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15635

POPULAR COMMUNICATIONS

NOVEMBER 2000

WMAQ: Gone, But Not Forgotten!

- **Special Report:**
REACT's 2000 Convention
- **National Crisis Monitoring:**
Frequencies And Tips
- **In The Spotlight:**
**RadioShack's PRO-2052
Scanner**

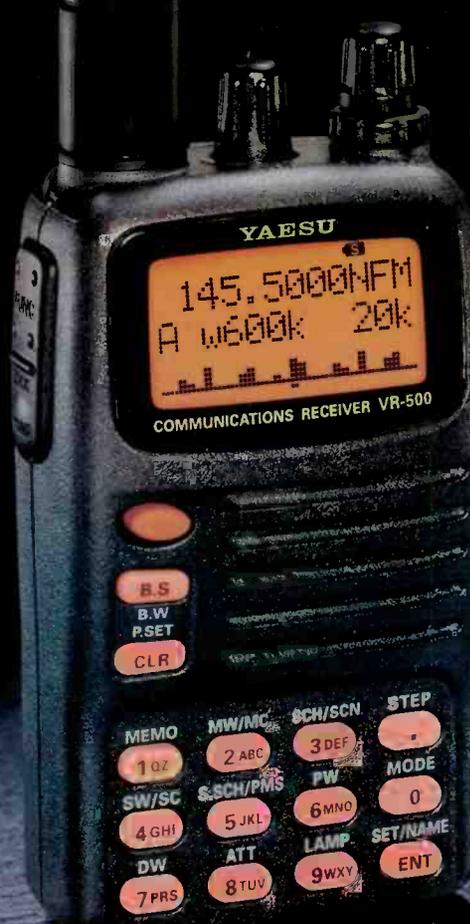
**Probe
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Page 50**

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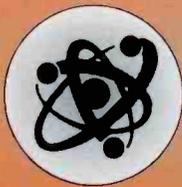


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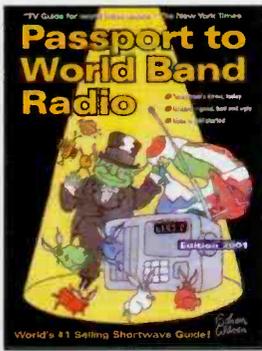
On The Cover

A look at one of WMAQ's 15 work stations where stories were produced, edited and recorded. This month's Broadcast DXing by Bruce Conti highlights WMAQ: We Must Ask Questions. (Photo by Andy Pearce).

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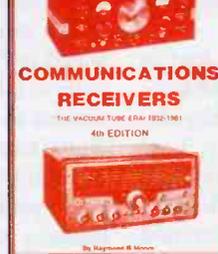
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TUNING IN

An Editorial

Good-Bye To A Good Friend, And Hang Up And Drive!

If you told me a few weeks ago — despite the fact that I have several calendars — the November issue of *Pop'Comm* was just around the corner, I would have shrugged my shoulders, not terribly concerned about the encroaching deadline. But now that it has come and gone — even though it's still nearly 80 in the northeast as this is written — we're thinking about the upcoming holidays and the end of the year. Didn't we just have that Memorial Day picnic? Of course I still haven't fixed the bedroom window or helped completely weed the garden, but this past summer I didn't even get around to replacing the aging coax on the antennas or put up that new MFJ tri-bander I'm reviewing for an upcoming issue.

I don't know about you, but I love to tinker; putz around with multimeters constantly measuring the DC voltages at the storage batteries in the garage, re-wiring things that don't always need re-wiring, and sorting the dozens of wall wart adapters (seems like there's always *one* that doesn't belong to a radio!). So today I sat down and put together a list — with pen and paper, not the computer — of things I've got to get moving on before Christmas and 2001. Most of the list is "good" stuff, like reviewing more really great alternative energy products from Kyocera and Uni-Solar, MFJ's 6-Meter SSB Transceiver, a couple of high-capacity power packs, and an assortment of other radio gear we know you'll like. (Of course, the "other" stuff, like that darned window can wait a few more days). We've also got plenty of outstanding articles and columns planned for the coming months, including a special article written by Bob Padula about his recent visit to Vietnam, so stay tuned.

Yes, time flies by all too fast. And in its wake we often forget those close to us — family, friends, and fellow hobbyists. Case in point is now Silent Key, Lew McCoy, WIICP, who passed away this summer. Lew was one of those folks who was always around offering advice and counsel — an omnipresent fellow at Dayton's annual Hamvention and other amateur radio get-togethers. Lew McCoy

— a "living legend" in ham radio and fixture on the *CQ* masthead since 1981, was 84. Known widely as "Mac," Lew was an ARRL staffer for over 30 years, and after his retirement in 1981, joined *CQ* as Technical Representative. He wrote hundreds (thousands?) of ham radio articles and one book, "Lew McCoy on Antennas." Antennas were a perennial favorite of Mac's, and in fact, he was working on several reviews of antennas and antenna accessories at the time of his death. *CQ* and amateur radio have lost a good friend. We extend our condolences to Lew's family. He will be missed by all of us.

Lawmaker's Wish Comes True In Jersey

Marlboro Township, New Jersey, is like any other suburban city you might encounter; home to about 34,000 hard working souls trying to make ends meet. The difference between Marlboro and your hometown is that in Marlboro you're in violation of Ordinance 2000-18, which regulates the use of mobile telephones "while operating a motor vehicle."

You'll recall we talked about this very issue back in July with the reminder that we should be careful what we wish for; could a law on the books prohibiting cellular phone use be eventually amended to add mobile radios? Marlboro's law, signed into law this summer, made front-page news because it's the first municipality in New Jersey to enact such a law. Twenty-two states have proposed similar bills — yet none have passed — still some are, nonetheless, pending.

The new "Chapter 94, Section 94-3" added to Marlboro's ordinance defines a mobile telephone as "including but not limited to cellular, analog, wireless, and digital telephones." Very interesting, don't you think? Could this law be stretched a bit to prohibit the mobile use of a ham repeater autopatch function? After all, you're making a telephone call and it *can*

(Continued on page 77)

BY HAROLD ORT, N2RLL, SSB-596

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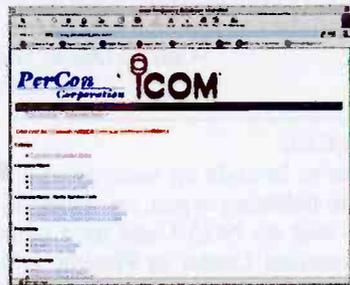
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OUR readers SPEAK OUT...

Each month, we select representative reader letters for our "Pop'Comm P.O." 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 "Pop'Comm P.O." 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>.

He's Not Taking Sides

Dear Editor:

These are just some general comments; I'm not taking sides on any arguments! I was pleased to see the article on weather and the spots where you could tune them in. I'm an old shipboard operator from WWII and also made several trips in '51 and '52. There was a lot of weather information on NSS and also the English stations. They weren't very good, as their data was scarce. We were in one very bad storm in the North Atlantic and they missed one of the two centers, and we were in the one they missed. The bottom fell out of the barometer; I think it was in the low 28s. Captain Carlson was north of us in a similar storm. He stayed with his ship after they had given up hope for it. He had the crew abandon ship as there was a British ship standing by. He was a ham and kept contact for about a week using his set. He finally had to get off and she sank.

I hope that you have an article in the weather area about lightning. The WGN (Chicago) weather report with Tom Skilling is very good and about the best in the short time that he has. He discusses positive and negative lightning strikes, and I have been unable to find out how these occur. I would think they should all be negative. I built a very sensitive electrostatic meter using one FET driving a centered microammeter. I hook it up to the antenna during a storm and it does actually swing positive and negative. Most strikes appear to be negative.

Also, the concept that lightning does not always go for the highest place or

what appears to be the best conductor is a good topic. I understand that since it is an RF voltage, impedance plays a part in where it hits. I would like to see something more on this, if it is available. I wonder what impedance it likes best - this would seem to invalidate lightning rods - there have been incidents when the stroke ignored the rod and hit a nearby tree.

Carl G. Davis, W9CR
Illinois

Dear Carl:

You've brought up some good points. I'm no lightning expert, so consulted the folks that are NOAA and the Lightning Information Center in Florida. NOAA has some excellent online information on lightning at nssl.noaa.gov/edu/ltg.

From the Lightning Information Center we learn, "Positive flashes constitute less than 10 percent of all CG (Cloud to ground) flashes, and most often occur on the periphery of a thunderstorm away from the central rain shaft. However, the peak current of their return strokes is often much larger than the peak current of the negative return strokes. Thus, they are more lethal, and can cause greater damage than negative flashes. It is believed that a large percentage of forest fires and power line damage is caused by positive flashes."

Both of the above Websites also offer excellent links to other online resources I'm sure you'll find fascinating.

Panasonic's 900 MHz Cordless Phone Review

Dear Editor:

I began reading your review in anticipation of hearing your take on complaints you and others have heard or made regarding the issue of privacy as it relates to Panasonic's cordless phone technology. Shortly into the article you say, "Now that's not to say those folks with these phones didn't hear their phone on a scanner. It only means that on the phone I reviewed for many hours, I didn't." This issue of privacy begs to be addressed, but you unfortunately chose to extol its GigaRange claim. . . . Maybe too, rather

than obtaining a model from the manufacturer, you purchase another - possibly older - model that employs the same (Panasonic) 'technology.' What's my advice? Keep the phone they sent you as you are apparently one of the lucky ones.
Gerald Guske, Florida

Dear Gerald:

Thank you for your letter and pointing out a rather obvious, glaring point that we already made: My review of that phone, as stated in the review, was prompted by concerns that the phone could be monitored. The phone I reviewed could not. I tried everything imaginable to monitor it, even after the published review, with no luck whatsoever. We also don't "purchase" phones (or other equipment) for our reviews; they're usually loaned to us for a specific review period - usually a few weeks - after which the reviewer can either purchase the item or return it to the company. I decided to return the phone to Panasonic, despite the fact that I personally found it to be an excellent communications tool with outstanding range - far greater than what I expected, and far greater than what I believe most people require of a cordless phone.

