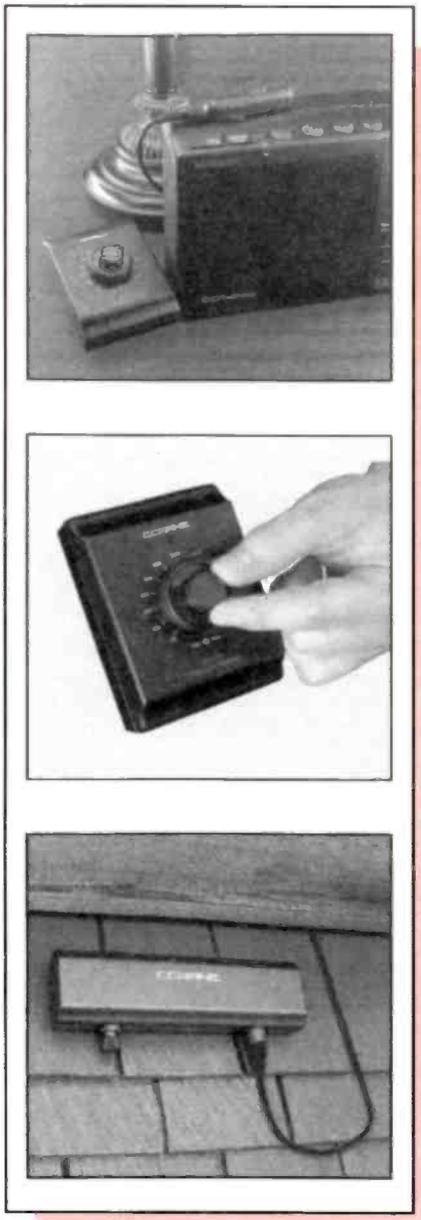
power up: radios & high-tech gear

by Harold Ort

review of new, interesting and useful products

C. Crane Announces Breakthrough In AM Radio Antenna Technology

C. Crane Company announces the introduction of the Justice AM Antenna with Twin Coil Ferrite™. The patent pending design of the Justice Antenna enables AM radio listeners to receive distant AM stations on their home stereo or portable radios. Inductive coupling allows the antenna to be used with radios without external antenna connectors. Precise tuning helps eliminate noise, adjacent channel interference, and distortion. A special remote placement option also helps eliminate heavy static. This technology will be incorporated in select high-quality radios and receivers in the future.



The new Justice AM Antenna from C. Crane Company may be just what you need to improve your AM radio reception.

"As a lifelong AM radio listener, I am very excited to be part of an important breakthrough in antenna technology," says Bob Crane, president of C. Crane Company. "Never before has an AM antenna consistently worked well on a home stereo. Most home stereos have very poor AM reception — the Justice AM Antenna with Twin Coil Ferrite is powerful enough to overcome this problem," he said.

Features of the new antenna include enabling home stereo receivers and portable radios to pull in more stations, nighttime fadeout is reduced by 99 percent, RF noise and adjacent channel interference and distortion is reduced, and it works with all types of radios — even those without external antenna connectors.

The new Justice AM Antenna with Twin Coil Ferrite™ has a suggested retail price of $99.95 and is available from C. Crane Company at 800-522-8863 or you can visit them on the web at www.ccrane.com.

The C. Crane Company, a privately held company in Fortuna, California, has been an innovator in the electronics industry and design. Their catalog is filled with unique products, many of which were designed or co-designed by C. Crane Company. Look for several new innovations from the company in the near future.

Prestone® Launches Inflate It!™ Portable Air Compressor & Tire Sealant

Prestone's new Inflate It!™ air compressor and tire sealant provides an emergency seal for most normal punctures and slow tire leaks. It also effectively re-inflates the tire. Available in automotive and select retail outlets, it's a portable 12-volt 250-PSI air compressor specially packaged with two cans of tire sealant. The sealant's fast-acting formula employs a special blend of super-strong polymers to help get you back on the road quickly and safely. With this system you don't have to hassle with loosening the lug nuts or using a car jack. The compressor simply plugs into the vehicle cigarette lighter, the sealant is installed, and the flat tire inflated.

"Flat tires are so common these days. According to AAA, nearly 3.5 million people called for help due to a flat tire last year," commented Andrea Raymond, product manager for the Prestone brand. "Our goal is to help drivers eliminate some of the hassles and hazards of everyday driving with products like Inflate It!."

The product is packaged in a sporty black nylon carrying case that can be easily stored in any vehicle's trunk or behind the seat. Weighing less than five pounds, it has a built-in pressure gauge, light/flash switch, compressor on/off switch, raft air pump hose, 6-PSI raft air pump quick inflator/deflator, red emergency light, three nozzle adaptors, a 10-foot 12-volt power cord with cigarette lighter plug, adaptors for all inflation/deflation applications and a 28-inch quick-disconnect air hose.

For more information on Prestone's Inflate It!™ go to www.prestone.com. Be sure to tell them you read about it in *Popular Communications* magazine.

2002 *Police Call* Books Include CD-ROM!

Police Call Editor, Rich Barnett announces publication of the 2002 edition of the books often referred to as the "Scanner User's Bibles." Each volume will include a copy of the new Police Call 2002 CD-ROM at no extra cost! The new Version 3.0 is an updated edition of the CD-ROM that sold for $34.99 last year, and Barnett stressed that every feature of last year's Version 2.0 CD is included.

Police Call, now in its 39th year of publication, includes radio frequencies for emergency agencies (police, fire, etc.) and 18 other categories of radio users such as federal government, public utilities, transportation, sports, education, entertainment, and aircraft. Additionally, there are sections on trunked system talkgroup codes, an exclusive Consolidated Frequency List, 27-page Listener's Guide, Radio Codes and Signals, FCC Frequency Allocation Tables, Maps, and a Glossary of Radio Slang and Terminology.

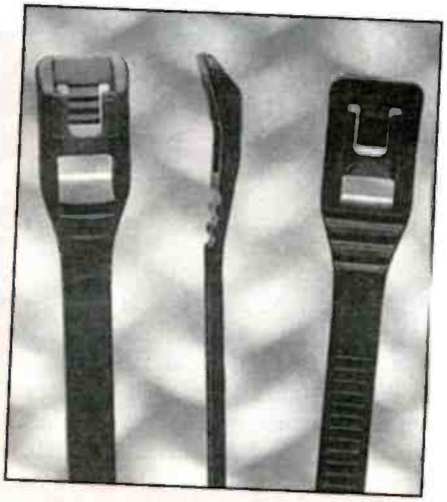
The CD-ROM includes data from all of the regional volumes, plus extra, added data. *Police Call*, both books and CD-ROM are updated annually to include the thousands of changes that are made during the year. The one CD-ROM includes the data from all seven volumes, plus additional features of interest to radio listeners.

Police Call is sold by selected retail electronics dealers and mail order firms, as well as all RadioShack stores (the cover of books sold by RadioShack will differ, but the contents are the same). The suggested retail price of each regional volume is $19.99, including the CD-ROM.

Advanced Cable Ties

Advanced Cable Ties, Inc. of Gardner, Massachusetts, is a full-line manufacturer of cable ties and accessories used in industrial/fastener, electronic, electrical, packaging, and a variety of other specialty applications. Products include cable ties: low profile, miniature, intermediate, standard, heavy duty, extra heavy duty, stainless steel, releasable, and mounting hole. They also make cable clamps, split loom, cable wrap, terminals, heat shrink terminals, and wire connectors.

ACT sent along a sample package of their heavy-duty "Cobra" low profile cable ties, which we immediately used to hold some coax to an outdoor vertical antenna. An especially innovative and welcome feature of their ties is the way the small connector portion remains flat against the mounting poles; no protruding sharp junction gets in the way to accidentally cut you or your cable with these cable ties! The company said in the news release, "The design of the pawl (locking mechanism) makes ACT cable ties superior in strength and allows our products to exceed the required tensile strength by margins of three to four times greater than industry standards."


Advanced Cable Ties, Inc. Cobra ties are perfect for organizing your radio and computer cables.

For more information, contact them at 800-861-7228 or E-mail the company at sales@advancedcableties.com. They're on the web at www.advancedcableties.com. Be sure to tell them you read about their ties in *Popular Communications*.

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global information guide

listening to what your world says every day

by Gerry Dexter

Letters And Calls Pour Into BBC Offices

The campaign against the BBC's decision to discontinue shortwave to North America continues, as letters pour into Bush House and the offices of British representatives in Washington, Ottawa, and elsewhere. There have also been numerous news stories, even in some of the major media outlets. There's even a website devoted to reactivating the service, which you can pull down at http://www.savebbc.org. This is an excellent source to access news stories and listener comments about the situation.

After the BBC vacated the times and frequencies it had been using, Radio Netherlands cleverly moved into those gaps so people who hadn't heard what was going to happen wouldn't find an empty channel when they tried to find London. The occupancy only lasted a couple of weeks, but RN's ploy had to have been a very positive thing for that organization and, certainly, their public statements of confidence in direct shortwave broadcasting were extremely welcome. Radio Netherlands deserves our fervent support!

Meantime, Radio Australia is floating an idea to somehow find a way to bring station management and programmers together with listeners to get a dialogue going on how shortwave broadcasters can better serve their public. That's a step we would certainly support.

Until things change back to the way they should be perhaps we'll just refer to the BBC's efforts as the BBCNQWS (Not Quite World Service!)

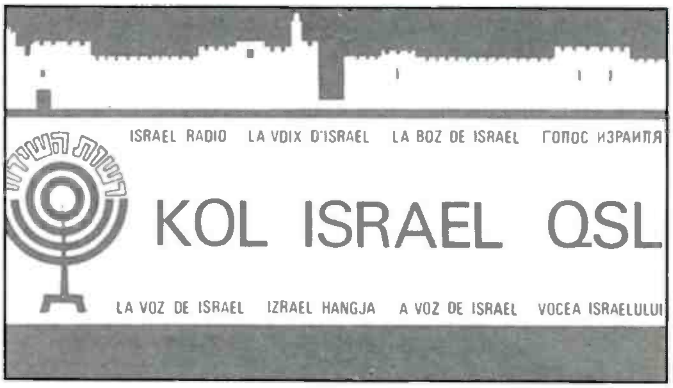
Got Uganda?

If you don't have Uganda logged (and it's a toughie) try **7195** at 0300 sign-on. Several people have been hearing it, though not without considerable interference from ham operators, who have every right to be there.

KAIJ shortwave in Dallas (Denton, Texas), originally KCBI, which devotes all its hours to relaying Dr. Gene Scott's University Network, has been sold to Peoria Broadcasting Services. A web search didn't turn up anything on these folks, so we don't know whom they are or where they are or what their plans for KAIJ might be.

A company called Aurora Communications International is going to put a new station on the air in the hamlet of Ninilchik, Alaska, on the Kenai Peninsula. This is a good name for the company, considering how often the aurora borealis is on display there. Again, we couldn't find these folks on the web and no further details on their plans have been announced, at least that we've seen.

Several stations are having anniversaries this year — well, actually they all are — but some are of particular note: Radio Prague is celebrating its 65th, Radio Telefis Eireann is marking 75 years (and is now heard on shortwave via several relays) Radio Lithuania is also celebrating its 75th, and China Radio International, the baby of the bunch, turns 60 in December.



Lately, this frequently seen card from Kol Israel arrives without the date and frequency information filled in. (Thanks David Weronka, NC).

Early morning listening provides a lot more action on 60 meters than does monitoring in the evening. Early mornings are not a welcome time here, but the logs of others certainly prove that's prime time for that band. We scrounged through the area between 4750 and 5050 the past couple of evenings and it was slim pickings to say the least. Even such regulars as Evangelica — 4819 and Quito — 4919 were barely there. Perhaps, we say, grabbing for some kind of positive note, it was simply less than optimal conditions.

This month's book winner is **Colonel R.C. Watts of Louisville, Kentucky**. R.C. will receive a 2002 *Edition of Passport to World Band Radio*, the one shortwave reference you simply must have next to your receiver. The book is courtesy of **CRB Books**, P.O. Box 56, Commack, NY 11725. Get a copy of their catalog, which is jammed full of fascinating books on all facets of the radio hobby by writing them or E-mailing them at sales@crbbooks.com or you can phone them at 516-543-9169.

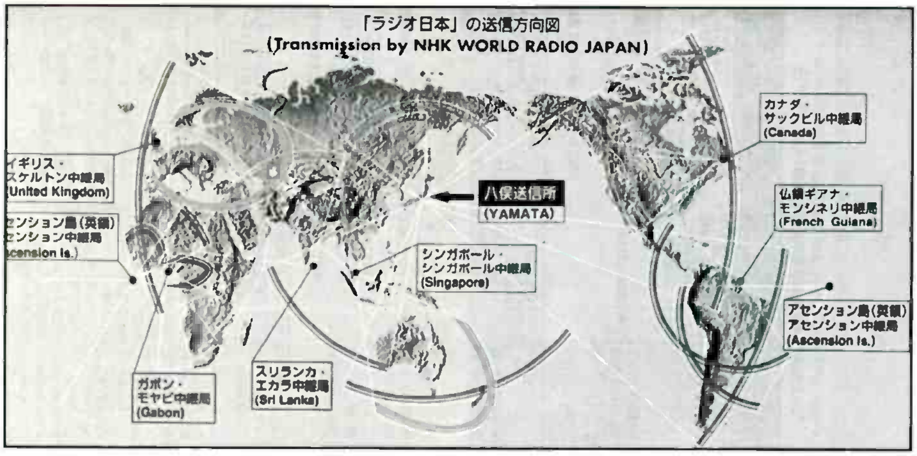
Now the usual pitch: your shortwave broadcast logs are always welcome. Please just remember to list your catches by country, double or triple space between the logs and add your last name and state abbreviation after each. We're also looking for spare QSL cards we can use as illustrations. Also station schedules, photos — anything along those lines you'd care to lay on us! Thanks for your continued interest and support!

Here are this month's logs. All times are in UTC, which is five hours ahead of EST, i.e.0000 UTC equals 7 p.m. EST, 6 p.m. CST, 5 p.m. MST and 4 p.m. PST. Double capital letters are language abbreviations (FF = French, AA = Arabic, SS = Spanish, etc.). If no language abbreviation is included the broadcast is assumed to have been in English.

ALASKA — KNLS, **11765** at 0859 with old pops, website URL, ID and off 0858. (Foss, Philippines)

ALBANIA — Radio Tirana, **7160.5** with ID, news at 0233. Also at 0115. (Burrow, WA)

ANGOLA — Radio Nacional, **4950** at 0350 with continuous vocals


「ラジオ日本」の送信方向図
(Transmission by NHK WORLD RADIO JAPAN)
イギリス・
スケルトン中継局
(United Kingdom)
センション島(英領)
センション中継局
cension Is.)
ガボン・
モヤビ中継局
(Gabon)
スリランカ・
エカラ中継局
(Sri Lanka)
シンガポール・
シンガポール中継局
(Singapore)
八俣送信所
(YAMATA)
カナダ・
サックビル中継局
(Canada)
仏領ギアナ・
モンシネリ中継局
(French Guiana)
アセンション島(英領)
アセンション中継局
(Ascension Is.)

With relays in the UK, Ascension, Gabon, Sri Lanka, Singapore, Canada, and French Guiana, Radio Japan/NHK has the world pretty well covered.

RMI
XERMX.OC
Radio México Internacional
31 mts. 9705 kHz
25 mts. 11770 kHz

This red, green, white, and black plastic pennant from Radio Mexico now includes mention of 11770 in addition to the station's long occupancy of 9705. (Thanks David Weronka, NC)

Abbreviations Used in Listening Post

AA	Arabic
BC	Broadcasting
CC	Chinese
EE	English
FF	French
GG	German
ID	Identification
IS	Interval Signal
JJ	Japanese
mx	Music
NA	North America
nx	News
OM	Male
pgm	Program
PP	Portuguese
RR	Russian
rx	Religion/ious
SA	South America/n
SS	Spanish
UTC	Coordinated Universal Time (ex-GMT)
v	Frequency varies
w/	With
WX	Weather
YL	Female
//	Parallel Frequencies

to 2+1 time pips at 0400, woman with "Radio Nacional de Angola" ID and man with news. (D'Angelo, PA)

ANTIGUA — BBC relay, **5975** at 0302, **//6110** also via Antigua. (MacKenzie, CA) **5975** at 0058 and 0150. **15220** at 1223. (Newbury, NE) Deutsche Welle relay, **9670** at 0525. (Newbury, NE)

ARGENTINA — Radiodifusora Argentina al Exterior, **11710** at 0209 with music and news of Argentina. (Burrow, WA) Radio Diaz (tentative) **8988** LSB at 0950 with much SS talk by three or four fellows joking around. (Montgomery, PA) **2350** with fast-past vocals, time pips, ID and news at 0000. Still going at 0140. (D'Angelo, PA) Radio Rivadavia, **20276** in SS at 0128 with continuous SS pop tunes. (Montgomery, PA)

ASCENSION ISLAND — BBC relay, **6005** at 0313 with news. (MacKenzie, CA) **12095** with a drama at 0040. (Foss, Philippines) **15400** at 2045 with Queen opening Parliament. (Newbury, NE)

AUSTRALIA — Radio Australia, **5994.9** at 0924 with talks. Not **//6020**. (Montgomery, PA) **6020** at 1108, **//121650**, **11680**, **12080** with the latter by far the best. (Brossell, WI) **9580** at 1120. (Newbury, NE) 1215. Also **11880** at 1230. (Northrup, MO) **9580** at 1545. **11650** at 1615, **//11680**. **17795** at 2248. **21740** at 2240. (MacKenzie, CA) **17175** at 2206. (Miller, WA) Christian Voice, **21680** at 0128. Tentative ID as just above the noise floor. Man with religious talks but I was never able to hear an ID. (Montgomery, PA)

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AUSTRIA — Adventist World Radio, **15195** via Moosbrunn with religious talk in FF. (Watts, KY) Radio Austria Int'l, **17865** at 1550 with health report, ID, schedule and off at 1558. (Burrow, WA)

BELGIUM — RTBF Int'l. **9970** at 0327 with FF pops. mention of Belgium. (Paszkiewicz, WI) Radio Vlaanderen Int'l, **9925** in DD at 0540. (Becker, WA) **15565** via Netherlands Antilles at 2245 with listener mail. (Miller, WA)

BOLIVIA — Radio Santa Cruz. **6134.8** at 0840 with SS pops, ballads, IDs, anmts. (Alexander, PA) **6135** in SS at 1008. Man and woman spelling out names, slowly pronouncing each word. (Newbury, NE)

BRAZIL — Radio Rio Mar, **9694.8** at 2330 with man in PP with canned ID, commercials, talks. ID again at 2353. (Montgomery, PA) Super Radio, **4875** at 0920 in PP with ID as Super Radio International. No mention of Radio Difusora Roraima, the other name for this one. (Montgomery, PA) Radio Bandeirantes, **9645.2** at 0000 with man in PP, tentative ID 0044. Very vast talking man announcer and hard to get much. (Montgomery, PA) Radio Senado, **5990** at 0124 with romantic vocals and brief PP talk. Carrier off at top of the hour with no announcements. (D'Angelo, PA) Radio Tupi, **9565** at 0031 with man preaching in PP before live audience, ID in passing at 0110. (D'Angelo, PA) Radio Educacao Rural, **4755** at 0117 with PP ad string, talk, guitar and vocal, jingle ID at 0126 followed by a spoken ID. (D'Angelo, PA) Radio Pioneira, **5015** at 0010 with two women in PP, ad string, ID at 0102, more talk. (D'Angelo, PA) Radio Nacional da Amazonia, presumed, **6180** in what sounded like PP at 0130. Thought I heard mentions of Amazonia. Also at 0850 on **11780** which was weak. (Miller, WA)

BULGARIA — Radio Bulgaria, **11900** at 1900 and 2155 with ID, news. (Burrow, WA)

CANADA — Radio Canada Int'l, **17695** at 2250. (Newbury, NE) **17860** at 0230. (Foss, Philippines) **17880** at 2220 with news in the World at Six. ID in SS at 2230 and continued in SS. //**9755**, **13670**, **15305**, **17695**. (MacKenzie, CA)

CHILE — Voz Cristiana, **6070** in SS at 1000. (Newbury, NE) **21550** in SS at 2242 with comments on soccer. (MacKenzie, CA)

CROATIA — Radio Croatia via Germany, **9925** in Croatian at 0415. (MacKenzie, CA)

CHINA — China Radio Int'l, **7170** in Esperanto at 1125 to 1130 close. **7820** in CC at 1142. **9855** in JJ at 1021. (Becker, WA) **9690** via Spain at 0306. (Newbury, NE) **11835** at 1745. (MacKenzie, CA) Voice of the Strait, **7280** in CC at 1035. (Becker, WA) Huayi Broadcasting Company, **11590** in CC at 0905. (Foss, Philippines) China National Radio (CPBS) **9170** in CC at 2352. (Foss, Philippines) **9625** in CC at 1554. **9710** in CC at 1559. //**9690**. **11100** in CC at 1535, **11615** in CC at 1556, **17890** in CC at 2246. (MacKenzie, CA)

RADIO
MARUMBY
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Brazil's Radio Marumby on 9665 kHz carries programming from the GMUH missionary organization.