We have repeatedly talked about cellular and cordless phone privacy; the bottom-line being that a user should always expect his or her conversations can be monitored, regardless of the phone or manufacturer's claims. I've read the online pros and cons about the Panasonic phone and the ongoing babbling there and in the hobby media is really no different than what folks say about scanner X over scanner Y. Truth is, you've got to drive it yourself and play with your scanner to see if yours is capable of being monitored. Your letter was the only one I received on this topic. I certainly welcome comments from other readers regarding this and other cordless phones.

April's Pop'comm

Dear Editor:

The article by Carl Tyrie, "Radio Moscow, An American Version in the April issue struck a chord in my memory. In September 1958 I was in Tehran,

Iran as a member of the U.S. Military Aid Advisory Group (MAAG). The aircraft that was shot down over Armenia was a regularly scheduled flight from Frankfurt to Tehran with supplies, fresh meat, fruit and other supplies for the U.S. commissary, which was behind the American Embassy.

When the shutdown became known, the story got around that the aircraft was a victim of Soviet "spoofing" which involved a transmitter in the USSR overpowering the navigation beacon being used by the aircraft with a signal so strong that it blocked out the real beacon. The Soviet station, of course, used the ID of the beacon it was imitating. I think the beacon being used was the one at Tabriz in northwestern Iran. The normal flight path over Turkey into Iran is close enough to the Soviet border that a small variation could easily lead the aircraft astray.

I was told later by an American pilot flying for Iran Air that he had nearly been fooled by a similar incident when flying from Tehran to Tabriz. He wandered off course but caught the mistake when the terrain he was looking at did not conform to what his experience told him should be there.

Shootdowns under these circumstances would serve as a propaganda weapon and a warning to the U.S. to "stay out of our backyard." I wonder if any of Pop'Comm's readers have any more information on this or similar incidents.

Earnest R. Oney, W4UXE (ex EP2AO)
New York

VOA Cutbacks

Dear Editor:

You're totally correct about your assessment of the VOA cuts in funding: Our national priorities are more and more set by the "elites" who have no idea of what is going on. They are motivated by wacky ideals, rhetoric and in all honesty, the social position an appointment to one of the agencies brings.

Many of the Internet cyberspace jockeys forget that the number of those who have no access to the computer world far outnumber those who do. You are right on and have called it as it is. Bravo!

Terry Jones, South Dakota

Amused By Vince

Dear Editor:

I read the letter from Vincent Ponzio with much amusement. I thought all

Republicans believed in Deregulation and the free market. I look at the changes in ham radio as much needed deregulation. Look at it this way: We downplay a mode that many consider obsolete. We increase the number of General and Extra Class hams. They buy new HF rigs, increasing business for dealers and manufacturers. The prices come down. Some ham dealers increase their workforce and maybe expand their dealerships, or build new stores. It's the trickle down effect.

I can understand the ire of some old time hams about the changes. I was studying for the old First Class Radiotelephone license. I spent a great deal of time and money to get it and guess what? The Reagan administration deregulated it out of existence. So think of the new rules as deregulation or is that only for Exxon and Mobil and other big businesses. I'm a General Class ham with 13 wpm and I welcome all these changes.

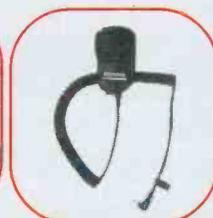
Thomas Maciaszek, WB2ZWY

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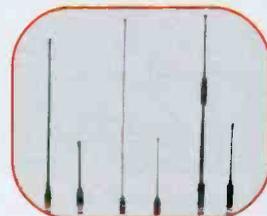
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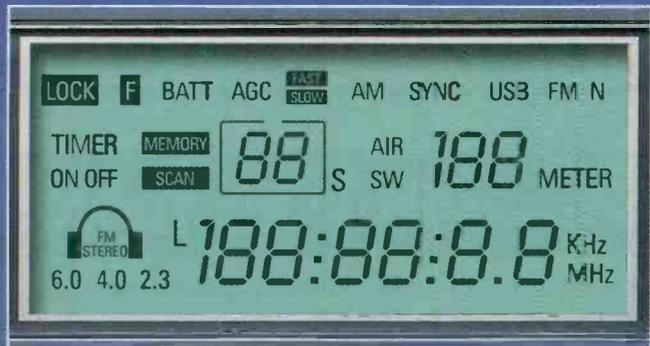
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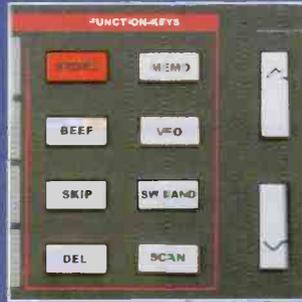
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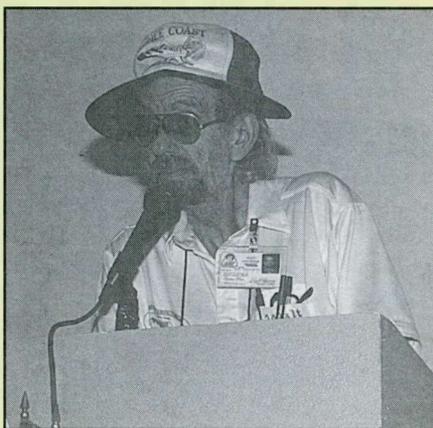
REACT International's 2000 Convention

Transmitting Into The 21st Century

By Alan Dixon, N3HOE/KST8678 <n3hoe@juno.com>

So hails as the slogan from REACT International's recent annual convention, and it remains the focus of the organization's forward-looking policies. This year's bash was held at the Ramada Plaza Hotel Gateway Inn in Kissimmee, Florida, just south of Orlando. As is true every year, it was an occasion to renew old camaraderie and to put faces to names known hitherto only by E-mail or newsletter. Well over 100 REACT officers, officials, and members along with their families had gathered for this year's meetings and celebration. The well-planned event officially lasted three-and-a-half days, but many had arrived by Monday of that week and stayed through the following weekend. Convention organizer Walt Young, KAE61 of Brevard County, Florida REACT could hardly have chosen a better location, being near all of central Florida's family theme parks. While the underlying purpose of any convention is to conduct certain business matters, many participating REACT officers and members purposefully plan their annual family vacations around this event, effectively combining business and pleasure, hobby and quality family time. The yearly conventions are not just for REACT officers, by any means. They are open to all REACT members and their families who are invited to come and participate at these events. Indeed, REACT's annual conventions are one of the great underrated family vacation opportunities.

The REACT 2000 International convention had all the trappings and goings-on of any world-class event. There were demonstrations with the Florida Disaster Communications Assistance Team's (DCAT) communications vehicles. First aid and CPR training classes were offered to round out emergency communications responders' skills. The REACT "country



REACT Convention Chairman Walt Young sets the tone for the three-day convention at the opening session.

store" was selling patches, cups, key chains, and other items from International Headquarters and from various team councils, while amateur radio operators enjoyed a special breakfast meeting. Cobra radio arrived with their motorhome display of the latest two-way communications equipment, as well as other electronics goodies. And a number of helpful workshops were provided to enable teams and individuals to better manage and prepare for public service.

More Than Just An Annual Meeting

This year's event was much larger in scope than simply an annual meeting. More significant than REACT's International 2000 convention proceedings, though, is its revelation of a new direction for the new century. Yet, to understand where the newly revitalized organization is headed, one really needs to understand from where it came. And

until now, REACT Int'l. has been too often *misunderstood*.

REACT is comprised of radio operators rendering their services on a voluntary basis. These operators are typically organized into local teams, with affiliate members serving areas without local teams. Their mission is to provide public safety communications to individuals, organizations, and government agencies, as well as to save lives, prevent injury, and give assistance wherever and whenever needed. The *Radio Emergency Associated Communications Teams* was founded in 1962 when its organizers saw a need for monitoring the relatively new 11-meter Citizens Band radio service. Prior to that point, there was no nationally recognized system of handling distress calls on CB channels. REACT pioneers also soon realized the usefulness of CB radio in handling public service events and in disaster mitigation communications. The organization also takes pride in promoting good operator skills among its membership. As time has gone on, REACT's scope and methods have evolved to better serve the public while keeping focused on its core mission. Ironically, it is the organization's new breadth that has caused so much misunderstanding of its purpose in recent years. Some of the concepts and actions advanced at the 2000 convention will do much to make REACT's mission clear once again. Read it any way you like. The basic fact remains that REACT is made up of radio operators. Because of its roots, REACT is largely thought of as a CB radio club. Reality though, is that radio operators come in all shapes, sizes, and *modes*.

There are any number of radio and communications-related organizations dedicated to public service and to emergency communications. Some are local or regional in scope. Others are national or

international. However, many of these organizations limit themselves to specific radio services. Probably the most well known among these is the Amateur Radio Emergency Service (ARES). Created and sponsored by the American Radio Relay League, ARES is an outstanding national association of licensed ham radio operators. Another emergency radio group is the Radio Amateur Civil Emergency Service (RACES), officially local units of Civil Defense. Obviously, such organizations are dedicated to ham radio, with the amateur service's multitude of capabilities.

REACT, however, draws no line of distinction among the potential radio services that may be utilized in accomplishing its mission. Years ago, the organization discovered the General Mobile Radio Service (GMRS), sometimes known as the FM Citizens Band. This licensed UHF radio service offers commercial grade two-way repeater and simplex radio communications. REACT has found GMRS to be useful for conducting public-safety communications at events such as walkathons, parades, and highway safety breaks. They also monitor the GMRS designated emergency and travelers' assistance frequency, 462.675 MHz. The new Family Radio Service (FRS), good for very low-power local comms, has also found a place in REACT's toolbox of resources. No one would be surprised to find a local REACT team utilizing licensed low-power VHF itinerant business frequencies, either. Certainly, amateur radio now has a very big place in REACT's mission, as well.

Not A CB Radio Club

It is this breadth of radio services utilization that sometimes confounds traditionalists, many of whom still see REACT as a CB radio club. Yet, nothing in the REACT International mission statement limits the organization to the Citizens Band. Taking advantage of this same breadth has become a major goal advanced at the 2000 Convention. Toward this end, REACT International and the ARRL are on the verge of consummating a Memorandum of Understanding to recognize the capability of individuals within both organizations and to facilitate information to and from the public during emergencies. Any antagonism, real or imagined, between hams, CBers, and other emergency radio operators can now be laid to rest. Each organization has immense potential, some common goals, and several mutually-served agencies.



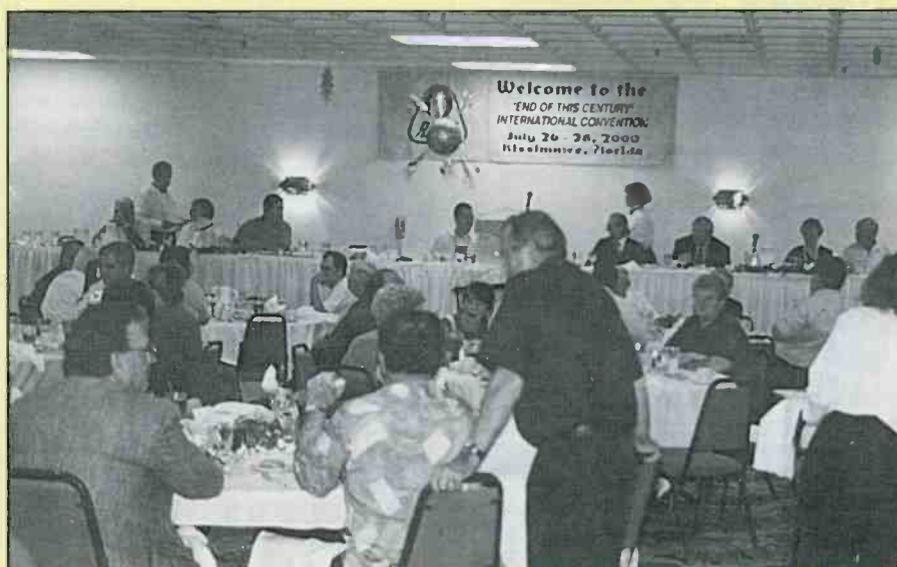
Cobra's mobile showroom visits the REACT International Convention in Kissimmee, Florida.

Obvious common goals include the provision of emergency radio communications. The Salvation Army and the American Red Cross are two nationally recognized agencies served by REACT and ARES alike. Both radio organizations will endeavor to work with each other in times of emergency, and work to maintain ongoing communications as a matter of regular policy.

The presence of a League official at the REACT convention was a positive sign of the new communication and cooperation between the REACT and the ARRL. Southern Florida Section Manager Phyllisan West, KA4FZI was graciously on hand to promote amateur radio and to answer questions about the purpose of the ARRL and the mission of ARES. Ms. West

had a number of ARRL publications available for sale to inquisitive REACTers.

Some discussion at the convention naturally centered on REACT's recent proposal to establish FRS Channel 1 as a national call channel. This idea was reported in last month's *Pop'Comm* "Washington Beat" column. As reported, no FCC action is necessary to establish an FRS call channel. Such an action need be no more than a "gentlemen's agreement." However, REACT is considering petitioning the FCC for a rulemaking to promote the idea by making it, quite literally, official. By the time you read this, such a petition may well be working its way through the Commission's bureaucratic maze. A national call channel will enhance the utility of FRS radios, and



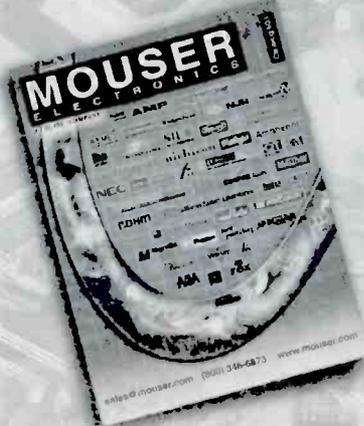
REACT members enjoy the closing banquet.

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Craig Fugate, Bureau Chief, Florida Division of Emergency Management, addresses the convention. (All photos courtesy of Stuart DeLuca of REACT International.)

may open up a new area of interest attracting much new REACT membership.

The 2000 Convention featured two keynote speakers. First was Special Counsel for the FCC's Enforcement Bureau, Riley Hollingsworth, K4ZDH. Contrary to what has been indicated by some published reports, Mr. Hollingsworth's bailiwick is not limited to amateur radio. The Enforcement Bureau covers all FCC regulated services, and Mr. Hollingsworth handles enforcement of Wireless Telecommunication Bureau licensees, users, and abusers in particular. Make no mistake; Hollingsworth made it clear that abuses on the GMRS frequencies will no longer be tolerated. Now that amateur radio enforcement is well under way once again, attention can be turned as well to other radio services. Licensed amateurs, as well as those who have met Mr. Hollingsworth, know him to be no-nonsense, yet personable and highly effective. Hollingsworth warned GMRS licensees and CB operators that their bands could become as coveted as some amateur bands have been, for takeover by commercial interests. Operators in these bands will have little defense of their frequencies unless they maintain proper operating practices. Hollingsworth went on to point out that by demonstrating proper on-air operational skill, REACT's volunteer communications services could well be the envy of other volunteer communications services. He invited GMRS licensees expe-

Welcome to the

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riencing malicious interference and observing unlicensed operation to telephone him directly at his Gettysburg office. The GMRS band will shortly become a cleaner place to work and play!

In addition to GMRS, Hollingsworth notes that CB enforcement will start to pick up. The first cases likely to be targeted for enforcement will be those in which CB operators encroach on other services. Unlicensed violators and violations will be considered the most serious offenses.

Interestingly, Mr. Hollingsworth took a moment to address a policy issue, something not typically within the scope of his activities. In recent years, many in the GMRS community have feared that the FCC may ultimately deregulate that service in the form of eliminating individual station licensing. This is what had happened to the 11-meter Citizens Band in the early 1980s and to recreational boaters in the VHF marine band in the mid-1990s. Participants at the convention seemed to concur that the deregulation of those bands had been an unfortunate undertaking. Hollingsworth indicated that due to lessons learned in previous delicensing actions, it appears unlikely that there will be similar future deregulation actions for services like GMRS.

Government Can't Do It All

A Friday evening banquet was the culmination of ceremonies for the 2000 con-

vention. Keynote speaker for the evening was Craig Fugate, Bureau Chief of Florida's Division of Emergency Management. Mr. Fugate turns out to be one of the more knowledgeable emergency managers to be found. In his speaking presentation, he offered an excellent dose of reality regarding disaster mitigation, applicable anywhere. Earlier in the day, Riley Hollingsworth had made the point that "sophisticated" communications systems too often fail during major weather events, and one could surmise or observe, during disasters as well. Building on this premise, and acknowledging that federal and state agencies have been weak in the aspect of *community* in disaster response, Mr. Fugate made some excellent points: "Government can't do it all." Unfortunately, volunteer services have been historically underutilized. Fugate asserted that public officials need to break the mindset that emergencies must be handled by government agencies and that services must be provided by paid "professionals."

Mr. Fugate went on to encourage REACT teams to continue getting involved in disaster response at the community level. He suggests that organizations like REACT simply come forward and ask, "How can we help?" And, it turns out that there is a particularly great need for short-haul communications of the type suited for GMRS and CB, in disaster areas, he insists.

What a point about professionalism, to REACT's credit! *Volunteer, amateur, and professional* are not mutually exclusive terms. Volunteer professionals abound. And a full-time salaried worker does not create a professional in and of itself. This is not a matter of opinion. Check your dictionary! The more specific point is that REACT strives for professional operator skills among its members. Consider that holders of GMRS or amateur call signs have no less an obligation to operate their radio equipment in a professional manner than does any paid public safety communications officer. The same can be said for CB operators, particularly when operating on channel 9.

Encouraging growth and new membership is always a topic for public service organizations. REACT has announced the establishment of a toll-free telephone number for new membership inquiries. Prospective members and those curious about how to become involved with REACT may now call 877-554-4859. If you are a radio hobbyist, a radio operator of any description, or an emer-

gency service worker, call this number and see for yourself what REACT is about. Or you can visit REACT International's website at www.reactintl.org/homepage.htm.

Make your plans now to participate in next year's 2001 REACT International Convention. REACT has active teams in several countries, and is demonstrating its international commitment by planning its first overseas convention. North American-based REACT has held all

prior conventions in the United States and Canada. The convention next year will be hosted by the Trinidad-Tobago REACT teams, in tropical Trinidad. Members will be gathering at Le Sportel Inn, July 25-28, in Tunapuna, Trinidad, in the West Indies. Now is the time to get your passport in order!

In any case, find out what your local REACT team has been doing in your community, and how your good radio communication skills can be put to use. ■



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27.165	1.50	41
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27.315	1.95	57
27.365	2.00	66
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THE RADIO CONNECTION

A Look Behind The Dials

The Australian Challenge — Proton's 1932 Mystery Crystal Set

We've been busy in the Radio Connection lab cooking up new projects. Thanks to our readers, I have some possible new projects for the upcoming year. We'll be starting a new construction project in this issue; but first a few loose ends need to be cleaned up.