CUBA — Radio Rebelde, on **5000** under WWV and //**5025** at 0250. Also harmonic (6 x 600) on 3600. (Montgomery, PA) **6140** in SS with pops songs at 1102. (Brossell, WI) Radio Havana Cuba, **9820** at 0532. (Newbury, NE)

CZECH REPUBLIC — Radio Prague. **15545** at 2245 with talk on "Café Slavia." (Weronka, NC) **21745** at 1700. Multilingual IDs, news, IDs again at 1727. (Burrow, WA)

ECUADOR — La Voz del Napo, **3279.5** at 0920 with SS talks, local music. (Alexander, PA) Radio Oriental, **4780** in SS with anmts at 0144, and local ballads. (Paszkiewicz, WI) Radio Interoceanica, **4840** at 0243 in SS with nondescript music, call letters. (Paszkiewicz, WI) HCJB, **11755** at 1021. (Jeffery, NY) **15115** at 0110. **21455** in SS at 2245. (MacKenzie, WI) **15115** at 0258 (Wilden, IN) 1225. (Northrup, MO) **21455** USB at 0338. (Foss, Philippines)

ENGLAND — BBC, **5995** via Delano at 0308. //**6005**. (MacKenzie, CA) **7120** via South Africa at 0312. (Watts, CA) **9590** via Delano at 2340. (Wilden, IN) **9515** (Canada) at 1315. **15220** (Antigua) at 1225. (Northrup, MO) **11765** via South Africa at 0537. (Newbury, NE) **15400** (Ascension) at 2000. (Jeffery, NY)

EGYPT — Egyptian Radio, **12050** in AA at 0333. (Brossell, WI)

EQUATORIAL GUINEA — Radio Africa, **15184.6** at 2105 with U.S.-produced EE religious programming. Abruptly off at 2246. (Alexander, PA)

FINLAND — Radio Finland Int'l, **21670** at 0657 with news and web address at 0658. Off at 0700. (Foss, Philippines)

FRANCE — Radio France Int'l, **11955** via Gabon in FF at 2144. (Brossell, WI) **15155** at 0400 to Africa with ID and news. Also on **15605//17605** at 1703 with news. (Burrow, WA)

FRENCH GUIANA — Radio France Int'l relay. **9710** in SS at 1013 and **9830** in SS at 1021. (Becker, WA) **15515** at 1145 in FF. (Brossell, WI)

GABON — Africa Number One, **9580** in FF heard at 0600 with music and anmts. (Becker, WI)

GERMANY — Deutsche Welle, **9785** via Portugal at 0529. (Newbury, NE) **9900** from Petropavlovsk, Russia in GG at 1018. (Becker, WA) **13690** with news at 0405. (Barton, AZ) **15275** in GG at 1733. (Jeffery, NY) **17860** (via Rwanda) in GG at 2230. (MacKenzie, CA) 2212. (Miller, WA) Radio Africa Int'l, via Julich, **13810** in FF with hi-life, program about the Congo, IDs, and New York address. (Paszkiewicz, WI)

GREECE — Voice of Greece, **9775** via Delano at 1444 in Greek. (Miller, WA) **15630** and **17705** (Delano) in Greek at 1800. (Burrow, WA)

GUAM — Trans World Radio/KTWR, **9430** at 1515 and off at 1517; **9445** at 1520. (MacKenzie, CA) **9865** to Central Asia at 1019 in CC. (Becker, WA) Adventist World Radio, **15615** at 1159 with "From the beautiful island of Guam, this is Adventist World Radio — The Voice of Hope." Into CC at 1200. (Brossell, WI)

GUINEA — RTV Guineenne, **7125** in FF heard at 2330 with talk, high-life music, anmts. Off at 0002 with orchestral anthem. (Alexander, PA)

GUATEMALA — Radio Verdad, **4052.5** at 0250 with variety of religious music — organ, choral, classical. Sound of chirping birds and cuckoo clock, SS anmts, IDs and sign-off with long national anthem at 0412 instead of the usual 0305. (Alexander, PA) La Voz de la Nahuala, **3360** in SS at 0338 with ID and music. (Brossell, WI)

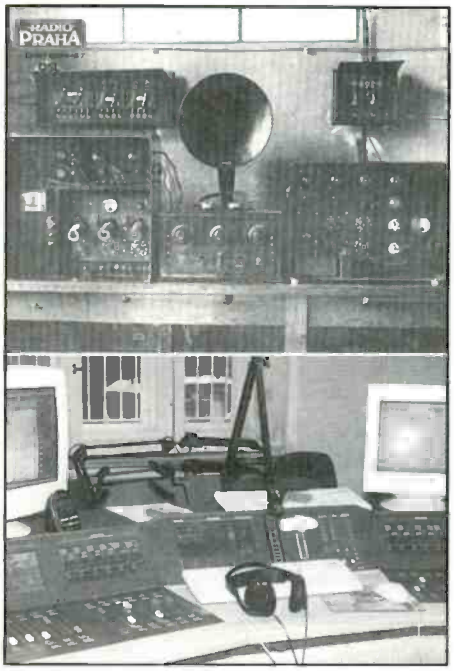
HAWAII — WWVH, **10000** under WWV at 0538. (Becker, WA) KWHR on **9930** with ID, address at 1200. **17510** with religious music at 0246. (Becker, WA) AFRTS/AFN, **10320 USB** at 0534. (Becker, WA)

HONDURAS —Radio Luz y Vida, **3250** at 0310 with EE religious program to 0358 ID, sign-off anmts and orchestral anthem. (D'Angelo, PA)

HUNGARY — Radio Budapest, **9570** at 0230 with IS, ID, news, and then buried under China Radio Int'l. (Burrow, WA) **11990** in HH at 0133. (Miller, WA)

INDIA — All India Radio, Mumbai, **4840** at 0040 with vocals and sitars. (D'Angelo, PA) **5010** AIR-Thiruvananthapuran, 0032 with EE news, flutes, woman with commentary, sitar music. (D'Angelo, PA) AIR, Delhi, **9950** at 2230 with stringed music. (Foss, Philippines) **10330** at 1010 in Hindi with woman anncr hosting music program. (D'Angelo, PA) **13605** at 0035. (Foss) **17670** at 1747. (Burrow, WA) AIR — Bangalore, **13620** at 0522 in AA. (Foss, Philippines) **13700** in Hindi at 1207. (Brossell, WI)

INDONESIA — Voice of Indonesia, **9525** at 1019 in Thai with several mentions of Indonesia. (Becker, WA) 1015 with mostly



Control rooms at Radio Prague, then and now.

music with occasional anmts by woman. Apparent language change after tentative ID at 1030. Dead air and other production problems. (Montgomery, PA) 1210 in Indonesian. (Paszkiewicz, WI) RRI — Jakarta. **15125** at 1135. (Brossell, WI)

IRAN — Voice of the Islamic Republic of Iran, **9895** ion AA at 0419. **11675** in Farsi at 1620 and **15084** in Farsi at 1932. (MacKenzie, CA) **11970** at 0040. (Weronka, NC) **13745** at 0221 with letterbox program. (Foss, Philippines)

IRAQ — Radio Iraq Int'l, **11787** heard at 0130. Very strong, but poor audio, ID at 0205 and news. (Montgomery, PA) 0310. (Brossell, WI)

IRELAND — Radio Telefis Eireann, via UK at 1800 with Irish and international news. Also **21630** (via Ascension) at 1829 with ID, news. (Burrow, WI)

ISRAEL — Kol Israel, **13635** at 2303 with news in HH, music. (Miller, WA) **17545** at 1658 with trumpet IS, into news at 1700. (Barton, AZ) **21670** at 1600 with news, comment, ID. //**15615**. (Alexander, PA)

ITALY — RAI Int'l, **6110** at 0135, //**11765**. (Watts, KY) **11800** with news at 0000, into FF after 0116. (Barton, AZ) 0310 with SS ID, music and anmts. (Brossell, WI) **17719** at 0631 with pop/rock. (Foss, Philippines)

JAPAN — Radio Japan/NHK — **9505** with news at 1706. (Burrow, WA) 1533. **11730** in JJ at 1625. (MacKenzie, CA) **9695** at 1017. (Jeffery, NY) **12030** in SS at 1006. (Becker, WA) **15220** via Ascension at 2223 in JJ. (Jeffery, NY) **15590** at 1153. (Brossell, WI) **17810** in Malay at 2245 and **17825** in JJ at 2234. (MacKenzie) **21610** in JJ at 0353. (Foss,

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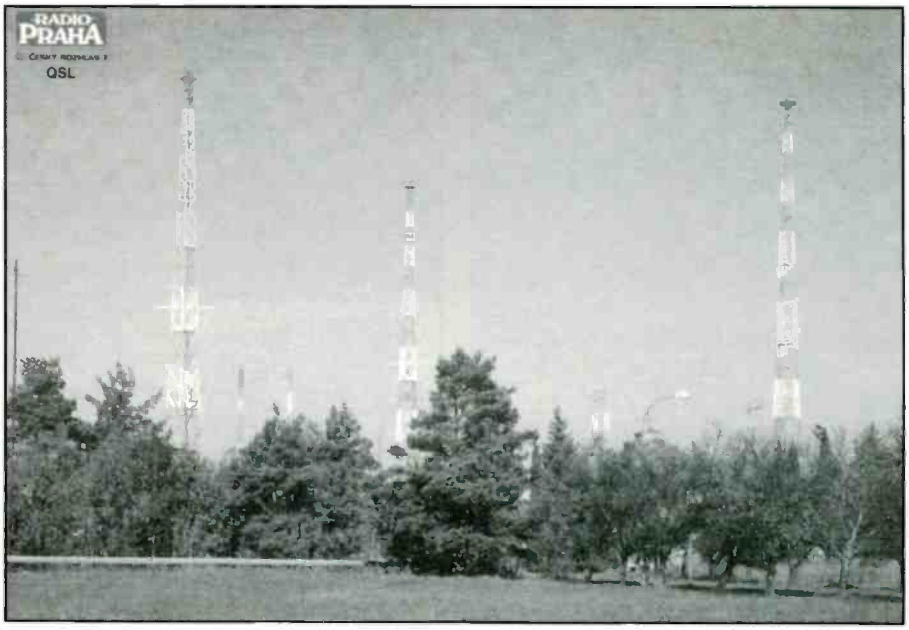

This is the Radio Prague transmitter at the unpronounceable Litomysl site in the eastern part of the Czech Republic. It went on the air in 1955.

Philippines) NSB/Radio Tampa, **3925** in JJ at 1215. (Barton, AZ) 1108. And **9595** in JJ at 1037. (Becker, WA)

KUWAIT — Radio Kuwait, **11990** at 1914 with pop song. (Weronka, NC) **15495** in AA at 1955. //**15505**. (MacKenzie, CA)

LESOTHO — Radio Lesotho, **4800** at 0501 with EE news, ID at 0508 "that's the end of the news from Lesotho National Radio." Man with an ad or PSA, rock number. (D'Angelo, PA)

LITHUANIA — Radio Vilnius, **9875** at 2340 with political news, ID, schedule. (Burrow, WA)

LIBYA — Radio Jamahiriya/Voice of Africa, **17725** with ID and EE news heard at: 1736–1746, 1820–1825, 1920–1925, 2030–2038, 21220–2125, 22220–2225, 2332–2340, 0020–0025, 0132–0140, 0222–0226, and 0332–0236. (Alexander, PA) *(Considerably expanded — Ed)*

MALAYSIA — Radio Malaysia, Sarawak, **7270** with music at 1415. (Miller, WA)

MALI — RTV Malienne, **5995** at 2345. Weak under VOA open carrier, completely wiped out by VOA sign-on. Much better on parallel **4782.8**, **4835.1**. FF talk, Afro pops, sign-off with anthem by local band. (Alexander, PA)

MEXICO — Radio Mil, **6010**, 0810 with SS ballads and pops, ID, whistle signature tune, cow and bird sounds. (Alexander, PA) 0835 with SS music. (Miller, WA) 0945 (Newbury, NE) 0315 with SS vocals. (MacKenzie, CA) Radio Educacion, **6185** with Medieval type music at 0256. Semi-classical music at 0604. 0511 various ethnic selections. (Newbury, NE) Radio Mexico Int'l, **11770.1** at 0245. Weak and unstable, constantly varying +/- 50 Hz. Better on //**9705**. SS ballads, talk, ID. EE at 0306–0336 with mailbag and local pops. (Alexander, PA)

MOROCCO — RTV Marocaine, **11920** at 0320 with talks and music in AA. (Brossell, WI) **15345** in AA at 1231. (Jeffery, NY) VOA relay, **15410//15445** at 1742. (Jeffery, NY) Radio Medi-Un, **9575** at 0050 in FF with continuous U.S., Mideast music, possible canned ID at 0110 then to short talks by man and back to music. No ID at top of the hour. Website feed running about 50 seconds behind. (Montgomery, PA)

NETHERLANDS — Radio Netherlands, **6175** (Delano) at 0423. **9515** at 1201 and 1610. (Also Delano) **9590** via Canada at 0100. (Newbury, NE) **6175//6165//9590** EE to North America via Sackville, Delano, and Antigua. Delayed by a split second until Bonaire off at 0125. Temporarily filling in the slots vacated by BBC to North America. (Silvi, OH) **9895** in DD at 0547 and **12065** (Russia) at 1002 to SE Asia. (Becker, WA)

NETHERLANDS ANTILLES — Radio Netherlands via Bonaire, **6165** at 0343 (MacKenzie, CA) **9590** at 2326. (Miller, WA) **9790** at 1033. (Jeffery, NY) **9845** at 0000. (Wilden, IN)

NIGERIA — Voice of Nigeria, **7255** at 2257 with end of talk, ID, addresses, orchestral anthem and off at 2303. (D'Angelo, PA) 0455 sign-on. (Newbury, NE)

NEW ZEALAND — Radio New Zealand Int'l, **9885** to Western Pacific at 1019. (Becker, WA) **9890** at 0850. **11725** at 0554. (Newbury, NE) **15160** at 2022 in Pidgin, EE ID, regional music. (Jeffery, NY) 2025, no sign of Algeria. Wiped out by Netherlands sign on at 2127. (Alexander, PA) **17675** at 2253. (MacKenzie, CA) 0145. (Jeffery, NY) 0256. (Foss, Philippines) 0327, ID 0332. (Brossell, WI)

NORTH KOREA — Voice of Korea **9850** in KK at 1021. (Becker, WA) 1447. (Barton, AZ) **9978.3** at 0843. **11710** with EE at 1545, //**13760**. (Newbury, NE) **11680** in KK at 1622. (MacKenzie, CA) Pyongyang Broadcasting Station, **6398** in KK at 1118. (Becker, WA)

NORTHERN MARIANAS — KFBS/Far East Broadcasting Co., **9465** in RR at 1525 with vocal music. IS, ID in Russian, continued in another language. **11580** in CC at 1553. (MacKenzie, CA) Voice of America Relay, **11930** at 0842. (Foss, Philippines) 0908 with news. (Newbury, NE) **11990** in CC. (Brossell, WI) **15240** at 1241 with nature program. (Jeffery, NY)

NORWAY — Radio Norway Int'l, **11635** with presumed news in NN heard at 0305. (Brossell, WI)

OMAN — Radio Sultanate of Oman, **15140** in AA at 1638. (Jeffery, NY) **15355** at 0341 with EE talk, rock number, talk about Oman, into AA at 0356. (D'Angelo, PA)

PARAGUAY — Radio Nacional, **9737** at 0128 in SS with music. (Miller, WA) 1025 with anmts. (Becker, WA)

PERU — Rdf. Huancabamba, **6535.8** at 0300 with OA folk music, ID, SS anmts. Abrupt off at 0333. (Alexander, PA) Radio Union, **6312.4** at 0220 to past 0630. Drifting but good audio. SS talks, ID, SS ballads/pops and U.S. pops from '50s, '60s, and '70s. (Alexander, PA) Radio Andina, **4995** in SS at 0246 with many commls, OA music. (MacKenzie, CA) Radio Imperio, **4388.9** at 0928. Audio out briefly. Typical OA music and long SS talks. Anncr is really over modulated. (Montgomery, PA) Radio Union, **6312.4** at 0230, long SS talks with flute in background. Drifting. ID at 0318. Then into pop tunes, some U.S. Difficult to follow as frequency drifts up and down. (Montgomery, PA) Radio Horizonte, **5019.9** at 0121 with fast woman talker and KJES-like repetition by children, a capella vocal by woman followed by woman anncr with ID and sign-off. (D'Angelo, PA)

PAPUA NEW GUINEA — Radio Milne

Bay. Alotau. **3365** at 1103 in Pidgin. Barely audible. (Becker, WA) Radio Sanduan, Vanimo, **3205** in Pidgin at 1055. (Becker, WA) Radio Northern, Popondetta, **3345** at 1102. Very faint. (Becker, WA) Radio Western Highlands, Mt. Hagen, **3375** in Pidgin at 1055. (Becker, WA) Radio North Solomons, Kieta, **3325** at 1102 in Pidgin. (Becker, WA) Radio West New Britain, Kimbe, **3235** at 1057 with local music. (Becker, WA) Radio Madang, 1058 with local music and Pidgin anmts. (Becker, WA) Radio New Ireland, Kaveing, **3905** at 1107 with woman in Pidgin. (Becker, WA) NBC, Port Moresby, **4890** with religious broadcast at 1050. (Becker, WA) **1104** with national news. (Brossell, WI) EE music at 1253. (Miller, WA) **9675** at 0840 with talks about rugby and soccer matches. ID, back to sports talk. No carrier noted on 4890. (Montgomery, PA)

PHILIPPINES — VOA Relay, **7215** at 0049. (Foss, Philippines) **9760** at 1119. (Brossell, WI) **15160** at 1228. (Jeffery, NY) **15180** at 1950. **17820** at 2240. (MacKenzie, CA) Far East Broadcasting Co., **9405** in CC at 1024 and 1510. (MacKenzie, CA) 1425. (Miller, WA) Radio Filipinas, **15120** at 1940 man and woman talking in FF. (MacKenzie, CA) Radio Veritas Asia, **9520** at 0940 with Cat Stevens LP. (Barton, AZ)

PORTUGAL — RDP Int'l, **15555** in PP with continuous music at 1935. (Jeffery, NY)

PUERTO RICO — AFRTS/AFN, **6458** USB, 0855 with sports. (Newbury, NE) 0946 with "Car Talk" program, ID as "AFS." At 1000. (Montgomery, PA) 1009 with "Morning Edition." (Jeffery, NY)

ROMANIA — Radio Romania Int'l, **11740//15365** at 2058 with IS, ID, schedule, news. (Burrow, WA) **15180//15340** at 0219 with news, ID, music, letterbox. (Jeffery, NY)

RUSSIA — Radio Magadan, **5930** in RR at 1117. Also **9530** at 1100 with Radio Rossii relay. Voice of Russia, **7490** in CC at 1031. (Becker, WA) **9480** in CC at 1147. (Becker, WA) **17690** at 0304 with news. (Newbury, NE) Radio Radonezh, (tentative) **6245** at 0020 in RR. Owned by the Russian Orthodox Church. (Montgomery, PA)

SAO TOME — VOA relay, **5970** at 0504. (Newbury, NE)

SAUDI ARABIA — Broadcasting Service of the Kingdom, **15230** in AA at 1943. (MacKenzie, CA)

SEYCHELLES ISLANDS — Far East Broadcasting Assn., **15535** in AA at 1149. (Brossell, WI) **15555** at 0237 in unid. language. (Jeffery, NY)

SINGAPORE — Radio Singapore, **7170** at 1410 in unid. language with music and comment. (Miller, WA) 1129 in presumed Tamil. Music and talk came from under China Radio Int'l, which goes off at three minutes before the half hour. Also **9665** in Malaysian at 1035 and **9740** in EE at 1025. (Becker, WA)

SOLOMON ISLANDS — Solomon Islands Broadcasting, **5020** at 0821 with news and music. (Miller, WA)

SOUTH AFRICA — South African Broadcasting Corp., **3320** with soft music at 0335. (Brossell, WI)

SOUTH KOREA — Radio Korea Int'l, **9570** at 1042. Also **9580** in SS to South America. (Becker, WA) **9650** at 1153 with RKI Feedback. (Weronka, NC) **15575** with poprock at 0219. (Foss, Philippines)

SPAIN — Radio Exterior de Espana, **6055** at 0500 with ID, schedule. (Burrow, WA) 0506 with news. (Newbury, NE) **11815** via Costa Rica in SS to South America. (Becker, WA) **15110** in SS at 1935. (MacKenzie, CA)

SRI LANKA — VOA relay, **15160** at 1217. (Barton, AZ) Sri Lanka Broadcasting Corp., **15425** at 0036 with big band standards. EE ID at 0102 and rock. Greetings to listeners in between selections. (D'Angelo, PA)

SWEDEN — Radio Sweden, **15255**, 2132 with report on Swedish electrical generation, ID at 2143. (Burrow, WA) 2145 with "Nordic Report." (Brossell, WI)

SWITZERLAND — Swiss Radio Int'l, **13735** via Singapore in GG at 1210. (Brossell, WI) **15315** at 1225 with news feature, music, ID. (Jeffery, NY) **15220//17640//21720** at 1730 with ID, news. (Burrow, WA)

SYRIA — Radio Damascus, **13610** at 2122 with comments, music, news, more music, ID. (Burrow, WA)

TAIWAN — Radio Taipei Int'l, **5950** via WYFR, at 0255. (MacKenzie, CA) **7130** in JJ at 1134. (Becker, WA) **15215** (WYFR) in SS

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Features internal AM mod. of 1kHz. RF output 100mV - 35MHz. Audio output 1kHz @ 1V RMS
SG-9000 (analog, w/o counter) $124

Elenco 10Hz - 1MHz Digital Audio Generator
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$225
Features built-in 150MHz frequency counter, low distortion and sine/square waves.
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Electronically controlled, ideal for professionals, students, and hobbyists. Available in kit form or assembled.
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- -1.25V to -20VDC @ .5A (1.25V to -15V @ 1A)
- +12V ±5% @ 1A
- -12V ±5% @ 1A
- +5V ±5% @ 1A

Function Generator
- Waveforms: Sine, Square, Triangle, Complementary Square
- Frequency: 1Hz to 100kHz in 5 steps continuously variable

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at 0242. (Wilden, IN) **15265** (WYFR) at 1405. (Brossell, WI) **15320** at 0338. (Foss, Philippines) WYFR Taiwan relay, **9280** in CC at 2326. (Foss, Philippines) **6300** in CC at 1122. (Becker, WA) **15060** in CC at 2216. (Jeffery, NY) Voice of Asia, **7445** at 1104 with EE news items. (D'Angelo, PA)

THAILAND — Radio Thailand, **7260** at 1100 with EE sign-on, into VV. Also 1134 in VV. (Becker, WA) 1101 sign-on with chimes, man with EE ID and said the coming program would be in Vietnamese. S9 signal, covering Radio Vanuatu. (Montgomery, PA) **15395** at 0314 with feature reports. (Foss, Philippines) BBC relay, **15280** at 1140 with report on the arts. (Brossell, WI) 0234. **21660** at 0349. (Foss, Philippines) VOA relay, **13650** at 0238 with news items. (Foss, Philippines)

TUNISIA — RTT Tunisienne, **7275** in AA heard at 0335. (Brossell, WI)

TURKEY — Voice of Turkey, **11655** at 0305 with EE news. (Brossell, WI) **11885** at 0115 in TT. (Miller, WA) **17830** with news. (Weronka, NC) **21715** with TT music at 0053. (Foss, Philippines)

UGANDA — Radio Uganda, **7195** at 0326 with highlife music, ID, news in Swahili at 0330. No EE news at 0400. Mixing with ham QRM. (D'Angelo, PA)

UKRAINE — Radio Ukraine Int'l, **9620** with time pips at 0400, weaker on //**9610**. (Barton, AZ) **11840//12040** at 0314 with "You are listening to Ukrainian Diary from Radio Ukraine International." (Brossell, WI) 11840 at 0400 with IS, ID, news. Also **12040** at 0300 with IS, ID, schedule, program preview and economic news. (Burrow, WA) **12040** at 0305 with news. (Weronka, NC)

UNITED STATES — WFLA, (Florida) *25870*, 1347 with gardening program, call-in talk show, lotto numbers, and news items. (Montgomery, PA) *(An over-the-air cueing system — Ed)* WJFP (Florida) **26469.8** at 1355 with song, religious music, partial ID at 1402 "WJFPO, Fort Pierce, Florida" again at 1403. (Montgomery, PA) *(Ditto — Ed)*

UZBEKISTAN — Radio Tashkent, **15295** at 1200 sign-on with IS, ID, EE news and comment, local pops. //**17775**. (Alexander, PA)

VANUATU — Radio Vanuatu, **7260** monitored at 0915. ID at 0916, pop tunes. (Montgomery, PA)

VATICAN — Vatican Radio, **9605** heard at 0250 sign-on in EE. (Newbury, NE) 0300. (Barton, AZ) **12065//13765//15235** at 1600 with news, IS and off at 1610. Also **15595** at 1612 in FF, into EE with ID and news at 1615. (Burrow, WA)

VIETNAM — Voice of Vietnam, **7210** domestic service at 0854. **12020** at 2351 with "Arts and Literature." (Foss, Philippines) **9525** via Canada at 0100. (Watts, KY) 0124. (Miller, WA)

YUGOSLAVIA — Radio Yugoslavia, **11870** at 2355 in unid. language. IS at 2357, ID at 0000, frequencies and into news. (Burrow, WA)

ZAMBIA — ZNBC- Radio One, **6265** at 0406 with tribal vocals, man in vernacular, EE IDd at 0459 and news in EE at 0500. Music fanfare and segment of the fish eagle IS prior to news. (D'Angelo, PA) Radio Christian Voice, **4965** at 0240 with gospel music. (MacKenzie, CA)

That's it! Beat the drums and blow the trumpets in salute to the following who did the good thing this month: Stewart MacKenzie, Huntington Beach, CA; Sue Wilden, Noblesville, IN; Mark Northrup, Gladstone, MO; Lee Silvi, Mentor, OH; Col. R.C. Watts, Lexington, KY; Richard D'Angelo, Wyomissing, PA; Brian Alexander, Mechanicsburg, PA; Mike Miller, Issaquah, WA; David Weronka, Benson, NC; Pete Becker, Clarkson, WA; Bruce R. Burrow, Snoqualmie, WA; Ed Newbury, Kimball, NE; Marty Foss; Guinayangan, Philippines; Robert Montgomery, Levittown, PA; David Jeffery, Niagara Falls, NY; Robert Brossell, Pewaukee, WI; Rick Barton, Phoenix, AZ; and Sheryl Paszkiewicz, Manitowoc, WI. ■

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the wireless connection

a look behind the dials

by Peter J. Bertini, <radioconnection@juno.com>

The MK484 ICs Are Here — Let's Build The Receiver!