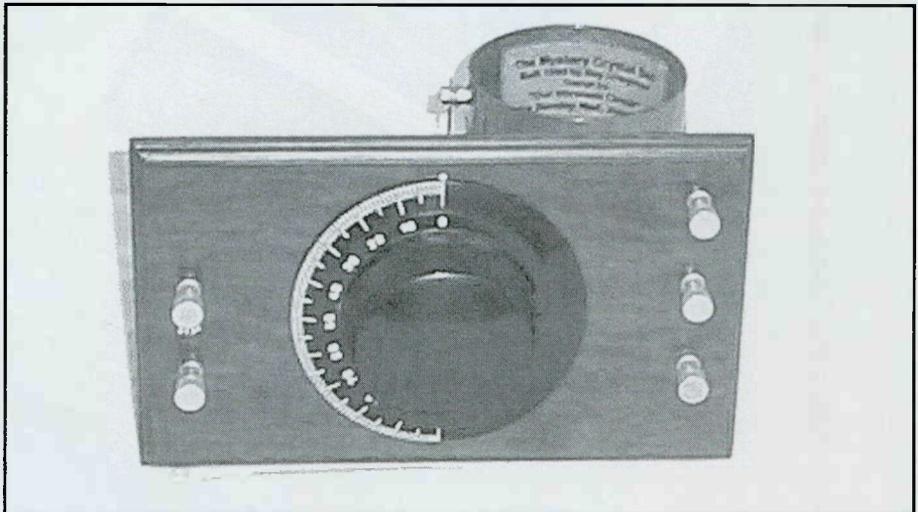
Ronnie Miller's Philco Dial Scale Dilemma

Recall we left off last month with these parting words from a despondent Ronnie Miller who had a problem his 1936-era Philco model 610 receiver:

"So here I am . . . I have the one radio above all that always meant the most to me, and I'm completely satisfied with all aspects of the restoration up to this point. Now I have this horrible mistake staring at me. Finally, to the point of my long letter. Can you possibly help me locate a replacement dial for my treasure? The original dial is Philco part number 27-5203. Some I have talked to tell me this dial may have been used on other sets. Surely I am not the first to run into this situation. I realize the search could take some time, but I have waited over 30 years to get one of these sets; a little more time is nothing at all. I will of course use my radio with the damaged dial until I arrive at some solution . . ."

Folks, Ronnie's plea is a very common one. I haven't met a restorer who hasn't committed the same gaff when first working on those beautiful vintage Philco sets! I'll never forget the time I destroyed a dial on a massive Philco chassis. I was applying spray cleaner to clean dusty and greasy plates in the tuning capacitor. I got careless, and some of the cleaner managed to drip down the dial scale, instantly destroying most of the markings. I was heartbroken, and since it wasn't my set, I had to foot the bill for a good replacement.

There is something magical about the multicolored inks and the station markings for strange and exotic countries — many of which no longer exist — that



Front view of the receiver. Ray used a vintage Brach fixed detector (the orange fuse-like device at the back of the crystal set) instead of an adjustable cat's whisker detector. The base and panel are made from Jarrah, a fine Western Australian timber.

highlight the backlit portions of a translucent radio dial's shortwave bands. I've seen fastidious restorers spend countless hours using Q-Tips to carefully clean a dial scale. The care is needed since only the unmarked areas of the celluloid dial can be touched; otherwise the inks will be removed or faded by the cleaner. Fortunately, many dial scales seem to use better markings than others. Some will withstand repeated cleanings, while the 1930s Philco flat, circular dial scales seem to be the worst of the lot for durability. Another series of sets to beware of are the 1940 vintage Philco's using horizontal dial scales that are reverse-painted on the dial glass. Many of these have developed problems with the adhesive bond between the paint and glass, leaving many of these sets with badly deteriorating dial scale markings.

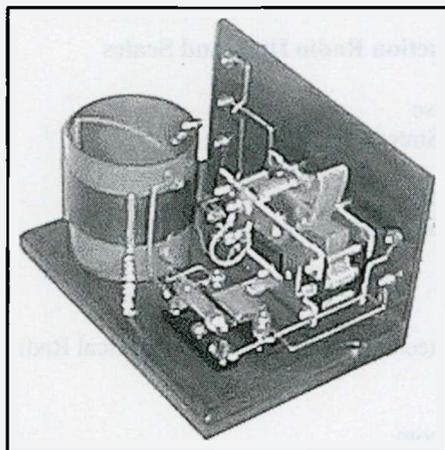
Another common problem found with Philco's large-sized celluloid dials is that they are prone to cracking or breaking. Too often this damage is due to careless past handling, or from permitting a small crack to grow to large proportions. I own a tiny four-tube Philco Jr. cathedral that is undergoing a major restoration. The

cabinet was recently restored, as found it was totally delaminated and destroyed! A good friend of mine who is an expert at cabinet restorations brought it back to life for me. The chassis is restored, but two problems remain: the dial scale and the speaker cone. Apparently sometime during this poor set's existence, a kid tossed a lit match in the cabinet, igniting the highly flammable celluloid dial along with the paper speaker cone and grill cloth! I've been working on this set off and on for about five years; it is not a high priority on my list of things to be done, but it will be done right and restored to its past glory. I will share some photos with you as the restoration continues.

Mike Tobin At Rock-Sea Enterprises, California

I was able to recommend two gentlemen who were pros at dial scale reproductions to Ronnie. Sadly, one of the gentleman, who was best known for his Philco and Zenith dial reproductions, has recently passed away. Since then Ronnie advised me his reproduction dial was

BY PETER J. BERTINI <RadioConnection@juno.com>



Rear view of the Mystery Crystal Set. Ray certainly earned the first place award for Best Crystal Set reproduction — the set and construction are stunning.

more than he could have hoped for, and he's now fully enjoying his newly acquired Philco.

At this time, Mike Tobin at Rock-Sea Enterprises seems to be offering the best dial-scale services to the restoration community. Mike has many dial scales in stock, and is constantly adding new ones to his product line. If Mike doesn't currently have the dial in his database, he usually can scan the old damaged dial into his computer and rework the damaged areas to produce a usable reproduction. He has done dials for exotic communications receivers as well, such as the dials and S-meter scales for the Hallicrafters SX-28 receiver. Hallicrafters S-meter scales have a tendency to crack and split, and the dials — if left in one position for decades — will darken in the exposed areas from UV exposure. One final point: if you are replacing a dial for minor reasons, be sure and save the old dial because a future owner may insist on having the original dial.

Mike's address and contact information are given at the end of the column. I always advise my friends to take advantage of any restoration services when the need arises. All too often I've delayed filling my needs, only to find out the person is no longer in business or has passed away when I finally decide several years later to finally place an order.

Ronnie also asked about caring for his Philco cabinet. I've mentioned this before, but I will repeat it again as the opportunity arises. First, for an extremely grungy cabinet, I would start by first rubbing it down in a cloth dampened with naphtha. This *must* be done outdoors and away from

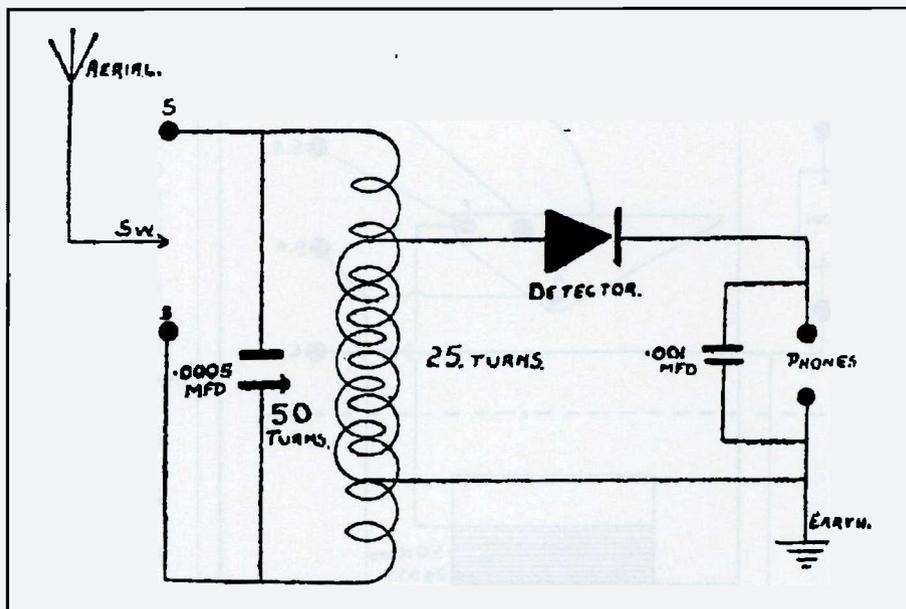


Figure 1. The schematic representation of Proton's Mystery Crystal set. Ray noted he got best selectivity when connecting the aerial to the B, or Broad terminal. This is the opposite of what was expected according to the diagram.

flames, as naphtha is extremely volatile! This treatment will remove years of accumulated dirt and grimes and oxidized layers of the original lacquer finish. The semi-liquid paste hand cleaner sold under the brand name *Go-Jo* also works extremely well for cleaning old cabinets.

Amazingly, once properly cleaned, most old sets are ready for presentation! A good wax should be used to protect the finish. Don't use Pledge or other similar household products for this task. I recently discovered the wood on my vintage 1960s KLH 5 speakers had developed a heavy layer of film, build-up from the repeated use of household polishes over the past four decades. Use a good antique paste wax, applied sparingly, to shine up your sets. A friend of mine, the late Frank Maggiore, was an avid collector who swore by the use of brown paste *Kiwi* brand shoe polish on his prized wooden sets and Zenith Transoceanic suitcase sets.

Proton's 1932 Mystery Crystal Set Challenge

A long time ago, 1932 to be exact, a gentleman using the pen name Proton described a strange crystal set for his newspaper audience in Australia. Even more amazingly, this set was rediscovered by Ray Creighton, and entered in a Crystal Set Competition sponsored by the Historical Radio Society of Australia (HRSA), South East Queensland Group

(SEQG) held on March 19th of this year. I am indebted to Mr. Creighton for graciously permitting to us reproduce material from his Website for our column. I'll provide some Internet links later for Ray's Website and for the South East Queensland Group of the HRSA as well. I think you will enjoy seeing some of the other sets entered in the contest as well, so please visit if you have Internet access. Ray's gorgeous set earned him the 1st prize for Best Reproduction Crystal Set, and 3rd Prize for Best Performance Crystal Set as well.

Here are some of Ray's comments on the Mystery Crystal Set:

"Construction details of this set were first published in the *Our Wireless Circle* section of the *Sunday Mail* newspaper in Brisbane on July 3, 1932. It proved to be very popular with the readers, and a second construction article was published on July 17, 1932, along with readers' letters and questions, and another on April 16, 1933. During almost every Sunday during this period there has been letters and comments regarding the *Mystery Crystal Set* in the *Sunday Mail*.

"Parts to construct a crystal set were relatively cheap, and construction fairly simple, so they were very popular at this time for people close to radio stations. Your local radio dealer could construct the *Mystery Crystal Set* for approximately 25 to 30 shillings (\$2.50 to \$3 Australian). At this time, a cheap four valve (tube) radio (*Radiola Jr.*) cost 24

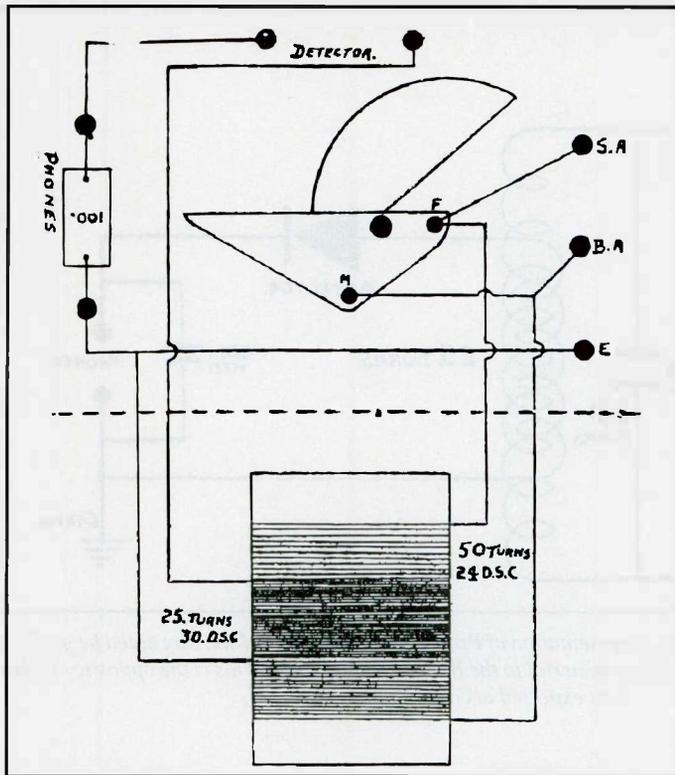


Figure 2. In the July 17, 1932 issue of Brisbane's *Sunday Mail's* *Wireless Circle* radio column, Proton provided a pictorial for the *Mystery Crystal Set*. I will be redrawing most the artwork to improve clarity for the next column.

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The South East Queensland Group of the Historical Radio Society of Australia:

<http://seqg.tripod.com>

Ray's Webpages for the Mystery Set:

<http://clarion.org.au/crystalset/mystery/html>

Ray's Webpages for the Browning Drake receiver project:

<http://clarion.org.au/browning-drake/>

To contact Ray directly E-mail ray@clarion.org.au
 Phone 07 3354 1107

Pounds 10 shillings (\$49) approximately six weeks wages for a radio service man!"

"In 1932 there were only four radio stations in Brisbane: 4QG, 4BC, 4BK, and 4BH. Radio broadcasting in Brisbane was only seven years old. At the time, there were only 17 radio stations in Australia. The circuit (of the *Mystery Crystal Set*) is a bit unusual due the Earth (ground) con-

nection being on the secondary side of the coil, and only the aerial being connected to tuned primary of the coil."

Next month, I will show you how I built my version of this nifty receiver. I'll share a secret that a friend of mine and I developed to make a neat reproduction of an Early Fixed Crystal Detector as part of this project. If you're an early set construction

buff, you will enjoy the challenges in reproducing this 70-year-old wonder.

Here is the original article and artwork from the 1932 article. More adventurous readers might jump in and build the set from the original *Sunday Mail* newspaper's weekly column, but I suggest novice builders wait for my suggestions and shortcuts, as well as a list of suppliers, that will be shared in the next issue.

THE MYSTERY CRYSTAL SET

(by: Proton)

The Sunday Mail — Brisbane Australia
 July 3, 1932

The mystery crystal receiver is so-called because I do not know just why it should be so good, and after trying it out for about a fortnight, I am more amazed at the results than before. It is without a doubt the best crystal set that I have heard. Some of the *Sunday Mail* crystal receivers have attained Australia-wide fame, and it is quite a common occurrence to receive requests from readers in every state of the Commonwealth, asking for details of the Improved Interstate Crystal Set or the DX Crystal Set, but, this crystal set, to my mind, eclipses them all. When you look at the diagram, you will note that it is quite a different arrangement

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from that which you normally see in the crystal circuits, but nevertheless it is a simple crystal receiver that will cost only a few shillings, and sufficiently selective to separate all the local stations without any overlap, and bring them in with enough volume to make the reception enjoyable. As compared with the Improved Interstate, this set is definitely superior. It tunes the B stations with greater ease and with more volume, while 4QG's volume will surprise you as it did me.

The coil, like the whole circuit, is a most unusual arrangement, consisting of two coils wound together, turn-to-turn on

the one former (coil form). The aerial coil — which is tuned — has two aerial points with any earth connection. The detection output circuit is untuned, and has the receiver's earth connection, a very unusual arrangement.

THE COMPONENTS

The components to build this freak crystal set are:

- One piece of bakelite panel, 10 by 7 by 3/16 inch
- One wooden baseboard, 9 by 7 inch
- One .0005 mfd variable condenser (500 pF variable — Ed)

- One 3 inch plain dial
- One glass-enclosed crystal detector
- Five terminals, NP type
- One piece of 3 inch coil former, 3 inches long
- lb. of 24 SWG (23 AWG) D.S.C. (Double Silk Covered) coil wire
- 2 oz. of 30 SWG (29 AWG) D.S.C. (Double Silk Covered) coil wire
- One coil of hook-up wire, solder, and wood screws
- One switch arm, two contact studs and one .001 mfd fixed condenser.

CONSTRUCTION OF SET

The first construction step is the winding of the coil. As this is a little unusual, I will endeavor to make it as simple as possible. Wind 12 turns of 24 gauge D.S.C. wire on one end of the former, and, without breaking the wire, stop winding and punch two holes in the former, and thread the end of the 30-gauge wire through these holes to make it secure. Then continue the winding with both the 24- and 30-gauge wire so that, for the next 25 turns, the coil is so wound as to have a turn of the 30-gauge wire between each turn of the 24-gauge wire. When 36 turns of the 24-gauge wire, and 25 of the 30-gauge wire have been wound on, stop winding, and without breaking the 24-gauge, break the 30-gauge wire, and secure it by punching two holes in the former and threading it through these. Now continue winding the 24-gauge wire for another 13 turns, and then securely fasten by punching a further two holes in the former, and the coil is complete.

The .0005 mfd condenser is mounted on the centre of the panel, and the three-inch dial is then fitted. The crystal detector is then mounted over the condenser, and the switch arm and the two studs is mounted under the condenser dial. The aerial terminals are mounted on the left-hand side of the panel along with the earth terminal, while the two phone terminals should be mounted on the right-hand side of the panel. The coil is mounted on the baseboard directly behind the .0005 mfd variable condenser.

OPERATION OF THE RECEIVER

The operation of this receiver is just as simple as the construction (*Say what! — Ed*) The first point to note is that the switch and the two studs vary the selectivity, for when the switch arm is in contact with the stud S in the diagram, the set is very selective, and will tune in all four locals (*early Brisbane stations — Ed*) without interference, but when the switch arm is in contact with stud B, the receiver is much

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broader in its tuning and interference may occur, but the volume is greatly increased. The .0005 mfd condenser tunes in the various stations in the normal way. A point worthy of mention is the phone condenser. This condenser is usually omitted, but in this set it will be found to increase the volume quite considerably.

The Mystery Crystal set is really a definite solution to the inexpensive crystal receiver selectivity problem, and all readers who build up the set have an excellent receiver possessing excellent punch and selectivity.

THE MYSTERY CRYSTAL SET

by: Proton

The Sunday Mail — Brisbane Australia
July 17, 1933

ACTUAL WIRING DIAGRAM

The Mystery Crystal set has proven most popular with constructors and some of the reports are really amazing, as the one published below indicates. A number of readers have written in asking for an actual wiring diagram, and this week, in response to their request, I am giving those details. In order to make the construction more simple, I have shown how to construct the set without the switch and

studs by using two aerial terminals instead. This does not affect the receiver's efficiency, but it makes it easier to construct for those who have not the necessary drills and dividers.

Now, for a few hints. Firstly if you desire to get the best results, build the set up in the manner instructed. Something else might work just as well, and on the other hand it might not, and every one of the few components in the set have a definite purpose, even the most despised phone condenser improving the results. The receiver works better with a cats whisker type of detector than a permanent type. In some cases, an indoor aerial is giving satisfaction, but this type is not always satisfactory for the reception of all four local stations.

PRaise FOR THE SET

(Letter from a *Sunday Mail* reader, July 17, 1932)

The merit of this receiver will be more readily appreciated after reading the letter from J. E. of Ashgrove.

"I have successfully constructed your Mystery Crystal Set. As you already know, I have tried out a good few of these in the last seven years. I used, on account of hav-

ing a lot in hand, No 23 D.S.C. wire for the 50 turn coil and 24 D.S.C. for the 25 turn coil, using a .0015 condenser between phones, having 120 feet overall aerial. I met with amazing results. I brought in 4BG with wonderful punch. It was audible on the speaker (scientific type) two rooms away, on stud B, but when I switched to stud A 4QGs volume decreased a bit, but I pulled in 4BK, 4BC, 4BH, and K4KW on the speaker. It was so strong that they could be heard 30 feet from set."