Reader Joe Giovanelli's recent E-mail is typical of what I've been hearing from readers over the past several months. Here is what Joe had to say: "Pete, I'm always behind in reading, but just learned from you that the Ferranti ZN414 has been discontinued. What is the performance difference between the ZN414 and the MK484? What is the status of your direct order from Hong Kong? There may be a few of us interested in working with this device. Joe."

Well Joe, there's good news. After the first batch of 200 chips were lost in transit, I've finally received the second shipment which is being reserved exclusively for *Pop'Comm* readers! The ordering information and pricing is on the next page.

I had planned on offering a few projects based on designs tested and built in the "Wireless Connection" workshop, but since it's such a simple device I've decided instead to present some ideas for building some simple TRF AM BCB receivers using either the ZN414 or MK484. I'd like to see what interesting applications you — our readers — come up with. To make things interesting, I'm offering a few complimentary one-year subs/renewal extensions to *Pop'Comm* magazine, to be awarded to the most interesting photos and experiences for a MK484 receiver project submitted for publication. If you can build a simple crystal set, you can put the MK484 to work in a homebrew receiver.

	Min.	**Typical**	**Max.**
Supply voltage	1.1 volt	1.4 volt	1.8 volt
Current draw	———	300 uA	———
Frequency range	150 kHz		3 MHz
Input impedance	———	4 megohms	———
THD	———	4%	———
AGC range	———	30 dB	———
Power gain	———	70 dB	———

Table 1. Technical specifications For the MK484.

First things first. Let's begin by previewing the once popular Ferranti ZN414 IC. The ZN414, packaged in a three-lead TO-18 plastic package, more resembled a small-signal transistor than the 10-transistor TRF (Tuned Radio Frequency) receiver that it was. The device required a mere 1.2 to 1.6 VDC at a maximum of 500 microamps (a mere modest 1/2 mA), with 300

Photo 1. A front panel view of Al's homebrew receiver, which bears an uncanny resemblance to our upcoming Night Hawk project.

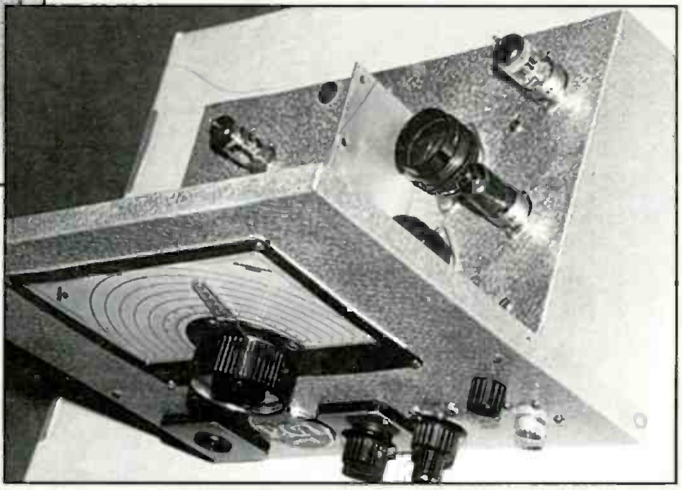

Photo 2. Al's receiver features a tuned RF stage for added performance. Both sets of coils can be seen behind the panel.

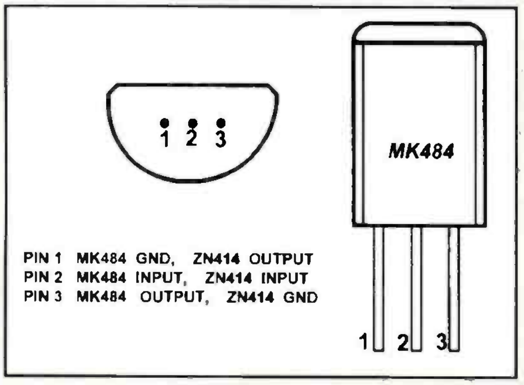
1 2 3
MK484
PIN 1 MK484 GND, ZN414 OUTPUT
PIN 2 MK484 INPUT, ZN414 INPUT
PIN 3 MK484 OUTPUT, ZN414 GND
1 2 3

Figure 1. Case outlines and pin-out connections for the MK484 and the discontinued ZN414 TRF IC.

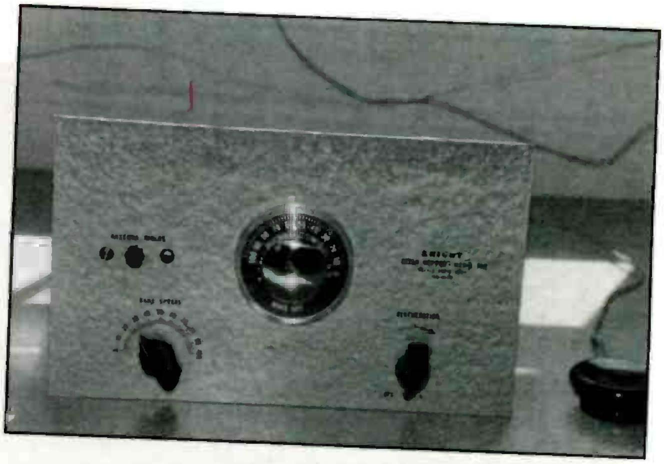

Photo 3. The original Knight Ocean Hopper receiver.

microamps being typical, over its 150-kHz to 3-MHz operating range. This means the chip can be powered from the smallest 1.5-volt watch or calculator button battery, or even from solar cells. The device also features a 20-dB AGC range. Several years ago you could buy the chip for about a buck; but since being discontinued the price is now $5.00 and up *when* you can find them, and the shipping and handling is extra!

Figure 1 shows the outline drawings and pin outs for both the '414 and '484 devices. Both chips, except for the physically different base connections, are electrically interchangeable. The '484 is housed in a three-lead TO-92 plastic package. **Table 1** gives the pertinent specs for the '484 chip — they are almost identical to those for the ZN414 except for a slightly better 30-dB AGC range. The MK484 was obviously marketed to directly compete with the ZN414!

Figure 2 shows the block diagram for the MK484, which, not surprisingly is virtually identical to the '414s internal workings! **Figures 3A and 3B** show some suggested hookups for simple AM receivers taken from the MK484 data sheets. The set works best with high-impedance ceramic/crystal earplugs. These can be ordered from Mouser Electronics for about $1.85 each in small quantities; reference Mouser part number 25CR060 when ordering. I suggest ordering 10 of them for $15.40 to get the quantity discount; get together with your buddies and do a group order. They also work great on crystal sets projects, so stock up on a few extra. Contact Mouser at 800-346-6873, or by mail at Mouser Electronics, 958 North Main Street, Mansfield, TX 76063. Their sales department E-mail is sales@mouser.com. You can try using vintage 2,000-ohm headsets, but I suspect you may have to supply a matching transformer to achieve the best results.

Adding An Audio Stage

A single-stage transistor amplifier can be easily added once the basic circuit show in **Fig. 3A** is up and running. The transistor shown in the data sheets schematic, our **Fig. 3B**, is a foreign ZTX300 transistor, which according to the NTE replacement guide can be replaced with a NTE 123AP, also available from Mouser Electronics. The NTE 123AP is a silicon small-signal amplifier, so I suspect almost any handy small-signal NPN transistor from your junk box, such as a 2N3904 or 2N3903, would also probably work quite well. Don't be afraid to experiment! You can try varying the resistors values to see

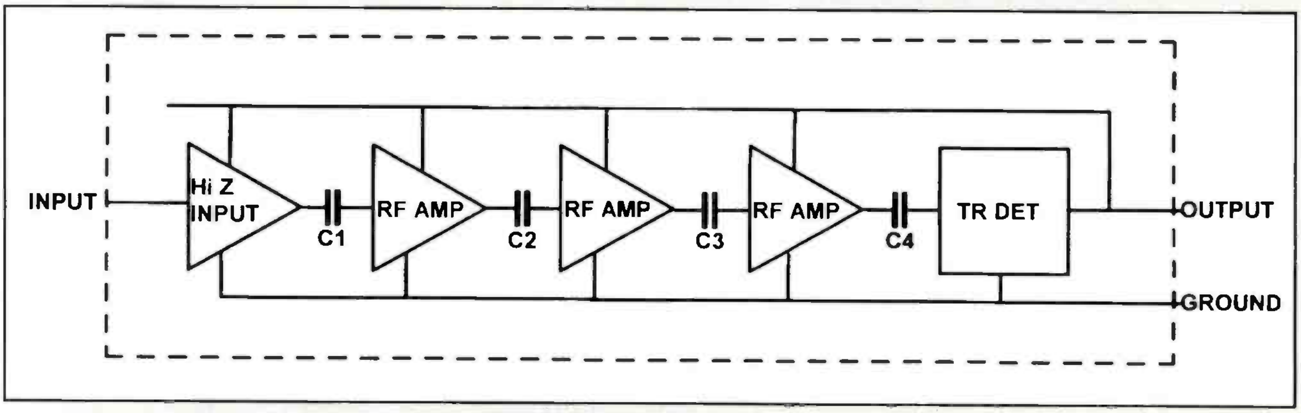

Figure 2. Block diagram for the MK484 and ZN414.

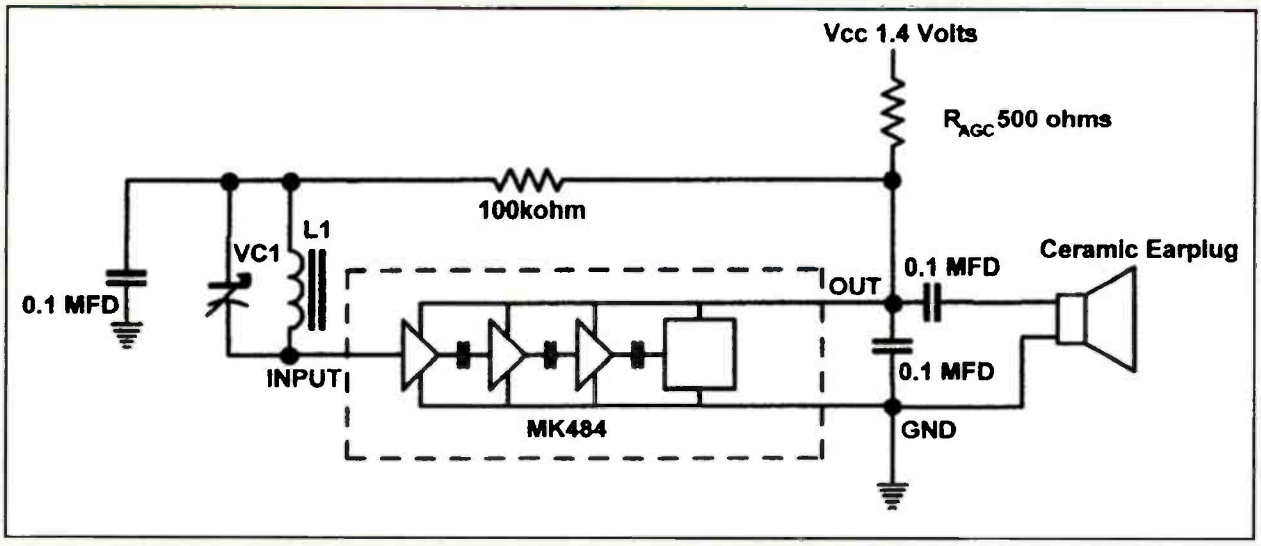
Vcc 1.4 Volts
R_{AGC} 500 ohms
100kohm
L1
VC1
0.1 MFD
OUT
0.1 MFD
Ceramic Earplug
0.1 MFD
INPUT
MK484
GND

Figure 3A. Schematic for a basic TRF receiver using the MK484.

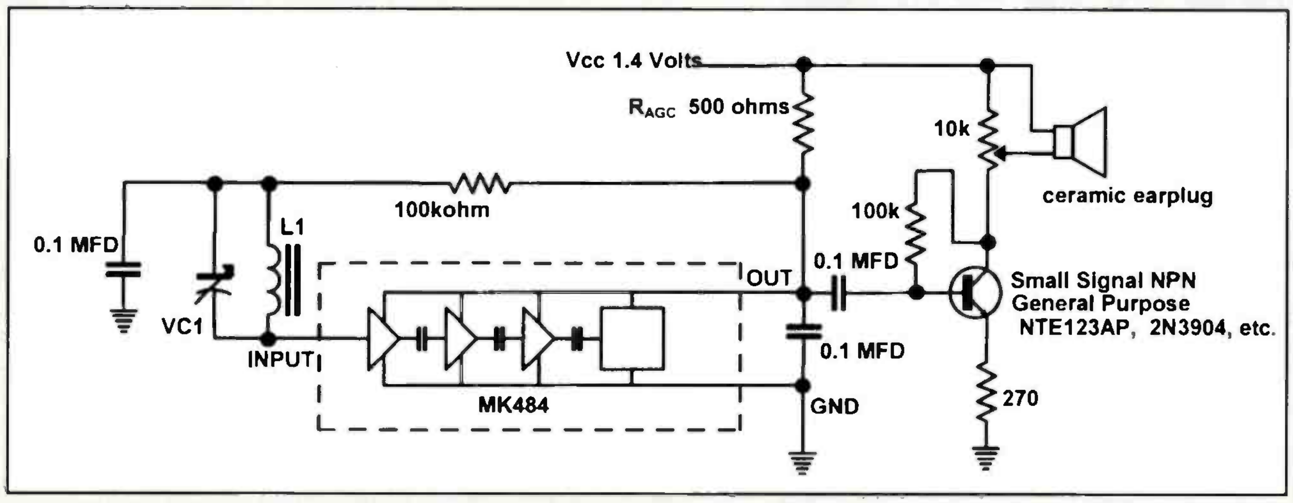
Vcc 1.4 Volts
R_{AGC} 500 ohms
10k
ceramic earplug
100kohm
100k
0.1 MFD
L1
0.1 MFD
OUT
Small Signal NPN
General Purpose
NTE123AP, 2N3904, etc.
VC1
INPUT
0.1 MFD
270
MK484
GND

Figure 3B. Added audio stage using a single NPN transistor.

what improvements can be made in the AGC range, or for other receiver characteristics. Do not exceed the maximum 1.8-volt supply voltage!

The Tuned Circuit

The MK484 input impedance is around 4 megohms. This means the chip won't load down the tuned-input tank circuit, adversely affecting its loaded Q, which is comprised of L1 and VC1. The selectivity is directly proportional to the quality of the components used for the antenna tuning preselector. Covering the broadcast band using a standard value 365-pF variable capacitor (VC1) means you will need an antenna coil (L1) with around 240-uH of inductance.

The components for the tuning system can be salvaged from an old AM transistor or tube-type AM BCB receiver. The transistor set will yield a small loopstick antenna wound on a ferrite rod or bar that is typically tuned with a 140-pF variable, while the early tube AC/DC AM sets usually feature a flat loop style antenna wound on the rear cover that is tuned with an air variable of around 365 pF. One other possible source for tuning components is using parts salvaged from an inexpensive RadioShack *Science Fair* crystal radio kit.

Since the chips work down to 150 kHz, a TRF receiver for covering the foreign mediumwave BC bands is easily made, as is a simple MW beacon receiver, by using a suitably large antenna coil. For MW work you may need to add a 220k resistor across the antenna coil to reduce its Q. Otherwise the selectivity may become sharp enough to adversely reduce the recovered audio bandwidth!

A Hot Crystal Set

The MK484 is a natural for *souping up* a crystal set! Imagine hiding the MK484, its power source, and some of the supporting circuitry in a replica fixed detector cartridge similar to one we showed for our the Mystery Crystal Set project? Now, imagine your friends' faces when the crystal set easily pulls several distant stations loud and clear using only a six or seven foot indoor antenna! Your secret is safe with us, we won't tell!

What about shortwave? With a typical upper frequency limit of 3 MHz the chip should work well on the 160-meter amateur band, which spans from 1.8 to 2.0 MHz. The chip only receives AM signals unless an on-frequency BFO is added, but some amateurs still operate older AM *boatanchor* gear on the 160-meter band for nostalgia or as an adjutant to their hobby of collecting vintage ham gear. There is foreign AM shortwave activity in the 3 to 4 MHz regions as well. Check *Pop'Comm's World Band Tuning Tips* frequency guide in this issue for active stations. A few readers have related having some luck using the ZN414 in the 10 MHz region, so I would be interested in hearing how others fair in pushing the upper frequency limits.

The gain of the device falls off rapidly above the broadcast band, and also the *arithmetic selectivity* offered by a single tuned circuit becomes rather poor in the HF regions, and as a result the radio will tune very broadly.

Antenna Needs

With 70 dB plus gain, the antenna requirements are minimal and are best met using an antenna of several feet or less in length. Use only as little, or no antenna, as needed to hear stations. Too long an antenna will cause numerous problems such as overload, poor AGC, and strong signals bleeding across the set's tuning range. You can bring the lead-in for your longwire antenna near the antenna coil for DXing — no direct connection should be necessary.

MK484 Orders

Here's the deal. The price for two MK484s is $7, postage paid in the U.S. I will include only *one* copy of the data sheets with each order, regardless of the order amount. Three devices is $9 postage paid. Five devices is $15 postage paid, and five is the most I will sell to one buyer at this time. Please, I want everyone to have a shot at these parts. This offer is good until my supply is depleted, although if sufficient interest is shown, I may try and reorder more. Canadian orders are in USD and please add one dollar for additional postage costs to Canada. I am selling a minimum of two in order to make shipping worthwhile, and under the premise that at least one of the ICs will be lost after it is has been experimented on for some time! Postal money orders are the preferred means of payment; checks will require 10 days to clear. Send your orders care of: Wireless Connection IC Offer, Peter Bertini, 20 Patsun Road, Somers, CT 06071-1810.

A Homebrew Ocean Hopper!

Reader Al Cikas KA9GDL wrote us regarding the one-tube All-Bander receiver. Al commented: "Dear Peter, I couldn't believe it when I opened the my January issue and discovered a project which closely resembled one I had just completed. A few years ago I constructed a series of receivers based on the Allied Radio *Ocean Hopper* design, which was marketed from 1958 until 1962. This model features "set and forget" regeneration, the main reason for building this particular set. I developed my receiver

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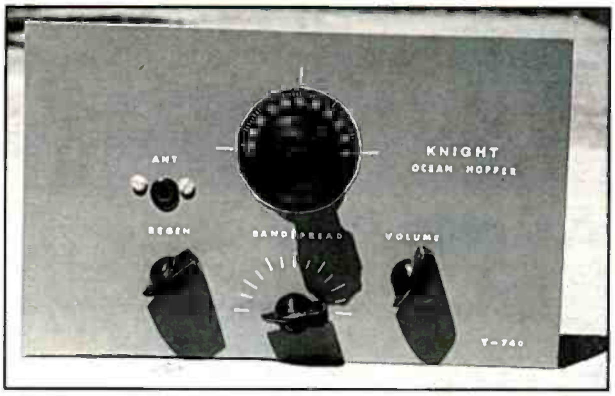

Photo 4. Al's first attempted homebrew version of the Ocean Hopper looks better than the original! It also sports a volume control.

independently of the one featured in the January 2001 issue, yet the resemblance is remarkable!

"I am also enclosing photos of a unit build for a specific purpose: it was made to resemble as closely as possible the Allied Radio C-11, one of the earliest CB units available when the Citizens Band was first established. My goal was to make it resemble the C-11 as cosmetically close as possible. My biggest problem was that I had never seen a C-11, only a few very small ads from old magazines! About a year ago, I finally obtained a real C-11, one of the few left, to compare side-by-side with the project regen receiver. The photos tell the story well. 73, Al Cikas, KA9GDL."

Thanks for the story Al, your sets look fine to us! And, that's it for this edition of the "Wireless Connection." ■

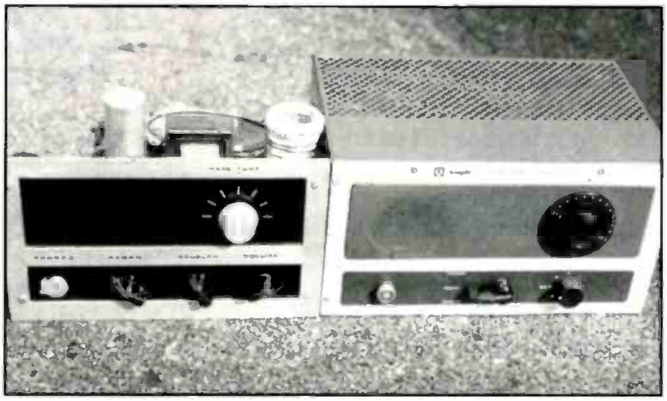

Photo 5. Another of Al's homebrew regen receivers (at left) is modeled to resemble the C-11 Knight CB radio styling (shown at the right).

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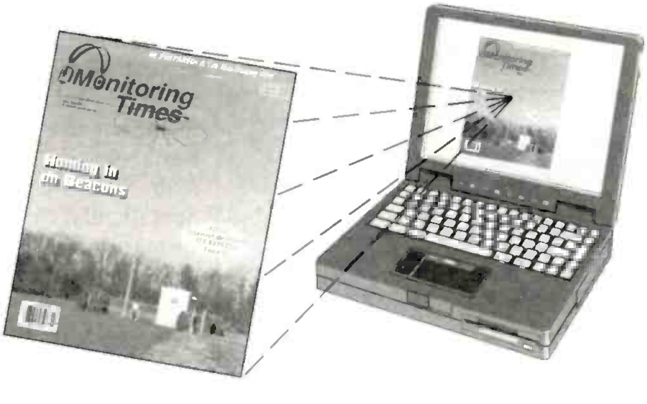

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That's right. The Federal Communications Commission, that's who. Why? Simply because once again they have proved that they are more interested in protecting their precious traditions - and the monopolistic status of the Amateur Radio Service - than protecting us, the public. On July 30, 2001, Kathleen O'Brien Ham, Deputy Chief of the FCC's Wireless Telecommunications Bureau, denied Alan Dixon's request (RM-9807) that the 155.3-mile limit on CB emergency communications be removed.

I know this will be a shock to many long time channel 9 monitors who, like myself, never gave a thought to how far away the people we were assisting were located. Little did we realize that, when our communications exceeded legal limits, we were in violation of the letter and intent of the law. Once engaged in a call (and coming to realize that the person on the other end wasn't local) I never once thought, let alone said, "Oh gee, I am gonna endanger the status of the Amateur Service, so sorry pal, you'll have to crawl to the nearest pay phone and call this one in yourself." Ridiculous!

In the denial, Ham states "The Bureau denied Dixon's Petition for Rule Making, concluding that the request was inconsistent with the purpose of the CB Radio Service and could fundamentally alter the nature of the service. Specifically, the Bureau noted that the Commission's rules prohibit long-distance and international communications in order to ensure that the CB Radio Service is used for the purposes for which it was authorized, i.e., to provide for short-distance personal and business radio communications. The Bureau also concluded that, if granted, the Petition for Rule Making would transform the CB Radio Service from a short-distance voice communications service (where long-distance communications inadvertently can occur) to an examination-free amateur radio-type service, in which long-distance communications would become permissible communications. In this connection, the Bureau determined that such a result would contravene the Commission's express intention not to create a service paralleling the amateur service when it authorized the CB Radio Service. As a result, Dixon's Petition for Rule Making was denied."

OK, I admit that none of the "Over Limit" calls I worked were extreme emergencies, just breakdowns and minor accidents where the local radio monitor and caller couldn't hear each other, but I could hear both of them, and them me. As is my custom for all calls I handle, I simply repeated the callers' information. The monitors in their area, hearing me and recognizing the locations described, would key up, repeat the information to verify it, and make whatever phone calls were necessary. I don know of at least one situation, which you can probably verify in the archives of the REACT International, is of a young man that was stranded in a mountain top cabin. He was out of food and water and in dire need of assistance. The only form of communications he had was a CB radio and the only people who could hear him were more than 155.3 miles away. Thank God, whomever it was that took the call didn't put the status of the Amateur Service or the intentions of the FCC above the well being of this most unfortunate stranger.

This last instance illustrates just how out of touch the Commission really is. Ham continues, " . . . we note that there is nothing in the rules that indicates the Commission intended to permit any communication between CB Radio Service stations over 150 miles apart,

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even though it was aware that long-distance communications could inadvertently occur, or that the Commission intended primary uses of the CB Radio Service to include public safety, emergency, or disaster communications."

Now they tell us after all those years of service by so many operators helping so many people. What were we thinking?

Don't Need CB Anymore?

This decision, and the Commissions reasons for it, not only goes on to say, in so many words, that emergency and assistance communications on CB radio are no longer needed but should probably never have existed. " . . . we do not believe this amendment is necessary. As an initial matter, we note that individuals who find themselves in emergency situations are likely to have stations in other radio services, such as amateur, marine, land mobile stations, or cellular or other wireless telephones, available either to them or to another individual close to the emergency location. Further, we believe that messages from these stations are more likely to result in the individual quickly obtaining the needed emergency services. In this regard, we note that mobile communication capabilities generally, and the wireless telephone services in particular, have become widely available since the CB Radio Service was authorized and these mobile services have become a common method of reporting emergency situations to emergency service providers. We also note that wireless telephones and certain other stations are, or can be, automatically interconnected with the public switched telephone network and, therefore, the public safety response systems, a capability that is not available to CB Radio Service stations. Additionally, we note that Enhanced 911 systems will have the capability to determine the location of a cellular unit transmitting a message, which also is a capability not available to a CB Radio Service station that hears an emergency message. Moreover, we note that there is nothing in the CB Radio Service rules that prevents an individual who receives a message that contains a request for emergency assistance, regardless of how far away the transmitting station is, from using other communications services to inform public safety providers of the need for assistance. Based on the foregoing, we decline to reverse or revise our conclusion that the Petition for Rule Making was inconsistent with the purpose of the CB Radio Service and could fundamentally alter the nature of the service, and we conclude that the Bureau considered the matters raised in the Petition. Accordingly, we deny Dixon's Petition for Reconsideration. Accordingly, IT IS ORDERED that, pursuant to Sections 4(i) and 303(r) of the Communications Act of 1934, as amended, 47 U.S.C. §§ 154(i), 303(r), and Section 1.106 of the Commission's Rules, 47 C.F.R. § 1.106, Alan Dixon's Petition for Reconsideration, filed September 19, 2000, IS DENIED."

Well, Ham is right, at least in some respects. There are many more and reliable ways to communicate today. That's good, especially if you can afford them. Not everyone can. It also must be noted that there are still areas of the country where these services are unavailable or at least unreliable. Yes, the need for emergency and assistance communications on CB has been greatly reduced, but in the real world, the need occasionally still arises. There are still a few of us who monitor channel 9. I don't know how the rest of you will react, but as for me, if I ever hear a call for help from more than 155.3 miles away, I'll answer. If the Commission objects, oh, well.

November and December On-Air Mixers

For those of us who find the act of 'randomly contacting' on the air (which the FCC also says that CBers should not be doing because it endangers the status of the Amateur Service) very exciting and alluring make plans to attend the next, regularly scheduled on-air CB Mixer. They are held, wherever you are, from 9 p.m. until 10 p.m. local time, on the last Saturday of the month. The next two will be on the 24th of November and December 29th. SSB operators work channel 36 LSB. AM operators work channel 23.

Well, that is it for now. Thanks for writing me here at the magazine or via the Internet where my address ed@barnat.com . And as always, if you can (especially November 24th and December 29th) - catch me on the radio!

73 ■

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washington beat

Capitol Hill and FCC actions affecting communications

by Laura Quarantiello <lauraq@cts.com>

FCC Denies Dixon's RM-9807 Petition For Reconsideration

The FCC has denied a Petition for Reconsideration in the case of RM-9807, the Citizen's Band Radio long-distance rule filed by former *Pop'Comm* Washington Beat columnist Alan Dixon. Currently, the Commission's rules prohibit a CB station from "communicating with or attempting to communicate with any CB station more than 250 kilometers (155.3 miles) away, and from communicating with stations in other countries (except General Radio Service stations in Canada)."

In late 1999, Dixon filed a Petition for Rule Making asking for amendment of the CB Radio Service rules to eliminate the prohibitions against long distance communication. The FCC denied the request, saying it was inconsistent with the purpose of the CB service, which is to "provide for short-distance personal and business radio communications." It also stated that granting the request would turn the CB service into "an examination-free amateur radio-type service, in which long-distance communications would become permissible communications." Dixon filed a Petition for Reconsideration, stating that the Commission rules failed to address the special case of emergency communications, and whether there should be a limit on distance of communications where life or safety may be involved. Healso asked for clarification on whether the FCC ever actually intended to place a limit on the distance of communications in emergency situations. The Commission received comments on the petition from R.K. Leef, Harold A. Ort, and Egbert C. Craig, Jr., who all supported the petition. Unfortunately, the FCC denied the reconsideration, basically asserting that there are other means of emergency communications (notably cellular phones) available. Dixon states that this ruling is a moral outrage and it is counter to the Commission's stated objective of deregulation.

FCC Proposed Part 90 Low Power Amendment For 450–470 MHz

The FCC has filed a Notice of Proposed Rulemaking (FCC 01-199) regarding Part 90 low power operations in the 450–470 MHz band. Last year, the Land Mobile Communications Council (LMCC), a non-profit organization representing many users of land mobile radio systems, filed a petition asking the Commission to revise its rules for two-watt operations in this band. Historically the FCC has allowed private land mobile radio users to be licensed for low power operations on 12.5 kHz offset channels within the 450–470 MHz band. These frequencies have seen heavy use, especially for medical telemetry and remote machinery operation. In 1995, the Commission adopted a new band plan, which changed the 12.5-kHz offset channels from low power to high power regularly assignable channels. Understanding there was still a need for low power operations, the FCC allowed frequency coordinators the authority to identify specific 12.5 kHz channels to be reserved for low power use. Current users could increase their power or move to a coordinator-designated low power channel.

Before the 1995 band plan rules took effect, the Commission granted a request to freeze the acceptance of high power applications for the former 12.5 kHz offset channels in order to prevent interference with existing operations. By 1997, the Commission had consolidated the 20 private land mobile services into two pools: Public Safety and Industrial/Business. The frequency coordinators were given until October of 1997 to develop a plan for identifying low power frequencies within the two pools. The LMCC filed their plan, but also included provisions that could not be implemented without changes to the Commission's Rules. In June of 2000, the FCC established the Wireless Medical Telemetry Service (WMTS), allocating spectrum in the 608–614 MHz, 1395–1400 MHz, and 1429–1432 MHz bands for medical telemetry use, hoping that telemetry users would migrate from the 450–470 MHz band, thereby solving the interference problem.

Under the current plan for low power in the 450–470-MHz band, any regularly assignable channel may be designated by the frequency coordinators as a low power channel. Stations are limited to two watts output power and there are 104 12.5 kHz offset channel pairs designated for low power operation nationwide. The LMCC Consensus Plan asks the Commission to "divide the low power Industrial/Business Pool channels into groups with different technical and coordination requirements." It also requests changes to the Part 90 rules to allow certain operations to exceed two watts. For more information, visit the FCC's Home Page at www.fcc.gov.

FCC Website News

Things are looking a little different these days at the FCC website. In July, the Commission launched the first phase of a major site redesign in order to "provide greater uniformity among all the sections and pages on the website and to make it easier for users to obtain FCC information." The work, expected to be completed in September, follows extensive evaluation of the site, which included comments from users and recommendations from usability experts. It's the first major redesign since 1999 and the second since going online in 1996. Take a look for yourself at www.fcc.gov.

Motorola Now Supports MURS

In quite a change from their earlier position, Motorola, Incorporated has said that they now support the MURS personal radio service. The company did say however, in a Supplemental Comment to the FCC, that they favor imposing certain restrictions, such as prohibiting all communications except voice, and requiring non-detachable antennas. They also favor restricting interconnection with the public switched telephone network, as well as prohibiting the use of MURS frequencies as mobile relay stations. Watch for movement on MURS now that this hurdle has been passed. ■

our readers speak out

Each month, we select representative reader letters for our ""Our Readers Speak Out" column. We reserve the right to condense lengthy letters for space reasons and to edit to conform to style. All letters submitted must be signed and show a return mailing address or valid E-mail address. Upon request, we will withhold a sender's name if the letter is used in "Our Readers Speak Out" Address letters to: Harold Ort, N2RLL, SSB-596, Editor, Popular Communications, *25 Newbridge Road, Hicksville, NY 11801-2909, or send E-mail via the Internet to <popularcom@aol.com>.*

Whose Goose Are We Chasing?

Dear Editor:

I live in Jefferson County, just outside Louisville, Kentucky, and there isn't a REACT operator in the area that I know of, so I put together a little emergency radio station consisting of little more than a mobile CB, base scanner, and an antenna. Getting to the point, the first letter I'd like to comment on is from last October's *Pop'Comm* from Clint Bradford in California. Even though I agree that REACT and CB channel 9 aren't as synonymous as they were 20 or 30 years ago, REACT still provides assistance for thousands of people a year on Channel 9 alone, not to mention REACT was practically founded for that purpose. I also agree that there are not as many emergency calls on 9 and other CB channels as there used to be, due to the public using cell phones and FRS radios.

For all REACT teams to use just one mode of communications is foolish, but to stop using CB 9 altogether would also be foolish. CB is not dead, not with millions of truckers with hundreds of thousands of motorists, and certainly not with me.

My other comment is regarding Don Hallenbeck's letter where he talked about a ham operator who told the state police that he had heard another ham that was in distress. After getting the police and three ham operators out on a wild goose chase due to several responses from this supposed distressed ham that were incorrect, and confusing one of the base units that was monitoring, they said the call was a hoax and told all units to go home. I agree with Don that the problem is that anyone can go out and buy a ham radio with no questions asked. You should have to show some proof you have a license, but as Don said, as far as some merchants go, George Washington, Abe Lincoln, and Ben Franklin are the license they need. I guess we'll have to let the FCC handle it. Keep putting out those issues and I'll keep reading them. Over and out . . .

Chris Demarsh

Panasonic Cordless Phones — Again

Dear Editor:

The first generation of the Panasonic 2.4 GHz phones can be monitored by a conventional scanner. The first generation of this so-called Spread Spectrum phone transmitted a much weakened analog signal in the 902–928 MHz range and could be monitored up to 300 feet away. The second and third generation version of the Panasonic 2.4 GHz phones cannot be monitored by a conventional scanner.

By the way, there are other brands of 2.4 GHz cordless phones which are using Spread Spectrum technology in the 902–928-MHz range (for the handset) and 2.4 GHz range for the base unit, but can still be monitored in the 451–464-MHz range (basically 902–928 divided by 2). Doh!

Bob
San Jose, CA

Dan's Listening!

Dear Editor:

I've been a SWL for many years. I use a Sangean ATS-803A shortwave receiver and purchase your magazine every month and learn a tremendous amount of theory from it. Your publication is excellent!

My curiosity is this: My owner's manual mentions 2182 kHz. According to them it's the frequency for International Distress and Emergencies. I've turned it on many times and have never heard a distress call. Is this the only emergency frequency or are there others?

If it is possible, could you please print my letter in a future issue? Maybe other SWLs can direct me to some other frequencies. Thank you for reviewing my letter — your time and concern for your readers is appreciated.

Dan Neprily,
St. Catharines, Ontario

Dear Dan,

The frequency 2182 kHz is the official marine distress frequency on HF and is used quite regularly, but vessels are also using everything from their standard VHF transceiver if within range of a shore station, to cellular and satellite phones. You might also want to check out 5696, 5717, 6694, and 8983 kHz for lots of shortwave activity, all in USB mode. Patience, as they say, is a virtue, so if you park that receiver on a frequency long enough, you'll eventually be rewarded.

UPS Frequencies Anyone?

Dear Editor:

I was hoping to find out if any of your readers in the Chicago area have found the frequencies to United Parcel Services in Hodgkins, Illinois. I know for a fact that they have anywhere from 100 to 300 handie-talkies in the building. Just the other day some fool decided to ship six bags of reefer for a total of 150 pounds through UPS docks. I was in the lunchroom on break when maintenance was discussing the incident. We have stuff like this go through our system every day. The only time we find out is if the bag breaks open and the contents spill out. In this case it spilled all over the belt.

So if any of your readers can find out for me it would be appreciated. Also, does anyone have the frequencies for Cook County Sheriff, on 800 MHz? I can be reached at mamorande@marks-mail.com.

Thank you,
Mark in Illinois

utility radio review

news, information, and events in the utility radio service between 30 khz and 30 mhz

by Joe Cooper <ur-review@provcomm.net>

The "Black Box" Radio — Ten-Tec's RX320, And 240+ Loggings

As we move forward into the first year of the 21st Century, there are a lot of questions being asked about the direction radio communication will take over the next decade. Change will certainly be the order of the day, and it will be almost constant.

We have already seen a great deal of change in utility radio during the past five years, and some of it has been indeed historical. The use of CW in the commercial world has become a rarity, and other digital modes have gone into a decline. Satellite communication has increasingly taken over from HF voice, particularly in the military. The regular use of FAX to transmit pictures to news services has virtually disappeared.

PC RADIO
Model RX-320
USER'S MANUAL

This is what you get when you open the cardboard box that ships your RX320. The only thing not shown is the phono plug you can use to attach an external antenna to the receiver.

No, the sounds of the HF radio spectrum that I remember when I first started listening to shortwave radios way back when have certainly changed in significant ways over the years. Even some of the most famous and enduring inhabitants of the airways, such as the BBC, are now silent in this part of the world.

So is this the beginning of the end of radio monitoring? Should we start taking down our antennas, sell our equipment, and begin collecting stamps instead? Absolutely not!

Frankly, we are moving into an exciting new time in radio monitoring, with some truly historic developments taking place within the field. Indeed if you look at this month's logs you will see for yourself that there are many exciting and interesting things to listen to on the air with standard equipment and modest antenna setups.

Not only are there interesting ute stations on the air, there are also exciting new ways to monitor them. Three things have changed the way in which radio monitoring takes place in the 21st Century, and those are; the personal computer, the networking of computers, including the Internet, and computer-controlled DSP radio receivers.

For the next two issues I am going to be looking at a very exciting combination of radio hardware and software that I believe will be setting the standards for computer-controlled radio, particularly for those who are interested in monitoring ute radio.

Now in saying that I want to make one thing perfectly clear here; this is going to be an independent review and not an infomercial for the products. My goal is to educate you about the details behind this new development and to show you how such a hardware and software combination can help you monitor ute stations.

What I particularly want to do is outline how these products can become even more enhanced by having them connect to either a Local Area Network (LAN) or the Internet. Trust me when I say that I am not going to get bogged down in a lot of technical details that most of you don't need to know. What I am going to do is give you a framework for understanding so that you won't feel left behind when the changes really start to happen in a few years time.

Oh, and don't worry, I still have logs and letters from readers for this month. Do take time to read through the logs, as Craig Rose has managed to capture yet another in-air problem. KPH was also monitored during their annual return to the air. There is also an interesting letter from a retired commercial radio operator who used to make regular contact with KPH when it was in it's hey-day.

So let's get on to it. Time to march boldly into the 21st Century and see what it has in store for us. It promises to be interesting, from what I hear.

The "Black Box" Radio And Its Software

I've talked about the RX320 by Ten-Tec before, since its introduction in this column. It is basically a black metal cube measuring 3" x 6.25" x 6.5" and weighing 2.5 lbs. The most notable feature is a group of plug-in connection points on its back. Other than that there are no control functions on the box other than an on-off switch for power.

The only way that you can control it is through computer software, which is supplied when you purchase the receiver. The software that is supplied sends its control information from the computer to the radio box via a serial cable connection, and also receives important information back from the radio (such as frequency, signal strength, and selectivity status), which is displayed on the computer screen.

The radio's coverage is from 100 kHz to 30 MHz, it receives AM, CW, USB, LSB modes and has 34 IF-DSP bandwidth fil-

Table 1: Ten-Tec's RX320 Specs

MODES: AM, LSB, USB, CW
FREQUENCY RANGE: 100 kHz - 30 MHz
FREQUENCY ACCURACY: +/- 100 Hz at 25 degrees C.
MEMORIES: Limited only by available RAM in PC, virtually any PC will store 1000's of stations.

SENSITIVITY:

MODE	B/W	Sensitivity
AM (80% mod @ 1 kHz)	6 kHz	.64 uV for 12 dB S+N/N
CW/SSB	2.5 kHz	.3 uV for 10 dB S+N/N

SELECTIVITY: 34 IF-DSP bandwidth filters built-in. 300 Hz, 330 Hz, 375-750 Hz in 75 Hz steps, 750-3000 Hz in 150 Hz steps, 3000-6000 Hz in 300 Hz steps, 8 kHz.

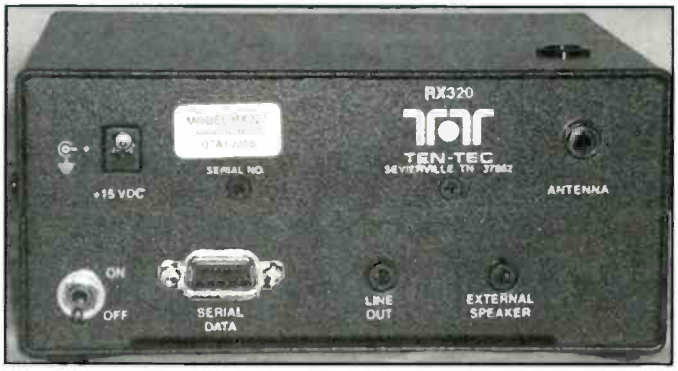
THIRD ORDER INTERCEPT: + 10 dBm
DYNAMIC RANGE: 90 dB @2.4 kHz bandwidth at 50 kHz spacing
IF FREQUENCIES: 1st IF 45 MHz, 2nd IF 455 kHz, 3rd IF 12 kHz
IF REJECTION: > 60 dB
IMAGE REJECTION: > 60 JB
ANTENNA: 50 ohm unbalanced for external antenna. High impedance at telescoping whip connection, automatically switched out of line when external antenna connected.
PC INTERFACE: Industry standard serial interface on DB9 connector
CONNECTIONS: + DC input, DB9 for serial port, external antenna, line output to sound card, external speaker.
POWER REQUIRED: < 500 mA at 13.5 - 15 VDC, wall transformer supplied
AUDIO: 1 watt at 4 ohms. > 1 v p-p output into 600 ohms (typical to drive a sound card).
CONSTRUCTION: Two epoxy glass PC boards, aluminum chassis, steel top and bottom
SIZE: HWD 3 "x 6.25 "x 6.5"
WEIGHT: 2.5 lbs (1.14 kg)
All specifications are typical, degraded performance below 500 kHz

ters available. The actual range of selectivity is from 300 Hz to 8000 Hz , with the latter wide-frequency range allowing for some pretty good sound reproduction of strong AM broadcasters. I have summarized the remaining specifications for the RX320 in **Table 1**.