One other very important note. Ray has requested that anyone who may have an original *Mystery DX* or *Interstate Crystal Set* to please contact him. Also, Ray has kindly supplied us with a link to Webpages detailing the construction of a Browning-Drake receiver for readers looking for a more advanced project to build.

I hope this information gives you some historical feeling for early radio in Australia, and gives my readers some impetus to experiment. By the way, on Ray's Website you will find links to another Website that shows how another builder used the *Mystery Crystal Set* as a project for his science class; you'll get a kick out of what kids did with this project. See you next month, when we begin constructing our version. ■

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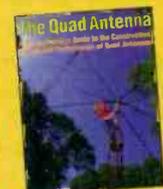
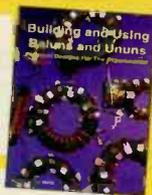
by Bill Orr, W6SAI

Inexpensive practical antenna projects that work!

Building & Using Baluns & Ununs

by Jerry Sevick, W2FMI

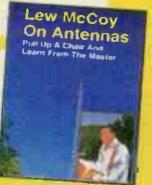
Info and designs on transmission line transformer theory!



The Quad Antenna

by Bob Haviland, W4MB

Design, construction, characteristics and applications of quad antenna.!



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by Lew McCoy, W1CP

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RADIO & THE INTERNET

Pop'Comm's Cyber Sleuth Checks Out Online Resources

Strong Signals Has It Nailed, And Hot Clandestine, Pirate And CB Sites

Editor's Note: All the URLs here are available online at the Sleuth's Quick Links Page at <http://www.dobe.com/ql/>.

We'll kick off this month's journey with a visit to a real "shining star" of a site — "Strong Signals" by Richard J. Wells. In my opinion, when it comes to a QUALITY and COMPREHENSIVE radio monitoring resource, "Strong Signals" has got it nailed. This incredible resource more than lives up to Richard's Welcome Message and Goals Statement — which says: "Welcome to the Internet's largest website (over 350 pages) devoted to the hobby of radio monitoring! To the layman, it would probably be better known as 'scanning' but around here we have much broader horizons. While scanning is usually thought of in terms of a 'police scanner,' such radios can be used to listen to a *lot* more than police, including firefighters, commercial and military aircraft, railroad, federal and local governments, weather, newspapers, TV crews, marine, satellites, power, water/cable/ TV/telephone workers, sports teams, race cars, and so much more! There are also many radios available which can be used to listen to signals from around the globe on the shortwave bands."



Probably the largest quality radio monitoring resource on the 'net.

And, from his "Our Goals" statement: "Provide a community of hobbyists interested in seeing radio monitoring prosper and grow. Provide THE MOST up-to-date source of radio-related news and information. Provide the information needed to make informed purchases of radio accessories, antennas, books, receivers, and software. Provide resources that new users can utilize to answer their own questions and thus educate themselves. Provide the means necessary for users at all levels to contribute their knowledge and experience in an effort to help each other."

One word sums up "Strong Signals" — AWESOME! A definite DON'T MISS and BOOKMARK resource at <http://www.strongsignals.net/>.



Listen to nearly 3,000 worldwide stations at the click of your mouse.

Internet Radio

"Tune in to the World" Worldband.com, from iTuner Networks Corporation, is a comprehensive station guide and Broadband portal where you can find and tune in to nearly 3000 International Radio and TV stations. When I visited, 2813 stations spanning 126 countries and 53 languages were available! All popular streaming media players (RealPlayer™, Microsoft Media Player™, etc.) are supported. If you need a player, you'll find a separate download page where you can grab one. All in all, it's a pretty impressive (and addictive) resource. Forget about propagation problems and Check 'em out at <http://www.worldband.com/>.

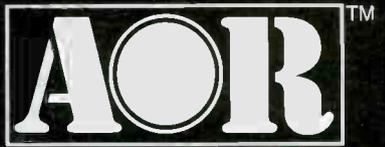
Clandestine Radio Watch

Clandestine Radio Watch (CRW) is a monthly summary, which centralizes the latest news and developments affecting the study of clandestine radio in an easy-to-read format. Editions are published on the CRW website. A subscription to CRW is free. CRW is both not-for-profit and non-partisan. CRW welcomes your interest, input, and queries. Contributions, input and support, logs, QSL verification information, as well as back-

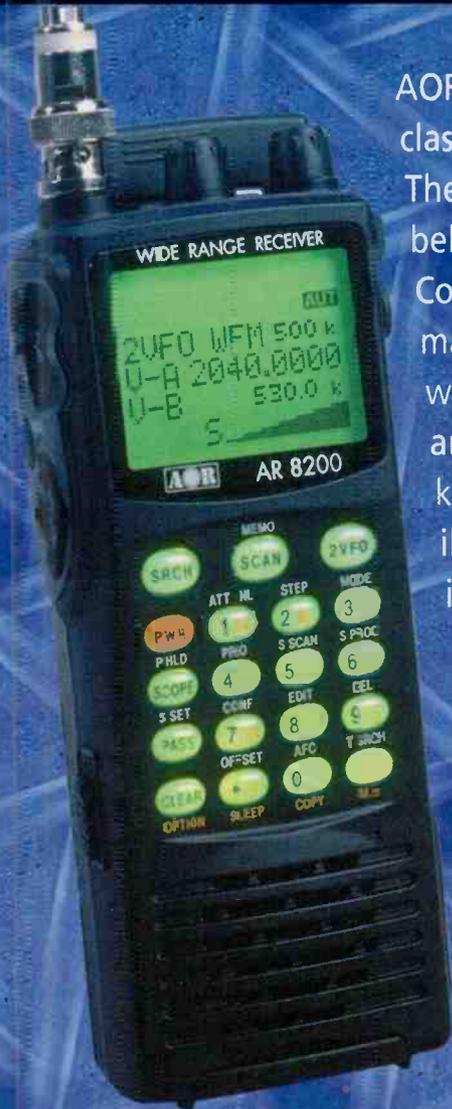


Keep abreast of what's happening in the world of clandestine radio.

BY ERIC FORCE <eric@dobe.com>



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AOR has just improved its world-class AR8200 B portable receiver. The AR8200 Mark II B leaves others behind, with a new Temperature Compensated Crystal Oscillator that maintains frequency stability without regard to changing ambient temperatures. A new keyboard layout and improved illumination allow a low easy operation in a variety of conditions.

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CIRCLE 15 ON READER SERVICE CARD

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ground material can be sent to CRW's Editor, Martin Schöch. Details can be found at the site. CRW issues include parts in English, Spanish, and German. If you have an interest in clandestine radio, CRW should definitely be part of your resource toolkit. Be sure to check out <http://www.swl.net/swl-de/crw-main.html>.



Grab a cup of coffee, kick off your shoes, and enjoy this nostalgic Internet masterpiece.

Radio History

Barry Mishkind's "The Broadcast Archive — Radio History on the Web" is another resource that lives up to its name — in spades! Barry states: "The mission of OLDRADIO is to collect and preserve historical and current information, graphics, printed materials, and whatever else can be accumulated to help radio enthusiasts, researchers, and students find information on the background and history of the industry." And, that it does and more! Grab a cup of coffee, kick off your shoes, and enjoy "Radio History on the Web." It's located at <http://www.oldradio.com/>.

Two-Way Radio Troubleshooting

Al Cook (K2MPE) of CK Electronics in Sodus Point, NY, offers some good troubleshooting "tricks of the trade" for your 2-way radio gear. Three, relatively short, web pages will guide you through a common sense approach to finding that problem.

2-WAY RADIO TROUBLESHOOTING



by Al Cook (K2MPE)

http://www.ckradio.com/

Learn some "tricks of the trade" from 30+ years of experience.

Al divides the process into three concise areas: System Problems — Things to look for when the radio equipment checks out OK on the bench, Equipment Problems — Is it really the radio or simple misadjustment, and When All Else Fails — Other things to try when it really appears to be an equipment problem. Check it out at <http://www.ckradio.com/>.

CB Radio

Where better to find information on Citizens Band radio than the website of the person who co-maintains the rec.radio.cb Newsgroup FAQ (Frequently Asked Questions) document. At "Cody's PC Home Page" by Andrew Cody, you'll find just about everything you ever wanted to know about CB including: tips on how to buy a CB radio, a section on "SKIP" and the most current version of the rec.radio.cb FAQ document. The FAQ, by the way, is a comprehensive resource in itself — if you haven't seen it, you really should take a peek while you're visiting Andy's site at <http://www.iserv.net/~codyspc/>.

SWL QSL Card Museum



http://www.antique-corner.com/SWLQSL/

View cards from nearly 200 countries and 400 unique stations and sites.

SWL QSL Card Museum

If you like QSL cards you'll LOVE the "SWL QSL Card Museum." There you will find images of QSL cards from nearly 200 countries and 400 unique stations and sites. It's truly a massive and interesting archive. If you have a QSL card from a station not represented in the collection, you are invited to share it with the museum. Details can be found at the museum at <http://www.antique-corner.com/SWLQSL/>.

Pirate And Free Radio

John Anderson and his About.com section on Pirate/Free Radio is another one of those individuals who backs up his words with



Pirate/Free radio info at its best — if it's out there, John certainly has it covered.

actions! "We're gonna go nuts here. I'd like this to be the biggest, most comprehensive, and most useful site on the 'net dedicated to those broadcasters and enthusiasts who worship on-the-edge radio. Everything is game."

That's how John describes things. And, he ain't kidding. From A to Z, if it deals with Pirate/Free Radio, John has it covered — right down to launching your own web-based radio station. Take a peek at the screenshot for a partial subject list then visit and bookmark this INCREDIBLE resource at <http://pirateradio.about.com/tvradio/pirateradio/>.

Columnist Joe Cooper's Homepage!

Yes, the Internet is indeed global with literally millions of places to visit and explore. But, sometimes the greatest finds can be found right in your own back yard. In this case, the web-site of *Pop' Comm's* own "Utility Radio Review" columnist, Joe Cooper (VE3FMQ).