What makes the RX320 very different from other standard monitoring radios, and even many other computer-controlled radios, is the fact that it has become better even though the original design has not changed since its introduction in 1998. The reason for this has been the development of new innovations in the software being used to control the radio, and the fact that the original design of the RX320 took so many things into consideration that they got it almost perfect.

What has happened as a result of the unique way in which the RX320 was first designed, and then had software applied to it has been a co-evolution in the software design. Today the control software that is available has reached a point where ute monitors should take a serious look at the RX320's features and advantages.

In saying all this I have to point out that there are a surprising number of software control packages out there for the RX320, including the very good one that Ten-Tec ships with the radio. More surprising is the exception number of control software packages that are absolutely free, as well as many inexpensive shareware packages as well.



This is the back of the RX320. The only control is the on/off switch. Everything else is a plug-in.

The reason for this proliferation of control packages has come about due to a unique marketing decision made by management at Ten-Tec: to freely supply all of the necessary information needed to create the control software on their website, and to encourage people to experiment with the product and to find out what it was capable of doing. This has prompted a great many people to try out their programming skills in order to see what they could come up with.

After having mastered the basics of controlling the RX320, one of the first things that the programmers discovered was that you could customize the software to meet a variety of monitoring needs. The first group to benefit from this was shortwave listeners, who were provided with software that could be seamlessly integrated into logging and database functions.

Rather than having to jump from one program to another in order to find a frequency, tune the radio and then log the results, those using this new RX320 software were able to perform each of these tasks from within a single program.

Needless to say, those who used such software soon started using the black box all the time, particularly when they found that the radio's performance was equal to many high-end radios. Many reviews of the product have put it on par with such well-known radios as the Drake R8 or the Japan Radio NRD-525.

What Makes Up The RX320

When you open the small cardboard box that the RX320 is shipped in what you find is literally everything you need to get started (see photo). What you get is:

- The receiver
- Serial cable (two DB-9 connectors), 1.8m (6-foot) long
- Audio patch cable
- Wall-mounted power transformer, 120 Vac to 15 Vdc at 800 ma
- Ten-Tec control Software for the receiver (1 diskette)
- User manual
- Telescoping whip antenna
- Male phono plug (for external antenna connection)

The only thing that I bought separately for the radio was a coax-to-male phono plug converter in order to allow me to use my existing coax cable.

The five plug-in locations and one on/off switch are clearly labeled as to their purpose on the back of the radio. There are really only four things that you need to be concerned about, and that is the power source, antenna, speaker, and serial cable. Even the antenna is somewhat optional as you can use the supplied whip antenna that screws into its own hole, and is provided with a (built-in) broadband RF pre-amp.

If you have a reasonable understanding of how personal computers and radios work, you will have no trouble setting up the RX320. Due to this simplicity I was listening to local radio stations on the broadcast band in under 10 minutes (I timed it) without reading the installation guide, and that time included the installation of the software.

If you are a little less sure of yourself you can turn to the manual for instruction. It is a slim document, but complete and to the point. Each step is laid out in easy to understand terms, and is fully illustrated. The level of writing used is for someone who is new to either computers or radios.

However, if you want to go to the next level of understanding, and really want to know the innards of the RX320 inside out, then go to the Ten-Tec website, which has some excellent detailed information that you can download.

If you are indeed curious about what is "under the hood" and decide to open up the radio, what you will find is two circuit boards. The first is called the RF board and it contains the usual tuning hardware needed to pick signals out of the antenna. There are also a number of integrated circuits used to amplify the signals before they are processed.

Processing takes place in the second circuit board where DSP and control functions chips are found. It is here that the actual interface between the computer and the radio takes place, as well as where the signal you hear is detected and amplified for audio output.

Using The RX320

So what makes the operation of the RX320 so special, and why do people who use it get so excited about it when they do put it to use? The answer very simply lies in two things — its stability in holding onto a signal, and low noise floor. As I have written in previous columns, what you really need in order to be successful in radio monitoring — particularly ute stations — is a low noise receiver and good antenna.

I have been using the RX320 at my own monitoring station for about four months, and I can say that if I leave the RX320 on a single frequency, it will remain there for one week without drifting. I proved this, by leaving the radio on 24 hours a day for seven straight days on WWV at 10 MHz, and was still on frequency at the end of that test.

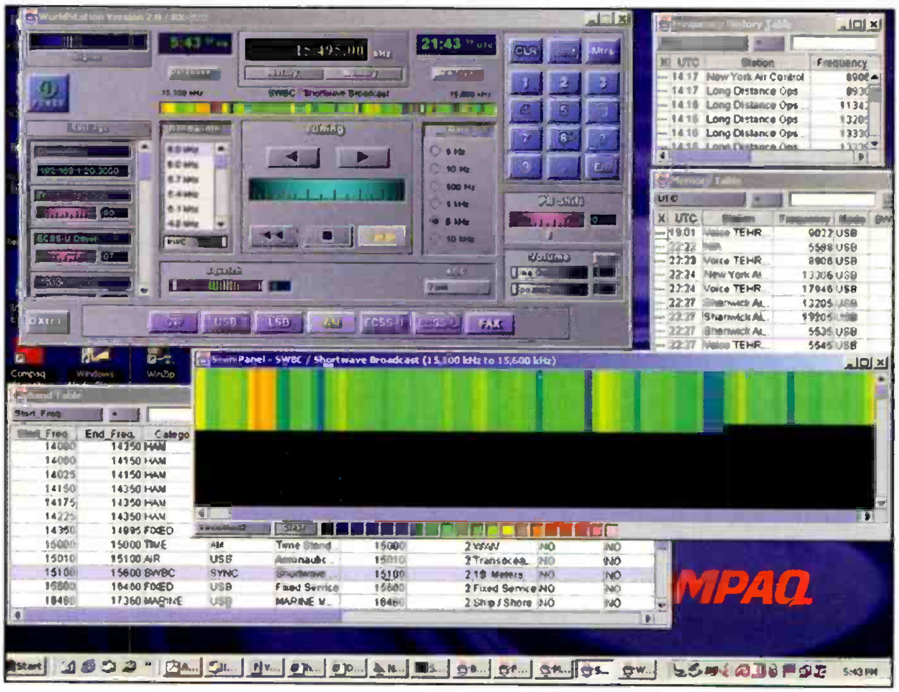
Likewise the noise levels are extremely low, and are particularly noticeable when using a good quiet antenna system. In my own particular case I use the Alpha Delta DXSWL, which is the 60-ft. sloper, and a G5RV. The Alpha Delta works best for me at lower frequencies, particularly the Broadcast and Tropic Bands. I like to do some BCB-DX work and find that the RX320 is excellent at pulling out weak signals among the noise of nighttime skip and flutter. Ute, even distant and weak signals, are very easily detected, and I find I can monitor most using a wider selectivity bandwidth than I do with other receivers under the same conditions. But that is only the starting point for the RX320.

One feature that I particularly find useful is the fact that you have two outputs; line and speaker. I have the box hooked up to an external amplified speaker (which is a bit of overkill as the 1-watt output is enough to drive a good speaker by itself.) I have the line-out hooked up to the soundcard on my computer through a suitable cable.

With that I am able to decode digital signals (CW, RTTY, PACTOR, and others) using the many available software packages. What is important to understand is that I can perform that decoding while operating the RX320, and listening to the signal through my speaker. What's even better is that the line-out and speaker levels are each individually controlled, with the result being that my success at decoding has increased considerably.

The other feature that I find extremely useful is the adjustable tuning rate. You can still tune in multiples such as 100 Hz, 1 kHz, 5 kHz or 10 kHz, to give an example, but on many of the software packages that are available you can adjust that to suit your own tuning needs. In fact you can tune the RX320 in 1 Hz increments with absolute ease. Now combine that with 300 Hz selectivity and you can begin to see just how fine a cut you can make across a signal. Such precision may not *seem* necessary today, but with new digital modes on the horizon it will become necessary.

In addition to all of the above you also have such important features as adjustable squelch, dual (local and UTC) time dis-



X	UTC	Station	Frequency	Mode
	19:01	Voice TEHR	9022	USB
	22:22	[illegible]	5598	USB
	22:23	Voice TEHR	8908	USB
	22:24	New York At..	13306	USB
	22:24	Voice TEHR	17946	USB
	22:27	Shanwick AL..	13205	USB
	22:27	Shanwick AL..	[illegible]	USB
	22:27	Shanwick AL..	5535	USB
	22:27	Voice TEHR..	5545	USB

Start_Freq	End_Freq	Category						
14000	14350	HAM						
14000	14150	HAM						
14025	14150	HAM						
14150	14350	HAM						
14175	14350	HAM						
14225	14350	HAM						
14350	14995	FIXED						
15000	15000	TIME	AM	Time Stand..	15000	2 WWV	NO	NO
15010	15100	AIR	USB	Aeronautic..	15010	2 Transocea..	NO	NO
15100	15600	SWBC	SYNC	Shortwave..	15100	2 19 Meters	NO	NO
15600	16460	FIXED	USB	Fixed Service	15600	2 Fixed Service	NO	NO
16460	17360	MARINE	USB	MARINE V..	16460	2 Ship / Shore	NO	NO

This is a screen shot of DXtra's Worldstation in operation in the Microsoft Windows operating system. Notice the Java run-time environment icons in the tray at the bottom of the screen. Likewise, notice the multiple windows that are part of the program's working environment.

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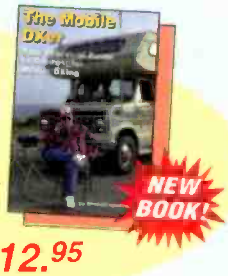

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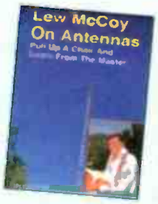

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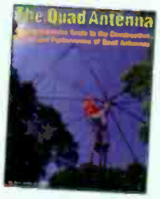

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Software Makes The Difference

Some of you at this point might be saying, "Well, Joe that's all very fine, but my current receiver does all what you are saying, and maybe a bit more, like synchronous AM." That is true if all we are talking about is tuning. Even with many modern monitoring receivers you can control them very well with computers, as I have written about in past columns.

However, what makes the RX320 different is the higher degree of control that can be achieved through a software package due to the simple fact that the RX320 was designed to be totally computer controlled from the very beginning. As a result, a software package can be made to do more than simply select a frequency or function.

While there are several software packages available for the RX320 that simply control frequency and function (including the software that comes with the radio) there are a number that incorporate something different. That is the ability to process information and make the RX320 perform in ways that are more than the sum of its parts.

To properly understand what I mean you must first look at how ute monitoring is performed. It is very different than the ways that people monitor other services, such as shortwave broadcasters or amateur radio.

To generalize about shortwave broadcasting, you have schedules, fixed bands, known frequencies, a broadcaster who is generally pointing their signals in a determined direction, and a steady output to lock on to. There all you need to do is tune into the correct frequency and listen.

With ute monitoring you have many more variables to content with that make capturing a signal more difficult. Stations can be many types of signals, with some of them being mobile. Lower power and shorter bursts of information can also make their capture more difficult. To make matters even more difficult for the ute monitor, the location of a signal in the HF spectrum is not so much defined by bands, but by individual frequencies that can be spread out over the wavelengths.

Now, armed with this picture of what makes ute monitoring different and challenging we can start to appreciate the technical requirements for success in the practice of it. Here is where the marriage of a good computer software program and the RX320 becomes apparent.

What makes the difference in a software package for the RX320 is its ability to process information and make it more useful to the user than it was in its original form. So what does that mean in real terms?

As mentioned before, the real challenge for the utility monitor is to be able to find the on-air activity that they are looking for over a wide range of individual frequencies. What a good software package can do for that person is three things. First it can store a database of frequencies where ute activity takes. Secondly it can use that database to scan frequencies and then record the activity found there. Finally, it can process that information so that the ute monitor can make better sense of it so that a final log of specific activity can take place.

That is all very fine and good to say, but how is it done in the real world? What I am describing here is a process where the software program continuously tunes the RX320 at a rate that is far faster than any human operator could perform, and then "listens" and records what it "hears" on each frequency that it covers. As a result the rate of tuning for each frequency is increased significantly, thereby increasing the chances of encountering some activity by a significant amount.

In saying all that, I have to point out that all the computer software program can "hear" when it does this is a signal, not information. It can record the fact that it found a signal of a certain level at a certain frequency at a certain time, and then count the number of times it did that. What it can then do is present a report of those findings to the software user, who must then make certain decisions about which frequencies they are going to listen to based upon their knowledge of ute monitoring and the information given to them.

We have not by any means reached the point where you can set up a software program, walk away, and come back to a set of logged stations. Rather, what the software does is to increase your chances at successfully monitoring a ute station by organizing the frequencies that you will be monitoring in a systematic way. Then it will perform an analysis of the activity found there through the systematic scanning of the requested frequencies.

The Worldstation 2.0 Software

In the next column I will look at the software side of the RX320 in more detail, particularly looking at how today's software is now capable of controlling the receiver over local area networks (LAN), the Internet, and even wirelessly. However I would like to introduce you to one software package that is very noteworthy and makes the best use of both the computer you have and the features and capability of the RX320 — Dxtra's Worldstation 2.0 software.

Over the past four months I have had a chance to test the RX320 with a number of different software packages, and I was surprised at the impact that each had on the performance of the receiver. That is due to the fact that the receiver actually interacts with the software in significant ways. As a result, both the hardware and the software are actually talking back and forth to each other, and how each responds to the other has a significant impact upon each.

What makes the Worldstation software unique is the fact that it is programmed in Java, rather than conventional programming languages. What this results in is a software product that is more stable, is able to process information faster, and has a responsive look and feel.

In order to appreciate what this means you need to look at the screen shot of the software in action. You will see that because it is working in the Microsoft Windows operating system it is processing multiple sources of information and displaying that in multiple open windows. What you are seeing is multiple databases of frequencies, the control panel for operating the radio, and a scanning panel showing the signal activity on multiple frequencies.

What really impressed me about using this particular software package was its bullet proof operation. Unlike other Microsoft Windows-based programs, Java-based programs are not prone to locking up, crashing, or exhibiting erratic behavior. I was able to leave Worldstation in continuous operation for over a week and it did not crash or lose accuracy. That is a significant accomplishment for any software package.

As I said, in the next column we will look at this and other software packages in more detail.. However, the Worldstation so impressed me that I had to give you a heads up on it now so that you can start doing some of your own research. The best place to start is at Ten-Tec's own website at http://www.ten-tec.com, and then check under amateur products. You will also find a link there for Dxtra as they are an official value added reseller of the RX320 and the Worldstation software. You can also visit Dxtra directly at http://www.dxtra.com/

And if you are interested in listening to an RX320 in operation, go to http://www.ralabs.com/webradio where you will find that Robert Arnold, N2JEU, has set up an interactive site with his receiver. There you can select a frequency then hear what the receiver is picking up if your computer has a sound card installed with speakers attached. It's a fascinating demonstration of what the RX320 is capable of doing when properly programmed.

Reader's Letters

The first letter is an interesting one from a former shipboard radio operator. I'd really like to see more letters like this from people who have been part of the industry, or military. Oh, and the WLO mystery continues to be solved.

Hi Joe,

The August *Pop'Comm* magazine was sent to me by a friend living in Texas. I have read with much interest your section. I used to be a seagoing Radio Officer who worked KPH and WCC on many occasions while on tankers. As you know UK Terrestrial Maritime Radio Services has now closed completely. I was an Operator and later Manager at Humber Radio/GKZ for many years. GKZ served the North Sea from the East Coast at Mablethorpe, Lincolnshire operating on the MF bands, WT, RT and RTTY. I have kept a small archive because I thought it was necessary to preserve something of the past. This is a QSL card that I used to send out, and which I have customized to mark the ending of services. In the letters section is one from Brian Limbach asking for an ID on a signal he heard.

I would think you will have had plenty of replies by now, but just in case you have not, I think that it is the call band tape from WLO Mobile, Alabama Radio. It is their RTTY service (Radio Telex) transmitting F1B emissions. The frequency Brian quotes he was QSX does not match any of those shown in the ITU List of Coast Stations for 1996 (the edition I have), but WLO is Mobile and 'chirping' tones are definitely a coast radio station call band.

Regards,
David Hopcroft

And we also have an "oops" letter as well from one of our regular contributors.

Dear Joe,

Saw my letter to you reprinted in the column July issue. A correction is due. After I sent you my E-mail the raspy dot-dash stations some listeners refer to as "raspers" did, if fact, return to the air. They were either shut down, or inaudible because of the rowdy sunspot conditions. My other questions still stand. Also I have an answer for the letter that appeared above mine from Brian Limbach of Pittsburgh, PA. He undoubtedly picked up a marker for coastal station WLO, located on the Gulf Coast of Alabama. Old time (American) ute listeners are very familiar with it.

73, Rick Barton

Next we have some really good information that helps answer a question that was posed in the August issue.

Hi Joe,

It's been awhile because I've been quite busy with work. I noticed in the August issue you had a question about frequency designators being used by the USCG.

The 23A is a standard marine VHF frequency: 157.125; there are lists of these floating around the Internet and in the back of the RadioShack *Police Call* books. 3A11 is an HF SECURE frequency. A list of these and the frequencies known to correlate to them are on the WUN website in the military lists area of the WUN Newsletter. I'll go ahead and paste them below:

U.S. Coast Guard Secure Net

4448.0	3A4	
5272.0	3E6	
5399.6	3C16	GANTSEC
5422.5	3A3	
6234.5	3E4	
6815.6	3E11	GANTSEC
7421.0	3A9	
7626.0	3E10	
7773.5	3A8	
7845.0	3E12	
7884.0	3E13	
7909.0	3E14	CAMSLANT
10608.1	3E5	Group Miami
10675.0	3E19	
10759.0	3E20	
10788.0	3E21	
11157.5	3E24	
13413.0	3E25	

Other frequencies in this net may be 8091.0, 10993.6, 13809.0, and 13950.0. Reference to a 3A5 designator has been heard on the air recently. For a full listing of USCG aircraft and helicopters, go to URL: http://www.wunclub.com/

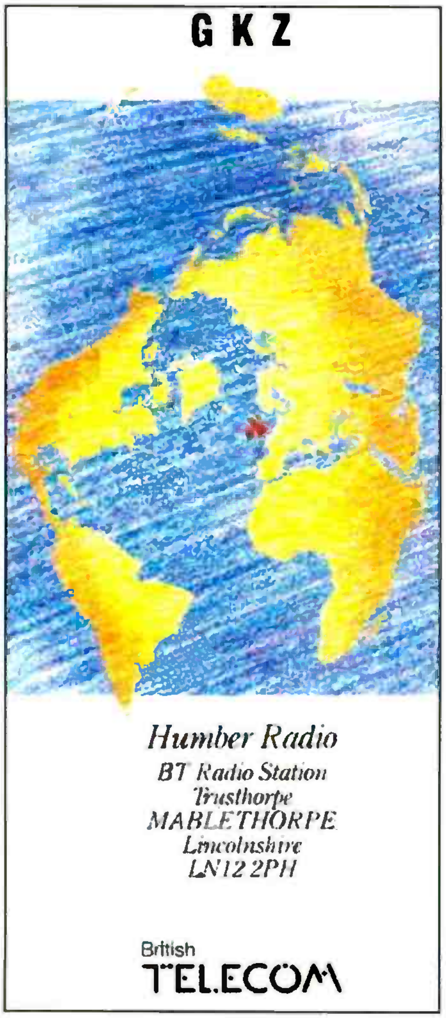
Hope this helps,
Roland R. "Mac" McCormick III

Thanks Roland, that does. So, with all that taken care of, on to the logs.

Reader's Logs

As always the logs are good, and we have the usual good representation of contributors. I just wanted to mention, if you have not seen your log, be patient. I'm backlogged with contributions, particularly written ones. I'm working my way through them in order to ensure everyone is at least answered. Please keep them coming though, as I still need to have them in order to publish or acknowledge them.

00000: STATION, Anytown, USA, summary of traffic heard in MODE at 0000 Z (Z), personal comments here. (JC)
2618.5: GYA, RN NORTHWOOD, FAX//120/576/N/800, 250mb spot wind chart, 1100z SFC anal (0600z) etc thru 1211z. (DW)
3300: UNID, USAF, coded message, USB at 2018Z. (LW)
4015: Marine standing by for a net at 8:45 p.m. local-0028 GMT. (LH)
4030: Marine with radio check 0058 GMT. (LH)
4125: Marine report having three boats ahead 1029 GMT. (LH)
4450: One wanted to know on what day did the other leave the dock



G K Z

Humber Radio

BT Radio Station
Trusthorpe
MABLETHORPE
Lincolnshire
LN12 2PH

British
TELECOM

The commercial station GKZ was the last to use CW in Britain. This is the front of the QSL sent out on it's final day of operation on July 3, 2000.

0027 GMT. (LH)
4724: GHFS. Andrews, with six character EAM broadcast in USB at 1404Z. (CR)
4962: SNN299. MFA WARSAW. CW (F1A-250HZ). Periodic chan free marker "vvv de SNN299 pse ga."(CR)
5154: C. CSIN MOSCOW, CW, Single letter [C] HF beacon.(CR)
5159: 4XZ, IN HAIFA. CW, Nr of msgs in offline encrypt. 1904z revert to marker "vvv de 4XZ ==." (CR)
5224: UNID. ARQ/E/72/I/400 4rc. Alphas. No TFC thru 2039z. (CR)
5224: UNID, French Mil. 18.25 ARQ-E 72/400 Idling with alphas. (PT)
5320: (what sound like) Kennakatido wkg Atlantic City Will survey the damage, see if they can add another pump or two and tow ship to Cape May 0151 GMT. (LH)
5320: Group Atlantic City wkg UNID asking for position 2357 GMT. (LH)
5547: REACH 5087, with radio and SELCAL check (EGBC) via San Francisco Radio in USB at 1203Z. (CR)
5574: Fed Ex 1800, Enroute, cleared by ATC to flight level 370 via San Francisco Radio in USB at 0544Z. (CR)
5574: N130AR, EC-130 National Science Foundation, with pos reprt (30.54N, 121.42W) to San Francisco Radio in USB at 1202Z. (CR)
5696: Coast Guard Rescue 2105 advises CAMSLANT Chesapeake that they are en route Nantucket in USB at 0536Z. (CR)
5696: REACH 456, calling any Coast Guard station with no response in USB at 0553Z. Strong signal from this aircraft but seemed to be ignored by CAMSLANT. (CR)
5696: Coast Guard Rescue 2136, with position report (26.35N, 96.45W), to CAMSLANT Chesapeake in USB at 0556Z. (CR)
5717: Halifax Military wkg Rescue 313 report of a signal on 121.5, location 44 34 north 06404 west. Report of music coming from an island, asked 313 to rtb to Greenwood will send Coast Guard to investigate 0048 GMT. (LH)
5717: Halifax Military wkg Rescue 110. Sick person on board the vessel *Labrador* RCC will contact hospital 2351 GMT. (LH)
6386.5: SO, IZMAIL RADIO?, CW. Weak marker then faster manual TFC list or QSX call? then quiet. (CR)
6477.5: KPH, San Francisco CA., Annual CW Night-of-Nights sign-on 0005, v marker at 0018 special msg at 0038 in memory of silent American CW stations with roll call of stations and 3 minutes of memorial silence. Also on 12808.5 and 17016.5 Col DX.
6501: Camslant wkg Westwood Camslant said Westwood was weak and unreadable 1233 GMT. (LH)
6516: Marine 2 yms in simplex talking abut jobs and birthdays one said he was on the Colorado River 0950 GMT. (LH)
6586: Air France 3671, with position and altitude report to New York Radio, in USB at 0548Z. (CR)
6604: UNID. USA AIR — WEATHER, USB CONTINIOUS. (LW)
6630.5: UNID, British mil 18.30 Piccolo 6. No traffic sent in 72 hours. Off air am 17th. (PT)
6693: SHAKA 12.Enroute, with radio check via MINITURE followed by radio check "in the green" and back to "the red" (clear voice) in USB at 1229Z. (CR)
6739: GHFS. Andrews, with 28-character EAM broadcast in USB at 1418Z. (CR)
6984: SNN299, MFA WARSAW, ARQ/POL//100/E/250 5rc. IRS mode then TFC (poor copy) in Polish. (CR)
7710: VFF, CCG IQUALUIT, FAX//120/576/N/800, Ice analysis chart for Davis Strait. 0557z for Baffin Bay. (CR)
7776: OST33, OOSTENDE RADIO, SITOR/B//100/E/170 TFC list. (CR)
7792: UNID, ARQ/E//72/E/400, 4rc. Alphas. No TFC thru 2230z. (CR)
8007: Zulubas, TURKISH MIL NET MIL.STD 188-144A, ALE on USB. Sounding. (CR)
8007: base0, TURKISH MIL NET MIL.STD 188-144A, ALE on USB. Sounding. (CR)
8007: TURKISH MIL NET, MIL.STD 188-144A, ALE on USB. Sounding. (CR)
8007: base1, TURKISH MIL NET MIL.STD 188-144A. ALE on USB. Sounding. (CR)
8007: base9, TURKISH MIL NET MIL.STD 188-144A, ALE on USB. Sounding. (CR)
8007: base4, TURKISH MIL NET MIL.STD 188-144A, ALE on USB. Sounding. (CR)
8007: base8, TURKISH MIL NET MIL.STD 188-144A, ALE on USB. Sounding. (CR)
8007: base5, TURKISH MIL NET MIL.STD 188-144A, ALE on USB. Sounding. (CR)
8040: GYA, RN NORTHWOOD, FAX//120/576/N/800, Gale wng summary, textual. No g/wngs in force. (CR)
8040: GYA, RN NORTHWOOD, FAX//120/576/N/800, 250mb spot wind chart. (CR)
8094: FDC, FAF METZ, CW, Marker "vvv de FDC ar." (CR)
8143: Marine ym/yl in chit chat is 0001 GMT. (LH)
8143: Marine yms in chit chat one said they have a leaking water heater, and they can now receive WX fax 0018 GMT. (LH)
8148: SNN299, MFA WARSAW CW (F1A-250HZ) Periodic chan free marker "vvv de SNN299 pse ga." (CR)
8401: UNID, SHIP UNID, SITOR/A//100/E/170 End of TFC in FF "~urcare de la ~zqi la+~6. modul c l. finalizat ~uclucrari in tablou electric ta~ainc. Basaram C~istian" then off air. (CR)
8427.5: UFZ, Vladivostok rdo 1100 ARQ msg to unkwn ship, UFZ log off. (ML)
8503: NMG, USCG NEW ORLEANS FAX//120/576/N/800 Tropical SFC analysis. 0630z schedule (fuzzy). (CR)
8694: XSZ, Dalian rdo CHN 1050 CW WX EE, 1130 WX in Chinese. (ML)
8814: UNID, OM discussing market conditions for fish catch with YL in USB at 0338Z. He also mentioned that he was runnning low on groceries and would need to return to port soon. (CR)
8825: New York Radio clears Air France 3551 to descend to 320 per ATC clearance in USB at 0155Z. (CR)
8843: Aloha 478, Enroute, with position, altitude report and SELCAL check is advised to contact Oakland Center on 134.150 at 127 West in USB at 0227Z. (CR)
8951: REACH 8053, Enroute, with position and altitude report to Tokyo Radio in USB at 1157Z. (CR)
8951: Air Canada 898 Enroute, with position report to Tokyo Radio in USB at 1216Z. Tokyo advises flight to contact San Francisco at next reporting point on 6.655.0. (CR)
8964: UNID, OM on unknown fishing vessel discussing poor fishing conditions with YL in USB at 0330Z. (CR)
8983: UNID wkg CG 1603 landing at UNID hospital in one hr, have video, spoke to Giant's killer on way out 0043 GMT. (LH)
8989: Trenton Military wkg Rescue 78. Phone

patch, injured but stable will take patient to Chicoutimi Hospital and refuel at Begaville 2322 GMT. (LH)

8992: OVERSLEEP with HF comms test in USB at 0005Z. (CR)

9076: UNID. FF PARIS ARQ/E3//192/E/400 8rc. Betas. No app TFC thru 1818z. (CR)

9259: UNID. FF UNID ARQ/E//184.6/1/400 8rc. Betas. No app TFC thru 1530. (CR)

9304.5: FDY, FAF ORLEANS CW Marker "vvv de FDY ar." (CR)

10150: S00. MFA STOCKHOLM MIL.STD 188-141A ALE on USB. Clng s78/Tunis followed by Mil.Std 188-141A bursts. (CR)

10341: HEC, GW NODE BERN CW Chan free marker (Globe) "HEC" and wkng ship in Globedata. (CR)

10360: SAB, GW NODE GOETEBORG CW Chan free marker (Globe) "SAB" and wkng ship in Globedata. (CR)

10361.5: SAB, GW NODE GOETEBORG CW Chan free marker (Globe) "SAB." (CR)

10470.5: FDC, FAF METZ CW Marker "vvv de FDC ar." (CR) 10536: CFH, CF HALIFAX FAX//120/576/N/800 Sfc analysis, eastern N Atlantic. (CR)

10610.9: UNID. MOSCOW MET FAX//120/576/N/800 Synoptic chart, blurred stn rpts. (CR)

10626: RFFXL. FF NAQOURA (?) ARQ/E//184.5/1/400 8rc. Weak, little sync. Betas. (CR)

10865: 140. CHINESE DIPLO MIL.STD 188-141A ALE on USB. Clng 162. (CR)

10865: 162. CHINESE DIPLO MIL.STD 188-141A ALE on USB. Responding to 140. 1323z clng 176. Brief burst of psk modem, and of voice. (CR)

10871.9: S. CISN ARKHANGELSK CW Single letter [S] HF beacon. (CR)

10872: C. CISN MOSCOW CW Single letter [C] HF beacon. (CR)

10900.5: GYU. Gibraltar 14.30 Piccolo 6 Test transmission with RY's, foxes and count. (PT)

10991.7: RFFYAY. FF SARAJEVO (?) ARQ/342//200/E/400 8rc. 2chandm. Chan A:B: betas. Weak sync. (CR)

11033.7: UNID. UNID, RTTY//50/N/300 TFC in E European language. Starts "Informacija o tretmanu vojske i odbrane u javnim glasilima utorak, 10. jul 2001. godine javnost u srj " S/off with qrx(?) for 1730? (CR)

11033.7: ICCH. UNID BELGRADE (?) RTTY//50/N/300 Serb (?) stns passing press bulletins? ICCH to HPCD. (CR)

11034.7: UNID. EGYPTIAN DIPLO SITOR/A//100/E/170 Op chart in AA (ATU80) and s/off. (CR)

11039: DDH9, HAMBURG MET RTTY//50/N/440 Nav wngs in German and EE. 0959z marker "cq de DDH47 DDH9 DDH8 frequencies 147.3 kHz 11039 kHz 14467.3 kHz ry's." (CR)

11086.5: GYA. RN NORTHWOOD FAX//120/576/N800 e of c, m/path smearing. 1012z 24hr spot wind prog for 500mB. (CR)

11125: HZN. JEDDAH MET RTTY//100/R/800 120hz high. Metc TFC, poor copy. (CR)

11156: FCD, UK DIPLO/MIL NET MIL.STD 188-141A ALE on . Sounding. 0847 clng BVA. (CR)

11156: BVA, UK DIPLO/MIL NET MIL.STD 188-141A ALE on USB. Clng FCD. (CR)

11156: BVM, UK DIPLO/MOL NET MIL.STD 188-141A ALE on USB. Sounding. 0849z clng BVM. (CR)

11175: TIGER 25 (B-1B, Ellsworth), Enroute, with p/p via GHFS Elmendorf to Ellsworth Metro for arrival WX at Ellsworth at 11:00 PM local in USB at 0427Z. TIGER 25 was especially concerned about t-storm activity in the area. (CR)

11175: REACH 4066 (C-17A, tail #940066), with p/p via GHFS Anderson to Elmendorf AMCC (DENALI) to provide arrival message including blocks at 1600Z. 0 pax, alpha-1, request Customs followed by p/p to Elmendorf Metro in USB at 1330Z. (CR)

11175: REACH 6006 (C-17A, tail #960006), requests p/p via GHFS Anderson and is asked to standby for high priority traffic AMCC then asked REACH flight if they were flare equipped and asked REACH to call on 349.400 when 30 minutes out. (CR)

11175: JAMBO 23 (B-52), Enroute, calling JAMBO 22 with no response in USB at 0132Z. (CR)

11175: AHAB 03, with p/p via GHFS Andrews to MUDBUG (?) to provide arrival time in USB at 0302Z. (CR)

11175: REACH 6183 (C-141, tail #60183), with p/p via GHFS Salinas (Puerto Rico) to HILDA WEST req relay of arrival information to Dyess CP in USB at 0243Z. HILDA WEST complies and requests REACH flight to expedite to Dyess as base closes at 0700Z. (CR)

11175: RANGER 72, C-12 VIP flight, with p/p via GHFS Andrews to RANGER BASE OPS at DSN 739-xxxx advising of arrival time in USB at 0321Z. (CR)

11175: SPAR 66, Enroute, with request for frequency assignment via GHFS Andrews in USB at 0351Z. Andrews assigns 311 (11.220.0) primary and 146 (9.027.0)secondary. (CR)

11175: REACH F7YB, Enroute, with p/p via GHFS Hickam to HILDA METRO for 1330Z arrival WX at FJDG (Diego Garcia) in USB at 1201Z. (CR)

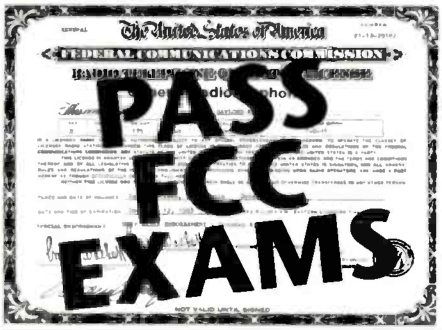
11175: TURBO 65, KC-135, with p/p via GHFS Anderson to unknown location advising of 2030Z arrival in USB at 2015Z. (CR)

11175: SAME 40 with p/p attempt via GHFS Andrews to commercial number 903-457-xxxx in USB at 2043Z. Patch failed and SAME 40 lost contact with Andrews. (CR)

11175: REACH 4J7, Enroute, with p/p via GHFS Puerto Rico to Charleston CP ETA 0130Z with 40 pax in USB at 2358Z. (CR)

11175: NAVY, WV 910, with p/p via GHFS Puerto Rico to Pt. Mugu Base Ops advising 1.5 hours out and to alert VR-55. Duty Office of arrival time in USB at 0136Z. (CR)

11175: TROUT 99, Enroute, with p/p via GHFS Andrews to Peterson AFB Ops adv of 0345Z arr and req 10 foot airstairs, negative fuel for quickturn TROUT 99 also mentions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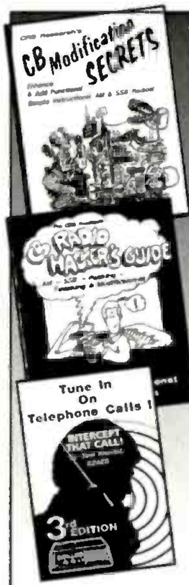

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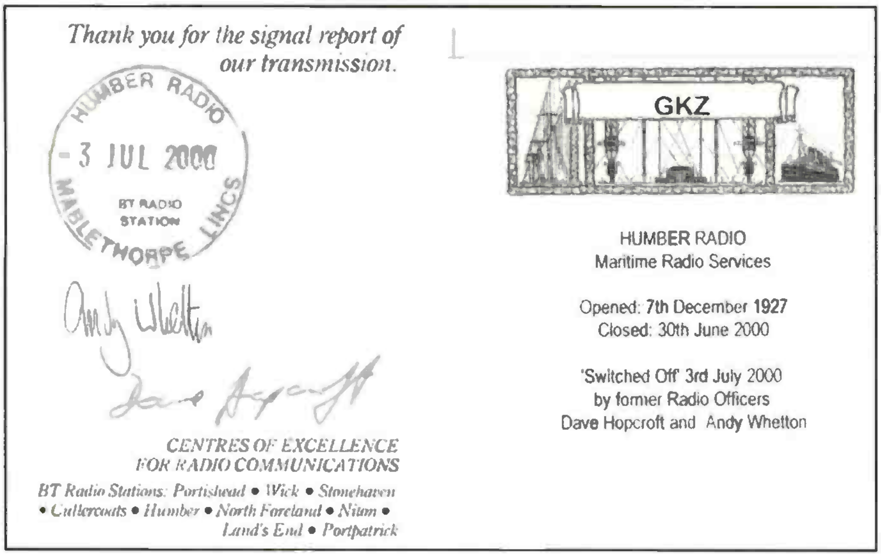

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The back of the QSL card sent on the last day of operation of GKZ. You can see the signatures of the final operators of the station. Courtesy David Hopcroft.

a pos divert to Pueblo due sev WX in area. (CR)

11175: TURBO 12, KC-135, with p/p attempt via GHFS Andrews to Luke CP with no answer in USB at 0212Z. TURBO 12 advises Andrews he will contact Luke on UHF. (CR)

11175: TUFF 47, Enroute, advising GHFS Andrews "ops normal, negative relay" in USB at 0215Z. (CR)

11175: AEGIS 85, Enroute, with p/p via GHFS Hickam to 317-626-xxxx for arrival coordination at 0510Z in USB at 0238Z. (CR)

11175: REACH 050 with HF radio check via GHFS Hickam in USB at 0021Z. (CR)

11220: GHFS Andrews with HF radio check via SPAR 66 in USB at 0356Z. (CR)

11232: KING 35 (HC-130), with p/p via Trenton Military to Nellis Metro for arrival WX in USB at 0233Z. (CR)

11232: CANFORCE 2764 with p/p via Trenton Military to Trenton Wing Ops advising of RTB time from current location near Edmonton in USB at0128Z. (CR)

11232: IL 585 passing 10 groups of three characters to Trenton Military in USB at 2123Z. (CR)

11232: CANFORCE 1733 with p/p via Trenton Military to Wing Ops at Comox advising 0130Z departure Acapulco with 0230Z ETA to Comox with request to update customs and maintenance of new arrival time in USB at 0035Z. (CR)

11244: GHFS, Offutt with 20-character EAM broadcast for (sounds like) DISNEY in USB at 1414Z. (CR)

11244: GHFS Andrews with 48-character EAM transmission in USB at 2100Z. (CR)

11282: OCEAN 54 (C-130E, 115AS, CA ANG Channel Islands) with position and altitude report is advised by San Francisco Radio that 13.288.0 will be secondary in USB at 1651Z. (CR)

11282: SAM 92, with position and altitude report to San Francisco Radio in USB at 2115Z. (CR)

11282: Canadian GW139, with position, altitude report and request to climb to 260 via San Francisco Radio in USB at 2152Z. (CR)

11282: TEAM 76 (KC-10, McGuire), with pos (35.24N, 129.59W) alt (310) report to San Francisco Radio in USB at 1952Z. (CR)

11282: NAVY 50511.VP-3A, CINC Naval Forces Europe, requests direct Kanoehe (MCAS) via San Fran due to shut down of no. 2 eng and adv declared IFE closer to PHNG in USB at 0027Z. Requests to descend to 220 from 240 because unable to maintain altitude. (CR)

11282: ORCA 14, KC-10, McGuire, requests radio check and primary/secondary freqs. for AR operations on 5 low (track off Cal. coast)in USB at 0029Z. (CR)

11282: REACH 8220, Enroute, with position and altitude report to San Francisco Radio in USB at 1954Z. (CR)

11282: NAVY PF605, Enroute, with position and altitude report to San Francisco Radio in USB at 2354Z. (CR)

11282: WOODEN 41, KC-135, with position report to San Francisco Radio in USB at 1932Z. San Francisco had called 41 several times until they replied and explained they were in the middle of AR during compulsory reporting point. (CR)

11282: UPSET 33, KC-135, with position and altitude report to San Francisco Radio in USB at 1934Z. (CR)

11282: NAVY, RX 790, (C-9, VR-57, NASNI) with position and altitude report to San Francisco Radio in USB at 1956Z. (CR)

11282: NAVY, JD 29, with position and altitude report to San Francisco Radio in USB at 2116Z. (CR)

11282: NAVY, JD 29, relay of NAVY WV 910 advising San Francisco Radio they are level at 200 in USB at 2121Z. (CR)

11282: RAIDER 49, Enroute, reporting position (30N, 130W) and flight level (220) to San Francisco Radio in USB at 2118Z. (CR)

11384: Northwest 74, with position and altitude report to San Francisco Radio and is advised to call Guam Center on 118.700 at 250 miles out in USB at 1355Z. (CR)

11384: UNID, AIRCRAFT FLIGHT KH8382 HFDL//on USB. Air ID 084 with shannon. Posn 57.45N 12.12E. (CR)

11384: UNID, AIRCRAFT ICAO 17070147 HFDL//on USB. Log on request. (CR)

11384: 007, ARINC SHANNON HFDL//on USB. SPDUs (CR)

11387: VOLMET (VJN 385), Sydney, with aeronautical WX observations in USB at 1401Z. (CR)

11396: Qantas 16, attempting position report to Brisbane Radio and is asked to switch to 6.556.0 due severe fading in USB at 1358Z. (CR)

11396: Qantas 20, with position, altitude report and SELCAL check (DSAR) via Manila Radio in USB at 1411Z. (CR)

11396: AMERICAN AIRLINER 9022, Enroute, ASKING FOR FLIGHT CHANGES TO 40 MILES WEST OF COURSE, USB AT 2107Z Note: VERY ACTIVE FREQUENCE NEW YORK AIR TRAFFIC CONTROLLERS. (LW)

11430: HMF55, KCNA PYONGYANG RTTY//50/N/250 Press(?) in EE until 1130z when terminates with "QRX SK" twice. (CR)

11453: IMB3, ROME MET RTTY//50/R/850 Met TFC, SYNOPs (CR)

11518.2: UNID, FF PARIS (?) ARQ/342//200/E/400 8rc. 2chan tdm. Weak sync. Chans A: B: betas. (CR)

12489: UFXP, M/V Tchajma 1024 ARQ msg to Vladivostok. (ML)

12505: UFUF, *RTMS Kurily* 1016 ARQ w/56015 UFOF log on and crew msg to Vladivostok. (ML)

12510: UHGO, NIS Amata 0925 ARQ TFC to Nakhodka. (ML)

12562.5: UIMQ, SHIP ARMENAK BABAEW 3SC//50/R/170 KLD/WRF. TFC in 3sc. (CR)

12562.5: UHEM, SHIP SVERDLOWSK 3SC//50/N/170 Clng UIW/Kaliningrad. 3sc. No apparent response. (CR)

12564.5: UHEM, SHIP SVERDLOWSK 3SC//50/N/170 BMRT. TFC in 3sc. (CR)

12568: UBQB, SHIP GENERAL RADZIEVSKIY 3SC//50/R/170 MA0063 MRM199. TFC in 3sec. (CR)

12568: UCTK, SHIP ORDYNSKYI 3SC//50/R/170 Call to UDK2. GMI-0705 MRM/199. TFC in 3sc. (CR)

12568: UAYQ, SHIP SERGUEI MAKAREVITCH 3SC//50/R/170 MR0017 MRM199. TFC in 3sc calls to UDK2/Murmansk. (CR)

12568: UIAI, SHIP WASILIJ ZAJCEW 3SC//50/R/170 MI-0712. OBS, TFC in 3sc. (CR)

12570: UIHU, RKMRT Bukhoro 1021 ARQ msg to Nakhodka. (ML)

12590: JNA, Japanese Maritime Safety Agency (JMSA) 0914 ARQ QSL to JVFF *M/V Atagosan Maru* for JASREP msg. (ML)

12603: UFH, Petropavlosk-Kamchatskiy rdo 0715 FEC TFC to various ships. UFH s/off. (ML)

12622.5: XSQ, Guangzhou rdo 0720 FEC TFC list and NAV wng in EE. (ML)

12637.5: XSG, Shanghai rdo 0650 FEC TFC list and NAVS in Chinese. (ML)

12676.5: A4M, MUSCAT RADIO C W Marker "de A4M." Just audible. Listed various as 12675.5. (CR)

13200: AIRCRAFT 0011, calling MAINSAIL for HF radio check with no response in USB at 1405Z. Finally answered by unknown aircraft and completed radio check. (CR)

13257: RESCUE 457, Enroute, attempting contact with Trenton Military and is asked to switch to 15.031.0 due to weak and barely readable signal in USB at 2325Z. (CR)

13261: Qantas 8, enroute, with position, altitude report and SELCAL check (LQBJ) via San Francisco Radio in USB at 0137Z. (CR)

13282: Honolulu VOLMET (KVM 70) with aeronautical WX obs and SIGMETS for western Pacific region in USB at 0105Z. (CR)

13288: Dynasty 004 advised to switch to 10.057.0 as new primary for next report to San Francisco Radio in USB at 2252Z. (CR)