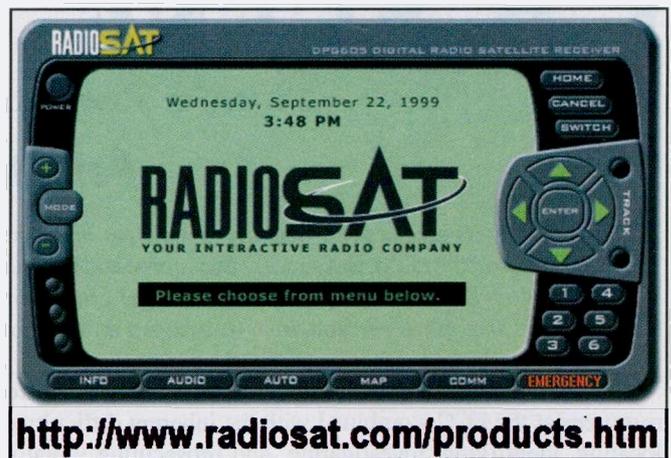
Diamonds in our back yard — Pop'Comm's "Utility Radio Review" columnist's site.

While Joe's column usually includes his website's URL, I'm highlighting it here for the benefit of those who may have missed it. "Joe Cooper's Homepage" is a really nice resource, which includes sections covering "Magazine Column, Monitoring Articles, and Radio Construction Projects," "ARS Station, Radio Monitoring, and Lower Activity," "Technical Writing, Journalism, and Essays" and "Anti-Bullying Information and Resources." Visit <http://www.provcomm.net/pages/joe/>.

Car Radio Of The Future?

Interactive Radio Corporation (IRC) has designed and (if all goes well) will market (possibly next year) a low-cost transceiver unit to automotive device manufacturers and OEMs. Installed in car radios or dashboard telematic units, IRC's patented technology and satellite-based two-way data network will enable the reception of standard radio broadcasting as well as a direct mobile interface to Internet content, e-commerce services, location based advertising, and other vehicle related services.

To give folks a feel of this new and emerging technology, IRC has set up an online simulation of their new unit. While actual audio was not available when I took a "test drive," I did find it quite interesting in terms of its proposed functionality. Buttons under the demo's splash screen simulate permanent automobile dashboard buttons. The splash screen above the dashboard buttons simulates a RadioSat touch screen. The simulation demonstrates a new dimension added



Is this the car "radio" of the (near) future? See text.

to radio — entirely new functions, rather than simply conventional audio broadcast reception.

Take a peek and a test-drive at <http://www.radiosat.com/products.htm>.

Web Tips

The Internet access division of Adelphia Cable (Adelphia Powerlink) has some good information available at their Technical Assistance Center site. There you will find Speed Tips to increase your download speeds, an Internet Guide where you'll learn about news, E-mail, and browsers, plus tips and tutorials on building web pages. A nice resource! Take a peek at <http://powerlink.adelphia.net/>.



Find some nice Web tips at this major cable company's site.

TIP: If you live in an area serviced by Adelphia, (or other cable company for that matter) you might want to inquire about the availability of Internet access via cable. If it's available in your area, I think you'll be pleasantly surprised at the cost and benefits. In my case, over 10 times the speed of a dual channel ISDN connection for less than a third of the cost, with unlimited access and the cable modem INCLUDED in the monthly charge. If you're using a 28.8K modem, cable access is about 50 times faster. With an ISDN connection through my phone company, the cost was high, (which only included 150 hours (dual channel) usage per month) and had to buy an ISDN adapter card to boot. Food for thought.

That's it for this month, so we'll head back to the barn. Keep those comments and suggestions coming and don't forget to visit the Quick Links page at: <http://www.dobe.com/ql/> for easy access to all the resources noted here and the *Pop'Comm* web-site at <http://www.popular-communications.com/> for the latest radio info. Happy Holidays!

Until next month, 73. ■

CB SCENE

27 MHz Communications Activities

Persistence Pays

Success never comes easy. Not in life, not in love, and especially not on the radio. But success does come and it comes most often to those who persevere. Time and time again, history shows that whatever you wish to succeed at, the most important thing to remember is, persistence pays.

For example, getting in trouble on the radio. Limited resources at the FCC, combined with the inherent difficulty of locating, identifying, investigating, and prosecuting violators render the chances of any particular practitioner of minor violations from ever hearing from the Commission, slim to nonexistent. Getting in big trouble — I mean really big trouble — is damn near next to impossible. If, however, you work at it long and hard, with lots of patience and persistence, it can be done.

Charlie Michael Group



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Charlie Michael Information #1 US: Tony Lohse, RR 1, Blockhouse, Nova Scotia B0J 1E0 - cm241@juno.com

QSL from the Charlie Michael Group.

Consider the following case. One of the most persistent radio pests to recently draw not only our attention but that of the FCC has been William Flippo. As you may recall, Flippo's story appeared in this column exactly one year ago. If you don't recall, allow me to refresh your memory.

On July 12, 1999, in a "Notice of Apparent Liability for Forfeiture," the Tampa District Office of the FCC's Compliance and Information Bureau fined William Flippo of Jupiter, Florida, \$20,000. Described as a Freebander by one FCC official and a CBer by others, Mr. Flippo was charged with numerous violations. They include, willful operation of an unlicensed radio station on 28.375 MHz, willful or malicious interference with an on-going amateur radio communications, and failure to make his radio equipment available for inspection by an authorized FCC representative.

Doubtless, Flippo worked long and hard to get this far. Most pests would have considered this success sufficient and moved on to some other project. Not Flippo, however, who has persisted in pursuing higher goals. And again it appears he has suc-

ceeded! Not content with attracting our attention and that of the Commission, Mr. Flippo is now the object of desire of one Guy A. Lewis. Lewis is the United States Attorney for the Southern District of Florida. If Lewis has his way, Flippo will not only be broke and off the air but behind bars as well. Wow.

On July 20, 2000, Lewis, and the Miami offices of the Federal Communications Commission Enforcement Bureau, announced that Flippo has been charged with four counts of unlicensed radio operation (47 U.S.C. § 301) and four counts of interfering with licensed radio stations (47 U.S.C. § 333), which he allegedly committed between June 8, 1999, and April 11, 2000. The United States Marshals Service arrested Mr. Flippo at his Jupiter, Florida home, from which it also seized his radio transmitting equipment. If convicted, Mr. Flippo could face up to one year in prison and a fine of up to \$10,000 for each violation.

The Lesson

The lesson to be learned here seems to go something like this — to really get in big trouble with a radio do every thing you can to make a pest of yourself to as many people as you can as often as possible. That way you have the best chance of generating a high number of complaints. Complaints are the driving force at the Compliance Bureau. The more complaints, the get the easier it is for them to assign their limited time to you. The best way to do this, of course, is to be rude, crude, and offensive. Run lots of power, especially through cheap non-maintained equipment, which will insure that you are causing heavy interference to your neighbor's electronic entertainment and communications equipment. If you are unlicensed, visit the amateur frequencies on a regular basis. Make yourself easy to find by transmitting often. Include your call sign or name and address frequently. Keep the key down for long periods of time because it will help the trackers pinpoint your exact location. Finally, when the warning letters come be sure to ignore them, that will help insure a personal visit. Then when the inspectors do show up, don't let them in. Yes, it is a lot hard work but remember, if you persist, it will pay off.

All joking aside, it is refreshing to see that the bad ones can and do get their just rewards. It is, nevertheless, more than a little disconcerting to realize that the same efforts that are helping to clean up the airwaves are also discouraging many fine operators from fully enjoying the hobby. Such is the case of an operator we will call "Hamdude" who asks his real name and call-sign be withheld to "prevent harassment" "Dude" writes concerning the recent series of articles about Freeband-ing that have been appearing here in the "CB Scene." He says, "Yes I am a licensed ham radio operator and really enjoy the hobby, and have met some great people. However, I do enjoy the attitude and the general feel of the freeband as a whole. Same atmos-

BY ED BARNAT <ed@barnat.com>

phere but yet more relaxed and still a tad different. I know there are some 'bad apples' in anything you do as well as I am sure you know this also. So, I really don't know what to do to benefit this portion of spectrum? I, for one, am not near as active on the freeband as in the past . . . since I feel that Mr. Hollingsworth (the new FCC enforcer on the hunt for bad operators . . .) will have more attention now than ever focused on the area between top of CB and lower end of 10m band. I agree with an earlier article that comes to mind of two instances . . . one — an amateur operator who was ordered to cease and stop the out of band TX from his station. And he never did again . . . then there is the station that turned in his callsign, denied access to his gear and has continually been on the air on illegal frequencies, causing interference on TVs and all types of problems. This gives the whole hobby a bad name no matter your choice of frequency to be on. What are we to do? And as you said who is the REAL 'bad guy' and loser here? Well, enough of me for now — KEEP up the GREAT WORK! I love the magazine and the excellent truthful style it has as well as 'CB Scene' every month!"

Dude, all that any of us can do is what we have always done — persist. Enjoy the radio and be the best operator we can be. Every time we key up, no matter what frequency we are on, for better or worse, we help shape the hobby. Characters like Flippo degrade it. People like you enhance it. If people like you stay off the air, then people like Flippo win. They set the tone, they set the example, they teach the newcomers, and they determine what the hobby will become. It is not that your fears of prosecution are groundless, they aren't. Especially, since the arrival of Hollingsworth and particularly in your case, since you are a licensed amateur. While a number of the FCC's recent enforcement actions have in some way involved CB or the Freeband, the connection to either seems to have been more coincidental than deliberate. As I recall, all of them, in one way or another, were mainly amateur actions. Either the operator in question had been causing interference on the amateur bands — Flippo for instance — or they were amateurs, like you, operating on the Freeband or CB.

There is also the recent case of Adam Andrews, of Lewiston, Idaho, who received a warning letter on July 6, 2000 for identifying on Citizens Band frequencies with an amateur call sign, W7OWG.