13288: China Eastern 584 SELCALed by San Francisco Radio with request for current flight level per ATC in USB at 2253Z. (CR)

13288: SKIER 86 is advised to contact Honolulu Center on 127.600 by San Francisco Radio in USB at 2254Z. (CR)

13288: REACH 9166, Enroute, with pos/alt report and SELCAL check (CQDG)to San Francisco Radio in USB at 2351Z. (CR)

13354: Hawaiian 6, with position, altitude report and SELCAL check (DL-JM) via San Francisco Radio in USB at 0030Z. (CR)

13467: SNN299, MFA WARSAW CW (F1A-250HZ) Periodic chan free marker "vvv de SNN299 pse ga." (CR)

13570: HLL, SEOUL MET FAX// 120/576/N/800 Weak. Dead zone, otherwise only vague outline. (CR)

13956.5: UNID, TUNISIAN DIPLO NET SITOR/B//100/E/170 "qrk 5555 qruy bc" "ry's de 453 svp qsy pr cgimerci j attends merci" and offair. (CR)

14396: SHARES exercise with check-ins from KGD-34, DLA-303, NNN0TOV and WPEH-728 portable in USB at 1657Z. (CR)

14404: S91, SWEDISH EMB LIMA MIL.STD 188-141A ALE on USB. Sounding. (CR)

14467.3: DDH8, HAMBURG MET RTTY// 50/N/440 Met TFC in GG. Poor copy. (CR)

14626.7: RFLI, FF FT DE FRANCE ARQ/E3//192/E/400 8rc. Betas. 1901z cct [LIJ] Controle de V svc RFTJ de RFTJ, then C de V svc RFLI de RFLI (CR)

14639: UNID, POLISH EMBASSY BAGHDAD ARQ/POL// 100/E/170 5rc. in irs mode until 1429z when qsl'd TFC fm Warsaw on 15682z and s/off. (CR)

14697: UNID, BEIJING MET (?) RTTY//50/-/- Met TFC, corrupt but hdr regularly ..CI BABJ. Tx problem? Two F1bs on same assgnmnt Strong +/-850Hz and weak +/-70Hz. (CR)

14975: P6Z, Paris, France 14.15 FEC-A 192/400 TFC to D2Z, Budapest emb. (PT)

15016: NAVY EJ 07 with p/p via GHFS Hickam to unknown Duty Office at DSN 457-xxxx and advising on-deck time of 0530Z and fuel requirements in USB at 0303Z. (CR)

15016: GHFS Andrews with 28 character EAM broadcast in USB at 2022Z. (CR)

15016: NAVY PF 605 with p/p via GHFS Andrews to Whidbey Base Ops adv arrival at 1855 loc and req for nine foot air stairs, lav service and neg fuel in USB at 0051Z. Base Ops requests 605 to contact them on UHF 350.000 30 minutes out. (CR)

15031: RESCUE 457, Enroute, requests Trenton Military advise RCC Victoria that they will be on-scene 0020Z and asks for any traffic pending from RCC in USB at 2326Z. RESCUE 457 reported location over Southern B.C.). (CR)

15636: UNID, UNID MIL.STD 188-144A ALE on USB. Calls to BR3. (CR)

15682: SNN299.MFA WARSAW ARQ/POL//100/E/250 5rc. TFC in Polish to Baghdad. (CR)

15682: SNN299.MFA WARSAW ARQ/POL//100/E/170 5rc. Msgs/press bulletins in EE and PP. QRM. (CR)

16017.7: UNID, EGYPTIAN DIPLO NET SITOR/A//100/E/170 Op chat in AA (ATU80) and s/off. (CR)

16105: S00, MFA STOCKHOLM MIL.STD 188-141A ALE on USB. Responds to s78/Tunis. 1350 sounding. (CR)

16105: S94, SWEDISH EMB GUATEMALA CITY MIL.STD 188-141A ALE on USB. Sounding. (CR)

16105: S78, SWEDISH EMB TUNIS MIL.STD 188-141A ALE on USB. (CR)

16111: HBD20, MFA BERN (?) SITOR/A//100/E/170 TFC in offline encrypt. Fading out by 0914z. (CR)

16143.7: RFFI, FF FT DE FRANCE ARQ/E3//192/E/400 8rc. Betas. 0936z cct [BFL] C de v svc RFLI de RFLI. (CR)

16213.7: UNID, MFA Cairo (FRM KHAYGIA CAIRO) 0550 ARQ 5LG msg to Libreville. (ML)

16231.7: UNID, EGYPTIAN DIPLO NET SITOR/A//100/E/170 in irs mode then s/off in AA(ATU80) (CR)

16245: VTN25, Indian Nvy Cochin 0600 RTTY 50/850 clg Mumbai w/VTH39 DE VTN25 TEST...... foxes 1-0 RYs COM CEN-4 COCHIN tape. (ML)

16318.7: UNID, EGYPTIAN DIPLO NET SITOR/A//100/E/170 in irs mode then s/off in AA(ATU80). (CR)

16324.7: RFTJD, FF LIBREVILLE ARQ/E//192/E/400 8rc. Betas. No TFC thru 1905z. (CR)

16801.5: J8B2054, BATM King Dory 0829 RTTY 50/170 crew msgs to unkwn. (ML)

16801.5: UBPO: *M/V Verasper* 0820 ARQ ship msgs for *Petropavlosk-Kamchatskiy*, UBPO log off. (ML)

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16801.5: UCYC, SRTS Segozero 0815 ARQ w/VVOCZ SELCAL string and 56409 UCYC log on/off, no TFC). (ML)

16802: UBXS, RTMKS Aleksandr Kosarev 0935 RTTY 50/170 TFC to Murmansk. (ML)

16804.5: UNID, GMDSS ALERT CHANNEL DSC//100/E/170 104 cpackets thru 3.5 hrs. 69 Safety, rest illegal. Cst Stns logged — Perth, Lyngby. (CR)

16812: JNA, Japanese Maritime Safety Agency (JMSA) Tokyo (?) 0520 ARQ QSL to unnamed ship for JASREP msg. (ML)

16813: UAT, MOSCOW RADIO SITOR/B//100/E/170 "QSX 8431.5/8391.5 12599.5/12497 16813/16689.5. (CR)

16830.5: SVU6, OLYMPIA RADIO SITOR/B//100/E/170 Greek ship press. (CR)

16841: UFZ, Vladivostok rdo 0030 FEC ships' TFC (ML) 18186.7: —: Egyptian Emb Harare (JG RFKFS) ZWE 0820 FEC clg Cairo w/MF string and 50281 (for QRX of 18206.7, nil heard that freq) then off-air. (ML)

16891.5: XSG, SHANGHAI RADIO SITOR/A//100/E/170 Responds to ship with "shairadio$" answer back. Weak, appears to give periodic qsl's for TFC. (CR)

16904.9: FUV, FN DJIBOUTI RTTY//75/N/850 Marker "FAAO de FUV znr uuuu zui testing ry's sg's nnnn." (CR)

16951.5: 6WW, FN DAKAR RTTY//75/N/850 Marker "FAAA de rftje znr uuuu zui testing ry's sg's. (CR)

16961.5: FUF, FN FT DE FRANCE RTTY//75/R/850 Marker "de FUF testing RYs SGs testing." (CR)

16971: JJC, KYODO TOKYO FAX//60/576/N/800 Newsprint in Japanese characters. (CR)

16976: PWZ33, BN RIO DE JANEIRO RTTY//75/N/200 Nav wng bdcst in EE then in Portuguese. 1604z "cq de PWZ33" followed by gale wngs inEE and PP. 1614z "cq de PWZ33 qru////zkm" rptd. Offair 1615z. (CR)

17045.6: 9MG, GW NODE PENANG CW Chan free marker (Globe) "9MG" or TFC in Globedata. (CR)

17066.5: A9M, GW NODE BAHRAIN CW Chan free marker (Globe) "A9M" of TFC in Globedata. (CR)

17147: URL, SEVASTOPOL RADIO CW Marker "cq de URL ans 16669.5 1919z wkng ship — vri fast cw. 1929z. Revert to marker "cq de URL ans 16669.5/22353/12458 pse qso k." (CR)

17430: 9VG209, KYODO SINGAPORE FAX//60/576/N/800 Japanese newsprint (Kyodo News). (CR)

18064: SNN299, MFA WARSAW CW (F1A-250HZ) Periodic chan free marker "vvv de SNN299 pse ga." Very weak. (CR)

18064: SNN299, MFA WARSAW CW (F1A-250HZ) Periodic channel free marker "vvv de SNN299 pse ga." Very weak. (CR)

18220: JMH, TOKYO MET FAX//120/576/N/800 3 day trop cyclone fcst. Fair copy. Cyclone "Kong-Key"(?) approaching Japan, S Coasts. (CR)

18320: BRA, MFA BRATISLAVA (?) MIL.STD 188-141A ALE on USB. Sounding. (CR)

18320: BRA, MFA BRATISLAVA (?) MIL.STD 188-141A ALE on USB. Sounding. Also at 1008z. (CR)

18320: STAT23, TUNISIAN MOI/MIL NET (?) MIL.STD 188-141A ALE on USB. Clng STAT152. Response. Exchanges in cw, FF "voir" "rien" and QSM. Also burst of Pactor-II(?) offset +1700Hz. (CR)

18320: STA, TUNISIAN MOI/MIL NET (?) MIL.STD 188-141A ALE on USB. Clng STAT152. (CR)

18320: STAT22, TUNISIAN MOI/MIL NET (?) MIL.STD 188-141AALE on USB. Clng STAT152. STAT152 res 1012z. (CR)

18503.7: UNID, FF PARIS (?) ARQ/E3//192/E/400 8rc. Betas. Nil app TFC thru 0930z. (CR)

19013.5: OST63, OOSTENDE RADIO SITOR/B//100/E/170 TFC list. (CR)

19101.7: RFLI, FF FORT DE FRANCE ARQ/E3//192/E/400 8rc. Betas. 1506z cct [BFL] C de V svc RFLI de RFLI. (CR)

19116.7: UNID, MFA Cairo 0845 ARQ IRS mode for 5LG msg from Islamabad on 18316.7. (ML)

19131: ATLAS, Enroute, calling FLINT 823 with request for point of departure in USB at 2035Z. (CR)

19216.7: RFLI, FF FORT DE FRANCE ARQ/E3//96/E/400 8rc. betas. (CR)

19336.7: UNID, MFA Cairo 0520 ARQ clg Islamabad w/SELCAL OOVP to ATU-80 msg. (ML)

19655: HEC, GW NODE BERN GLOBEDATA Wkng ship. Reverts to chan free marker (GLOBE) "HEC." (CR)

19945: BKO, ALGERIAN EMB BAMAKO MIL.STD 188-141A ALE on USB. Responding to mae/Algiers. (CR)

19945: MAE, MFA ALGIERS MIL.STD 188-141A ALE on USB, Clng bko/Bamako. (CR)

19981.7: UNID, Egyptian Emb Kuala Lumpur (JG WLKDKDJYLF) 0830 ARQ 5LG msg for Cairo. (ML)

20010: S78, SWEDISH EMB TUNIS MIL.STD 188-141A ALE on USB. Clng s00/Stockholm followed by psk MIL.STD 188-110OA (serial tone) modem. (CR)

20025.5: UNID, UNID PICC//20025.510. On standby thru 1601z. (CR)

20031.7: UNID, MFA ISLAMABAD SITOR/A//100/E/170 TFC in offline encrypt. (CR)

20031.7: UNID, PAKISTANI EMB ?LOC SITOR/A//100/E/170 SELCALs KMEU (Islamabad). Op chat in EE re bad parts (CR)

20179.7: RFFBBGB, Paris, France 14.05 ARQ-E3 100/400 GENDARMERIE PARIS with TFC in FF to RFVIT/DIRMIXTRAVO ST DENIS REUNION and RFVITW/GROUPGEN ST DENIS REUNION on IRE cct. (PT)

20633.7: RFVI, FF LE PORT ARQ/E3//100/E/400 8rc. Betas. Cct [REI] to Paris. TFC in FF. 1705z C de v svc Paris de Paris. (CR)

20633.7: RFVINVS, FS Nivose 15.30 ARQ-E3 100/400 Svc msg in FF to RFFLCVQ/SAO TOULON on REI, Reunion — Paris. (PT)

20942: S97, SWEDISH EMB ABIDJAN MIL.STD 188-141A ALE on USB. Clng s00/stockholm followed by MIL.STD 188-110 serial tone psk modem. (CR)

21961.7: UNID, Egyptian Emb Kuala Lumpur (JG WLKDKDJYLF) 0820 ARQ 5LG msg to Cairo. (ML)

23101.7: UNID, Egyptian Emb Beijing 0650 ARQ SELCAL SSTU & msg in ATU-80 to Cairo. (ML)

23511.7: UNID, MFA Cairo 0910 ARQ clg New Delhi w/SELCAL OOVC to ATU-80 TFC. (ML)

This month's contributor's were:

Col DX — R.C. Watts
CR — Craig Rose
DW — Day Watson
LH — Lenroy Hogan
LW — Larry Wheeler
ML – Murray Lehman
PT — Peter Thompson

Again, thank you all very much. Your contributions are, as always, very welcome and appreciated!

Final Words

This month's column has started us on an interesting journey that I hope you are enjoying. Beyond what I have been saying about a specific hardware and software product, I hope that my description of what they are and how they work have given you an insight into the new technologies that we are going to be working with from now on.

There will be some disappointments, as well as major breakthroughs, as this technology gets put into place. What is really exciting about it is how accessible it really is once you learn how it works. I still enjoy using my old receivers, which I have representatives from each of the decades of the 20th Century. Still, I am finding that the new computer-based radios are enjoyable — even fun — to work with. Let's see where this particular journey takes us as it can only teach us more about this fascinating medium of communication called radio.

So until the next time, may all of your monitoring sessions be productive, enjoyable and most importantly, fun! ■

iWAVES

By Eric Force <eric@dobe.com>

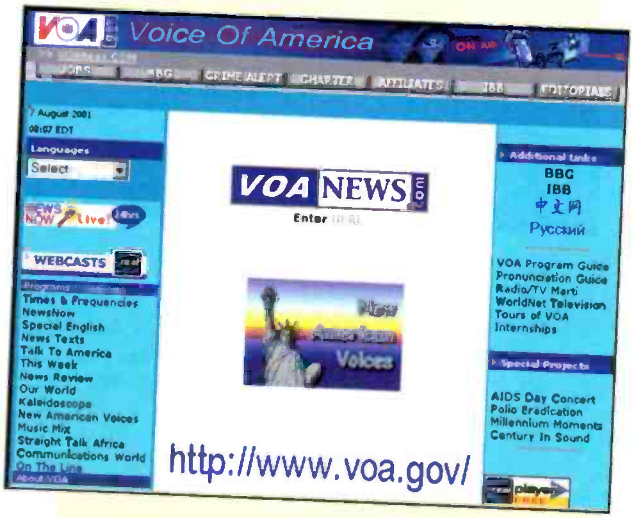
your guide to global internet media

Special Edition: Focus On International Radio

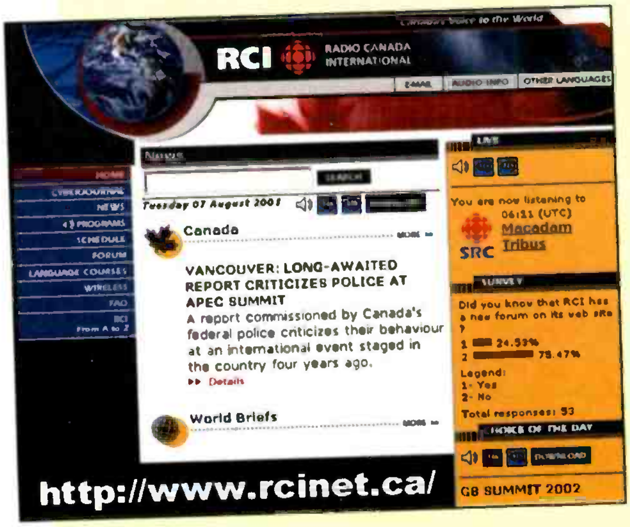
This month we'll focus on International — Shortwave — Radio Broadcasters that maintain a web presence with streaming media content. The "theme" came about as I tried to explain to my grandchildren that the "news" they see and hear on TV may not be totally accurate — at least in terms of how the reporting may or may not favor a particular political agenda. That exercise was futile since they're not quite old enough to understand the concept, but I did find myself "researching" the subject by listening to the subtle (and sometimes not so subtle) differences between countries in reporting the same news. But, more important to me and the reason for making it an "iWaves" theme was, as I began to explore the "culture" sections of these sites, I found a striking similarity of issues and concerns that transcend political ideologies and geographical boundaries — issues and concerns that we, as humans and inhabitants of the earth, share collectively. Maybe that's why some politicians fear the Internet? Oops, I'm drifting off on a tangent — sorry 'bout that. Anyway, the global broadcasters below are some I think you'll enjoy visiting and exploring. Russia and the BBC aren't included since they appeared in previous "iWaves" columns. Column space limits the number of resources we can show here, but I've set-up a special page at my "Quick Links" site where you will find links to these resources plus MANY more. If you'd like to "visit the world" from the comfort of your home, simply point your web browser to http://www.dobe.com/ql/ibc/.

The Voice Of America

What better place to start than our own "backyard." The "Voice of America" (VOA) is a multimedia international broadcasting service supported by the United States Government and headquartered in Washington, D.C. With correspondents and news bureaus throughout the world the VOA produces and broadcasts over 900 hours of U.S., world, and regional news and information programs every week to a worldwide audience of 91 million in English and 52 other languages through radio, satellite television, the Internet and 1,200 affiliate stations around the globe. On the logistics side, the VOA headquarters houses more than 40 radio studios and three television studios, a digital stereo master control with 432 incoming circuits and 360 outgoing circuits, and two centers to record reports from VOA correspondents around the world. They may have cutback somewhat on shortwave broadcasts and staffing but their website and available resources are indeed impressive. For those who may be having trouble with the English language, a "Special English" section is available where English is spoken from a 1,500 word vocabulary at a much slower than normal rate. While receiving normal VOA broadcasts should be easy for most SWL listeners, you'll find a wealth of "on demand" material at their website in a multitude of languages. Definitely a must visit site. Be sure to visit http://www.voa.gov/.


Voice Of America
ON AIR
BBG
CRIME ALERT
CHARTER
AFFILIATES
IBB
EDITORIALS
August 2001
08:07 EDT
Languages
Select
NEWS NOW Live!
WEBCASTS
Times & Frequencies
NewsNow
Special English
News Texts
Talk To America
This Week
News Review
Our World
Kaleidoscope
New American Voices
Music Mix
Straight Talk Africa
Communications World
On The Line
About VOA
VOA NEWS .com
Enter HERE
New American Voices
http://www.voa.gov/
Additional Links
BBC
IBB
中文网
Русский
VOA Program Guide
Pronunciation Guide
Radio/TV Marti
WorldNet Television
Tours of VOA
Internships
Special Projects
AIDS Day Concert
Polio Eradication
Millennium Moments
Century In Sound

Some shortwave services and staff may have been cut, but VOA's Web presence is impressive!


Canada's Voice to the World
RCI
RADIO CANADA INTERNATIONAL
E-MAIL
AUDIO INFO
OTHER LANGUAGES
HOME
CYBERJOURNAL
NEWS
PROGRAMS
SCHEDULE
FORUM
LANGUAGE COURSES
WIRELESS
FAQ
RCI From A to Z
News
SEARCH
Tuesday 07 August 2001
Canada
MORE
World Briefs
MORE
LIVE
SRC
SURVEY
CHOICE OF THE DAY
DOWNLOAD
G8 SUMMIT 2002
http://www.rcinet.ca/

VANCOUVER: LONG-AWAITED REPORT CRITICIZES POLICE AT APEC SUMMIT

A report commissioned by Canada's federal police criticizes their behaviour at an international event staged in the country four years ago.

▸▸ Details

You are now listening to 06:11 (UTC) Macadam Tribus

Did you know that RCI has a new forum on its web site ?

1 24.53%

2 75.47%

Legend:
1- Yes
2- No

Total responses: 53

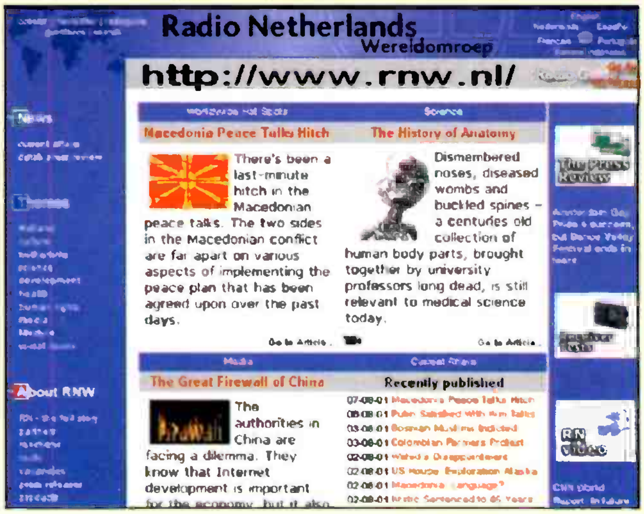
Broadcasting to the world since 1945 via shortwave, Radio Canada International now makes its programming available on the 'net.

Radio Canada International

Our neighbor to the North, Canada, is home to Radio Canada International (RCI), and probably best known by most *Pop'Comm* readers, who frequent the Shortwave bands, as "Canada's Voice to the World." Since 1945, RCI has been involved with global broadcasting focused at developing an awareness of Canada and its people. Whether in Canada or abroad, one can tune in to Radio Canada International through

swissinfo
ENGLISH
DEUTSCH
FRANÇAIS
ITALIANO
ESPAÑOL
PORTUGUÊS
日本語
عربي
FREEMAIL
Go!
NEWS
http://www.swissinfo.org/

Swiss Info/Radio International — shortwave broadcasting may be down, but SRI's Internet broadcasting is going gangbusters.



Macedonia Peace Talks Hitch

There's been a last-minute hitch in the Macedonian peace talks. The two sides in the Macedonian conflict are far apart on various aspects of implementing the peace plan that has been agreed upon over the past days.

The History of Anatomy

Dismembered noses, diseased wombs and buckled spines – a centuries old collection of human body parts, brought together by university professors long dead, is still relevant to medical science today.

The Great Firewall of China

The authorities in China are facing a dilemma. They know that Internet development is important

Recently published

As the new millennium unfolds, Radio Netherlands focuses on providing relevant programming to worldwide listeners.

Shortwave, Internet, and satellite and on public, private, community and University stations in many countries. RCI broadcasts a full range of daily and weekly programs in eight languages: English, French, Spanish, Russian, Ukrainian, Chinese, Cantonese, and Arabic. Programming includes national and international news, regional events from across Canada, in-depth reports and interviews on political, economic, social, scientific, and cultural issues. RCI also produces weekly and monthly programs that are sent to numerous partner stations around the world. Most, if not all, are available in RealAudio streaming format at their website.

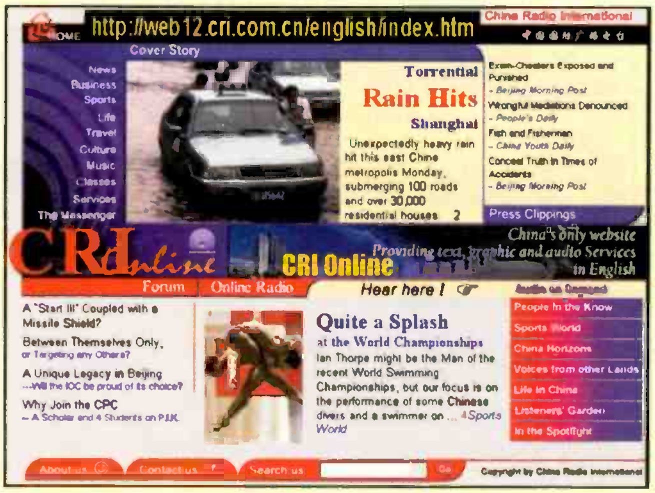
On the educational front, RCI also produces a superb collection of French language lessons. For me, quite useful since my new son-in-law is a multi-lingual Canadian — lookout Marc, you won't snow me much longer by speaking French. RCI's International language series offers 40 15-minute audio programs that I'm finding both educational and entertaining. Each lesson looks at an aspect of Canadian life, helps the listener learn common keywords and presents Canadians speaking as they do normally at home and at work. Each of the 40 lessons is structured to be a stand-alone learning experience. That is, the lessons do not depend on other lessons for comprehension — nice touch! Each lesson is constructed to be useful to the beginner who needs the basics (like me) and for those who are more advanced, and want to perfect pronunciation and pacing. (I'll be a while getting to that point) During my last visit, there were two basic courses available: Everyday French and Business French — both containing 40 lessons. All in all, Radio Canada International's web presence is a comprehensive, well designed and content rich site I'll return to often. I think you will too! Don't miss it! Visit http://www.rcinet.ca/.

Swiss Radio International

SwissInfo/Swiss Radio International (SRI) is the multimedia news and information platform of swissinfo/Swiss Radio International (SRI). Their aim (according to SRI) is "to inform Swiss expatriates as well as an international audience about the latest news stories in Switzerland and abroad." In addition to its Shortwave and satellite radio programs and TV products, Swissinfo/SRI has developed its own multimedia news and information platform in eight languages for their online presence. But, as its name indicates, SRI is also a radio station that broadcasts programs on Shortwave and satellite each day in five languages (German, French, Italian, English, and Arabic). Frequencies and timetables are available at the SRI site. SRI's editorial content is supplied in the form of texts and graphics, as well as audio and video recordings across the globe, 24 hours a day. To that extent, and since early 1999, Swissinfo/Swiss Radio International has focused mainly on its Web presence and Internet based multimedia operations. About 20 years ago, I spent a night (layover waiting for a plane) in Zurich. I wished then that I could have spent more time experiencing their wonderful hospitality and learning about their country and culture. Now I can — and so can you — from the comfort of your home via the Internet. Just point your web browser to http://www.swissinfo.org/.

Radio Netherlands

Over the past couple of years, I've touched on a few of the "print" resources available at Radio Netherlands in my "Radio and The Internet" columns. Now that we have a forum (iWaves) for Internet multimedia, I'm pleased to be able to highlight the main function of this extraordinary organization — International Broadcasting. Radio Netherlands shares issues being discussed in Holland with the rest of the world, in Dutch and several foreign languages while covering regional developments in areas of the world without free media. For some people, instant live pictures from events on the other side of the globe have blurred political boundaries. But the issues being discussed are stronger than ever.



http://web12.cri.com.cn/english/index.htm

China Radio International

Cover Story

News
Business
Sports
Life
Travel
Culture
Music
Classes
Services
The Messenger

Torrential Rain Hits Shanghai

Unexpectedly heavy rain hit this east China metropolis Monday, submerging 100 roads and over 30,000 residential houses 2

Exam-Cheaters Exposed and Punished
- Beijing Morning Post

Wrongful Mediations Denounced
- People's Daily

Fish and Fishermen
- China Youth Daily

Conceal Truth in Times of Accidents
- Beijing Morning Post

Press Clippings

CRI Online

China's only website Providing text, graphic and audio Services in English

Forum | Online Radio | Hear here !

Audio on Demand

A "Start III" Coupled with a Missile Shield?

Between Themselves Only, or Targeting any Others?

A Unique Legacy in Beijing
---Will the IOC be proud of its choice?

Why Join the CPC
– A Scholar and 4 Students on P.I.K.

Quite a Splash at the World Championships

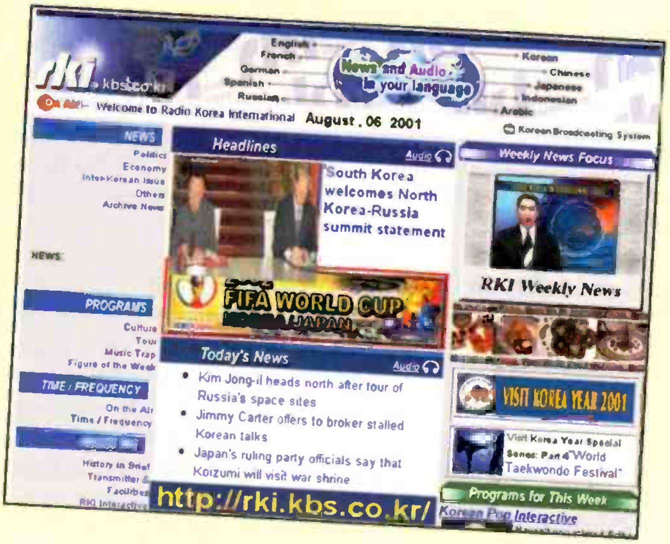
Ian Thorpe might be the Man of the recent World Swimming Championships, but our focus is on the performance of some Chinese divers and a swimmer on ... 4Sports World

People in the Know
Sports World
China Horizons
Voices from other Lands
Life in China
Listeners' Garden
In the Spotlight

About us | Contact us | Search us | Go

Copyright by China Radio International

Read and hear China's perspective on global affairs at CRI.



rki kbs.co.kr

English
French
German
Spanish
Russian

News and Audio in your language

Korean
Chinese
Japanese
Indonesian
Arabic

On Air – Welcome to Radio Korea International August . 06 2001

Korean Broadcasting System

NEWS
Politics
Economy
Inter-Korean Issue
Others
Archive News

PROGRAMS
Culture
Tour
Music Trap
Figure of the Week

TIME / FREQUENCY
On the Air
Time / Frequency

History in Brief
Transmitter & Facilities
RKI Interactive

Headlines Audio

South Korea welcomes North Korea-Russia summit statement

FIFA WORLD CUP KOREA JAPAN

Today's News Audio

- Kim Jong-il heads north after tour of Russia's space sites
- Jimmy Carter offers to broker stalled Korean talks
- Japan's ruling party officials say that Koizumi will visit war shrine

Weekly News Focus

RKI Weekly News

VISIT KOREA YEAR 2001

Visit Korea Year Special Series: Part 4 "World Taekwondo Festival"

Programs for This Week

Korean Pop Interactive

http://rki.kbs.co.kr/

Explore current events, culture, music and more at Radio Korea International (RKI), The Voice of Korea.

Radio Netherlands appears to me to be doing things the right way — focusing on providing effective and relevant programming by trying to achieve the best balance of radio, television, and Internet programming. I've been a long-time (Internet) Radio Netherlands "fan" and continually enjoy what appears to be one of the most unbiased and down-to-earth broadcasters out there — not to mention the tons of other extraordinary resources and information they provide.

"Radio Netherlands currently broadcasts radio programs and publishes Internet pages in six languages over its own facilities: Dutch, English, Spanish, Portuguese, Indonesian, and Papiamento. The station has always tried to be different from the other 120 or so international broadcasters on the radio [and Internet] dial." Once you've visited, I'm sure you'll agree. A superb resource, don't miss it at http://www.rnw.nl/.

China Radio International

China Radio International (CRI) serves the entire globe with over 200 hours of broadcasts each day in 43 foreign languages and Chinese dialects. Of those, CRI states that its English Service is one of its most important divisions. CRI's English Service was founded in 1947 and now offers over 60 broadcast hours per day, with overseas listeners in Asia, Africa, Oceania, and North and South America, and domestic listeners in some 20 cities. In recent years, in addition to its shortwave broadcasts, the English Service has added AM and FM broadcasts in foreign countries by means of rented transmitters and relayed programs. Listener demand led to the conversion of the Beijing channel, 91.5 FM, into an all-English frequency in 1999. CRI is now employing the Internet to further its reach and complement its traditional broadcasting model.

I found CRI to be an interesting resource offering a variety of text and audio formats covering news, current events, culture, and music. The hottest news of the day, in these parts (early August), is the spread of the "Red Code" and "Red Code II" computer viruses alleged to have originated at a China university. Interestingly, I could find nothing at the CRI site to indicate that these viruses even exist. Not surprising — I doubt that "we" would admit to it either if the situation were reversed. Regardless, I think you'll find the site worth your time to explore China's perspective on things. I'd suggest that you use Internet

If you enjoy Amateur Radio, you'll enjoy CQ.

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Explorer to visit since the site is designed to be viewed with that browser. On my first visit, I used Netscape v4.7 which promptly "crashed" requiring a reboot of my PC. I then tried Internet Explorer v5.0 and didn't have any problems. You'll also probably get a message indicating the need to download "Chinese (simplified) Text Display Support." I just cancelled the message and all seemed to work fine on my PC. Also, with respect to the streaming audio files, they apparently haven't yet mastered how to implement actual streaming media since the RealPlayer audio files had to first be downloaded to my PC before they could be played. Maybe by the time you read this they will have fixed that "glitch." Visit CRI at http://web12.cri.com.cn/english/index.htm.

Radio Korea International

Radio Korea International (RKI), the voice of Korea, is the nation's sole shortwave radio network (which now includes Internet broadcasting) with an estimated worldwide audience of over 40 million listeners. Their first signal was transmitted on August 15th, 1953 under the station name "The Voice of Free Korea." Over the years, new language services have been continually added, bringing the total number of broadcasts to ten. Using 24 different frequencies — 23 Shortwave and one mediumwave, today, RKI transmits language programs for a total of 110 hours per day including rebroadcasts. Up-to-date programs and news on Korea's politics, society, culture, traditions, and economy, as well as a variety of other information and entertainment are available 24 hours per day — check the website for specific times of English and other language broadcasting. Having never visited Korea in person, I found this culturally rich site to be an enjoyable experience. I think you will too. Visit http://rki.kbs.co.kr/.

Well, that's it for this month. If you have a favorite streaming media resource, or if you're possibly looking for one, be sure to let me know about it. Chances are that other *Pop'Comm* readers will be interested too. Until we meet again, happy listening and viewing. ■

NEED MEDIA PLAYERS?

REALPLAYER 8 BASIC
http://www.real.com

WINDOWS MEDIA PLAYER
http://www.microsoft.com/downloads/

APPLE'S QUICK TIME PLAYER
http://www.apple.com/quicktime/download/

WINAMP
http://www.winamp.com/

Get your player(s) or upgrades/updates at these URL's.

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loose connection *radio communications humor*

by Bill Price, N3AVY

Archeologists Discover New Dinosaur Species in Downtown Los Angeles

It was a dark and stormy night. I've always wanted to open with that line. If it really were a dark and stormy night, I'd be using my old manual typewriter, which is much less sensitive to sudden increases in voltage.

I've got some real dilemmas in my life, not the least of which is radio vs. Internet. I know that loyalty to the free use of the airwaves, to the great hobby of ham radio and all the friends it's brought me ought to have me out there pounding the brass and modulating the amplitude, and honestly, I am at least a little ashamed of myself for not doing more with (and for) the hobby of kings and plain-folks alike.

The Internet is very different from ham radio in that:

- my computer doesn't need an antenna.
- I can use any band I want (with the possible exception of www.wickedwandatheSSShe-wolf.com
- it doesn't require a "sked"

But it is very similar to ham radio in that it:

- requires that I constantly upgrade
- offers unlimited opportunities to buy gadgets and accessories
- provides the same incentive for sleep-deprivation, beard-growth, and bad nutritional habits

So I've tried to do some "ham radio activities" on the Internet.

In the past month, I've spoken (even used voice communication once, to see what it was like) to people from more countries and states in a week than I did in all my ham radio activities combined. That would be about ten. I was always a ragchewer, and only worked DX if it came up and bit me. My most rare ham radio DX was Wyoming, I think. Sent and received at well over 50 WPM, which is not so amazing as you'd think, because I type over 100 WPM on a good day.

But somehow, I think it's me, and not ham radio that's at fault. As a Coast Guard radioman I worked commercial ships ("merchies") and handled hundreds of relay messages on an 8-hour watch. I loved the "commercial" use of CW on the old Medium Freq band, and hoped to find a substitute for it on the ham bands. That was never to be.

There is no "field day" for Internet operators, so I thought I'd try one to see if it could re-create the camaraderie of some good friends and tolerant people of the Hazleton (PA) Amateur Radio Club. It did not.

First off, no one showed up. Field day by oneself is not much of a picnic, even if it is outdoors and includes food. And ants.

Second, there was no one to compete against. Against whom with which to compete. There was no one else participating, so even a score of 1 would be "high score."

My solar-powered laptop with cell-modem had a "contest multiplier factor" of 10, and 10X more because I'd charged the NiMH batteries with a bicycle generator.

Because I used a notebook computer, and not a desktop, I also awarded myself the QRPP multiplier for yet another 10X. My status as "single operator" brought me a 5X multiplier for MY rules!) and I was granted a fifth and final multiplier of 10X because I had hiked a mile to the isolated site, which had no running water or convenience stores within 100 yards.

So I fired up the system and browsed the web, eating up precious milliamp-hours in one-way communications which had no point value, bidding on a few harmonicas on e-bay until I was bored, then sent the winning 50,000-point e-mail to my wife (long@suffering.com), packed up and headed back to the car, victorious, but somehow empty. There would not be a second annual Internet field day.

It was not easy to find and interface a suitable "Morse to ASCII" converter, and to be completely honest I never was able to find Morse symbols for @ and the famous tilde (~), but I can now call up my favorite websites using my faithful Vibroplex™ Bug and a sidetone oscillator.

In my effort to make the Internet resemble ham radio, the second step (of what now looks like a journey to the laughing academy) was to convert my e-mail from ASCII text to Morse code. It's annoyingly mechanical, and sounds like an old Atco paper-tape keyer. I'm trying to hire a programmer to randomize the character length to give the CW some life, but I have yet to find anyone who understands both hand-sent Morse code (with a "swing) and a modern programming language.

The U.S. Coast Guard, and subsequently all shipping, has ceased using CW communications. Why even have a Coast Guard if all you're gonna do is clean up after certain oil companies and chase drug runners in the Caribbean? They could just expand the Miami PD and hire a few hundred out-of work pool-cleaners.

I was about to look for a converter which would take incoming JPG images and convert them to FAX AUDIO, then further to NTSC video, but I realized that it would not only be painfully slow, but in the end, it would be lower resolution and besides, I'd be the only one who knew why it took so long. That, by the way, would be a good thing, because I understand that it takes TWO corroborators to testify at a commitment hearing.

I have packed up all my radio gear, and I'm taking the final walk out to the LaBrea tar pits, I guess, where I'll lay a few eggs for posterity (I don't really think that guy dinosaurs laid eggs, but what's a metaphor, anyway?) and throw myself in among the brontos, stegas, and perhaps even the unicorns, for future archaeologists to discover. Clutched in my right hand will be my trusty speed-key, and next to me will be an old Underwood manual with communications characters - big and little upper-case, with big and little numbers across the top row.

I'll be wearing my CQ lapel pin and have an old "License Manual" in my back pocket; the one with the red and black cover - the one that would fit in your back pocket.

Dit dit; click click, oh what a relief it was. ■

Tuning-In *(frpm page 4)*

CB Radio Service is used for the purposes for which it was intended — to provide for short-distance personal and business radio communications.”

Stuck In The Past

Well, I'll be darned! Are they still playing that age-old tune, ignoring the facts we've pointed out countless times before: that when ordinary law-abiding citizens began using CB *dozens* of years ago they essentially overruled the Commission from day one. On my planet when that happens — when an overwhelming majority of folks “speak” by their actions, whether it's petitioning for a red light at a dangerous intersection or protesting en-masse for something close to their hearts, the bureaucracy should respond positively — or at least listen — and not flip them the bird and quote a rule that's about as relevant today as an edict from the Roman Empire. Anyway, they go on, “ . . . the Bureau determined that such a result would contravene the Commission's express intention not to create a service paralleling the amateur service when it authorized the CB Radio Service. As a result, Dixon's Petition For Rulemaking was denied.”

Someone, or a whole group of folks, must be smoking the weed at the FCC. Has anything changed there since 1958? What the FCC, in denying Dixon's petition, doesn't want to do, they did years ago: They created CB. And now, years later, they continue to backstep and put on some Gestapo-like uniform and point sternly to “the rules” as if that will change anything.

Perhaps the hardest slap in the face is the Commission's response to Dixon's request for clarification of the distance rule when it comes to emergency communications. The Commission said, “ . . . we do not believe this amendment is necessary . . . as an initial matter, we note that individuals who find themselves in emergency situations are likely to have stations in other radio services, such as amateur, marine, land mobile stations, or cellular or other wireless telephones, available either to them or to another individual close to the emergency location . . . further, we believe that messages from these stations are more likely to result in the individual quickly obtaining the needed emergency services.” They continued, “In this regard, we note that mobile communication capabilities generally, and the wireless telephone services in particular, have become widely available since the CB Radio Service was authorized and these mobile services have become a common method of reporting emergency situations to emergency service providers. We also note that wireless telephones and certain other stations are, or can be, automatically interconnected with the public switched telephone network and, therefore the public safety response systems, a capability not available to a CB Radio Service station that hears an emergency message. Moreover, we note that there is nothing in the CB Radio Service rules that prevents an individual who receives a message that contains a request for emergency assistance, regardless of how far away the transmitting station is, from using other communications services to inform public safety providers of the need for assistance.”

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Once again, I'm floored by the FCC's attitude. Do you smell money here? Enter the cellular phone. Do FCC folks read the newspapers or watch the news? Emergencies don't always happen on highly traveled interstates or in the middle of urban America where everyone has a cell phone permanently sewn to their ears, but frequently on remote hiking trails, ice-cold mountaintops and lonely country roads where cell phones experience dead spots. What about the countless times the phones, both landline and wireless, are down?

Remember Hurricane Andrew? It's not just Aunt Mildred calling for help on the highway. I can't help wondering if the FCC has contacted REACT International and told them to go on permanent vacation. The Commission's attitude seems to say “to hell with CB Channel 9” — after all, this is the wireless age and cell phones can get you help in a second. Copy that, REACT? Let's just auction off Channel 9!

For the record, REACT copied the message, and did nothing. REACT's president and general counsel, Chuck Thompson was encouraged to “take swift and decisive action” as Dixon told me. Time passed and nothing happened. Surprised? REACT's moment in the FCC's face came and went without so much as a whimper. Why, you ask? Because Thompson decided not to stir the pot at the Commission. Fact is, the FCC has done a double whammy on REACT; practically denying they exist and spitting in their face at the same time. I'm frankly ashamed of Thompson for not taking a stand on this issue. (Yes, Chuck, we know that REACT members take calls regardless of the distance involved, but you missed the point, and a grand opportunity to wake up the Commission to the facts.)

Of course the ARRL, with its 19th Century mindset, couldn't resist the opportunity to jab Dixon about RM-9807's defeat, quoting from the final Order Of Reconsideration. Too bad the League didn't also jump down the FCC's throat on this issue at the onset — another missed opportunity for the ARRL to recognize REACT and emergency radio volunteers (regardless of service).

This issue, in the final analysis, really isn't about CB or even Alan Dixon's RM-9807. It's a clear message from the FCC to radio volunteers — regardless of service — that when it comes to radio today, it's all about money. I wonder how much 420–450 MHz would bring on the auction block? ■

ADVERTISERS' INDEX

Advertiser	Page Number	Website Address
ADI/Premier Communications	9	www.adi-radio.com
AOR USA, Inc.	11	www.aorusa.com
Antique Radio Classified	57	www.antiqueradio.com
Atomic Time, Inc.	49	www.atomictime.com
Bill's CB & 2-Way Radio Service	59	www.bills2way.com
CQ Merchandise	65	www.cq-amateur-radio.com
C. Crane Company	80,Cov. III	www.ccrane.com
C & S Sales, Inc.	51	www.cs-sales.com
CQ Amateur Radio Calendars	27	www.cq-amateur-radio.com
CRB Research	31,69	www.crbbooks.com
Command Productions	69	www.licensetraining.com
Communications Electronics Inc.	19	www.usascan.com
Computer Aided Technologies	43	www.scancat.com
Cutting Edge Enterprises	71	www.powerportstore.com
DWM Communications	71	www.qth.com/dwm
Davis Instruments Corp.	71	www.davisinstruments.com
Hollins Radio Data	29	www.policecall.com
ICOM America, Inc.	5	www.icomamerica.com
Japan Radio Co., Ltd.	15	www.jrc.co.jp
Lee Electronics Company	58	www.LeesElect.com
Lentini Communications, Inc.	1	www.lentinicomm.com
MACO Mfg. Div/Majestic Comm.	59	www.majestic-comm.com/maco
MFJ Enterprises, Inc.	39	www.mfjenterprises.com
Mobile DXer, The	13	www.cq-amateur-radio.com
Monitoring Times	57	www.grove-ent.com
Mouser Electronics	45	www.mouser.com
Old Stone Inc.	37	www.antennamast.com
Optoelectronics, Inc.	Cov. IV	www.optoelectronics.com
PALSTAR, INC.	71	www.palstarinc.com
Phillips-Tech Electronics	58	www.phillips-tech.com
REACT International, Inc.	56	www.reactintl.org
Radioworld, Inc.	45	www.radioworld.ca
Ranger Communications, Inc.	21	www.rangerusa.com/PC
Signal Engineering	58	www.signalengineering.com
Shortwave Store, The	58	www.usa.shortwavestore.com
Universal Radio, Inc.	3	www.universal-radio.com
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