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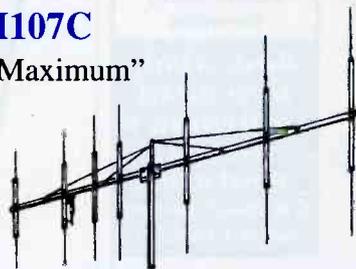
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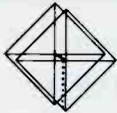
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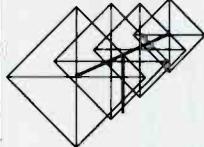
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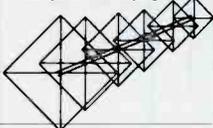
SUPERHAWK



WHITE LIGHTNING THE Four Element Antenna



LIGHTNING 6



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Broadband Hi
powered MOBILE

THUNDER 8
Hi Gain
Bi-Directional
OMNI
Electronically
Steerable

**And, also,
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POWERFUL
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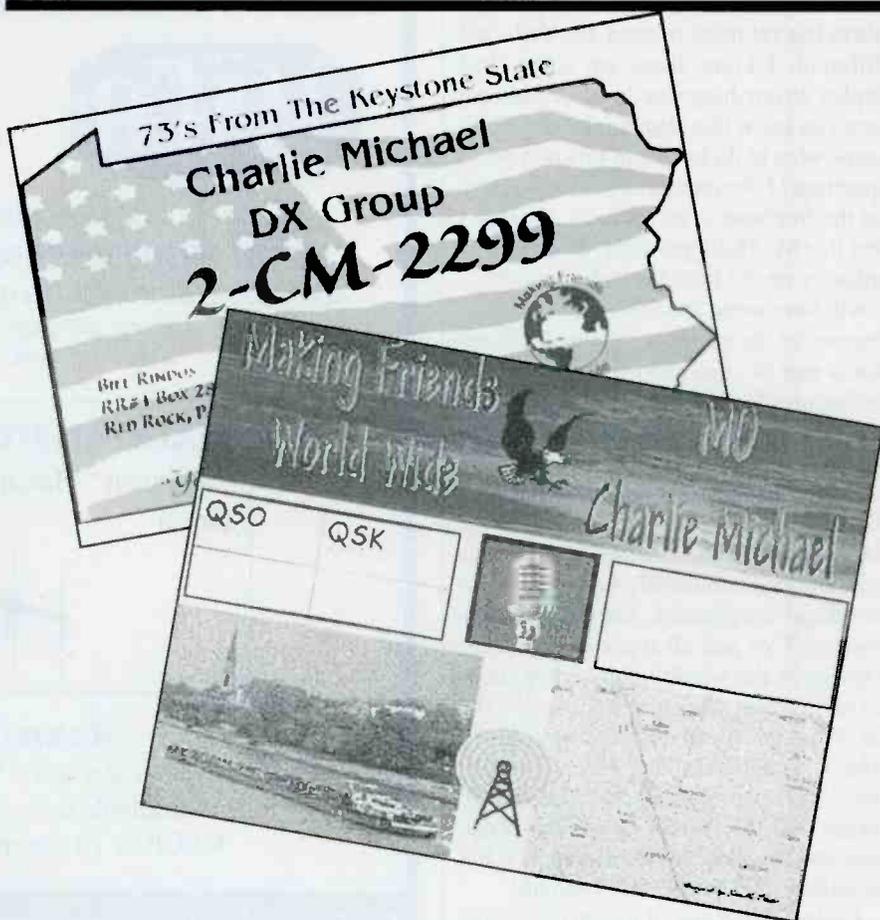
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Two more Charlie Michael QSLs.

The letter also states that, "Information also indicates that you have been transmitting on other frequencies, near the Citizens Band frequencies, without a license." For more information on this and other recent FCC actions check the USCBOA website at www.uscboa.org.

Finally, persistence also pays for George Valdes, SSB 133M, of Croydon, Pennsylvania. George wrote to say that he constructed the wire dipole antenna I wrote about in the July 1999 "CB Scene." He strung it up vertically (temporarily) indoors between his living room and dining room and attached it to his Sears Roadtalker 40. Then he tried to make contact during a monthly Saturday night mixer. No luck, no contact. Undaunted, George fired up his rig and tried again the next day, Sunday. "I turned the radio on Sunday at 7:30 a.m.," George reports. "I made a contact on 39 LSB which sounded like a local. I told him that I was in eastern PA. It turned out his 20 (location) was in Texas! This was my first long-distance contact. It made my day."

Well George, thanks for the story. It proves that you don't need a monster sta-

tion, large amplifier, and big antenna to fully participate in this wonderful hobby we call CB. So whoever you are, wherever you are and whatever kind of station you run, just get on the air and do it. Whatever your definition of success, if you persist, you just might achieve it.

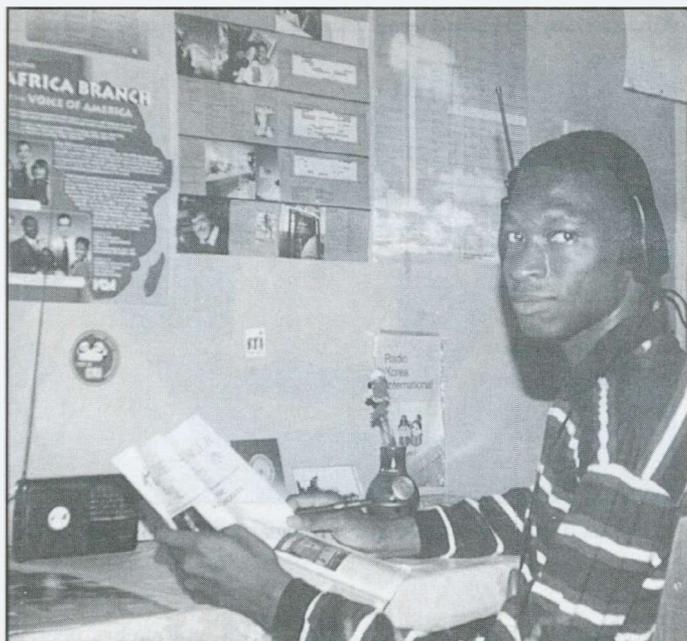
November And December CB Mixers

If you are looking for a little chatter on the CB make sure to make plans to attend the next, regularly-scheduled on-air CB Mixer. They are held, wherever you are, on the last Saturday of the month (the next two will be on the 25th of November and 30th of December from 9 p.m. until 10 p.m. local time. SSB operators work channel 36 LSB. AM operators work channel 23.

Well, that's 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 25th and December 30th) — catch me on the radio! 73

HOW I GOT STARTED

Congratulations To Reader Omoeffe Onoriobe Of Nigeria!



Reader Omoeffe Onoriobe of Nigeria at his monitoring post.

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: "How I Got Started," *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.

Our November Winner

Pop' Comm reader Omoeffe Onoriobe of Delta State, Nigeria, says, "I started listening to shortwave in 1986 with the BBC and VOA using a JVC Nivico MW/SW radio. Sometime in 1990,

my elder sister asked me to repair her faulty portable nine-band Philips D-1835 Compass World Receiver. In no time I fixed it and I never returned it to her.

With this wireless I began to discover the hidden treasures in the DX minefield. I found out that I could travel to every nook and cranny of Planet Earth without violating the airspace of any country. Tuning my radio simply does the magic!

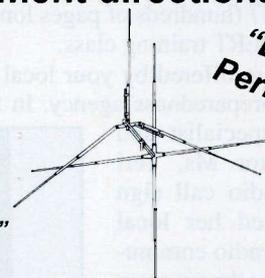
During my early days of DXing, I usually spend about five hours daily scanning with enthusiasm through the global village's airwaves. Radio is my first cup of tea in the mornings. I see myself as a shortwave addict. Sometimes, DXing is like a lunatic running without any destination.

Currently my DX gadget consists of an analog 20-band Artech HI 16 receiver with a two-meter long insulated copper wire. My favorite DX programs are DXing With Cumbre (WHRI), Wavescan (AWR) and Media Network (RN). ■

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Hess Electronics
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RADIO RESOURCES

Interesting Thoughts And Ideas For Enjoying The Hobby

City Response Teams Using FRS

Community Emergency Response Teams are forming throughout the United States, thanks to support from the Federal Emergency Management Agency. These teams, called CERT, are focused on training you, your family, fellow radio operators, and neighbors in the event of a catastrophic disaster. Because emergency services personnel will not be available to help everyone immediately, CERT members can make a difference by using the training to save lives and protect property.

The CERT training program is divided into seven sessions covering the following topics:

1. Disaster preparedness
2. Disaster fire suppression
3. Disaster medical operations — Part 1
4. Disaster medical operations — Part 2
5. Light search and rescue operations
6. Disaster psychology and team organization
7. Course review and disaster simulation

“The goal of the training continues to be preparing people to help people. Seeing the value of CERT, our Federal Emergency Management Agency is committed to supporting the training of local CERT teams across the nation. These teams, too, can assist with saving lives and protecting property in the event of a major disaster, according to FEMA. Each city may use the FEMA handbook SM-137 (hundreds of pages long!) as their guideline for setting up a CERT training class.

Most classes are offered by your local city fire department or city disaster preparedness agency. In Southern California, fire protection specialist and CERT coordinator Ms. Teri Durnall, ham radio call sign KF6VVC, worked her local emergency ham radio communications team into the program to facilitate citywide radio communications. Going with Page xvii of the CERT training handbook that describes “. . . ham and CB radio links also may be used to increase communication capabilities and coordination . . .” the City of Costa Mesa CERT program became so popular that local hams saw a need for developing “block communicators” and “school communicators” who might use another radio system to transmit and receive very localized radio reports.

The Midland 75-509 FRS handheld.



FRS is a great way to teach kids proper radio operating skills.

Should these City of Costa Mesa CERT volunteers need to obtain a ham license to take advantage of two-way radio, or was there an alternative radio service that might fit their localized communication needs?

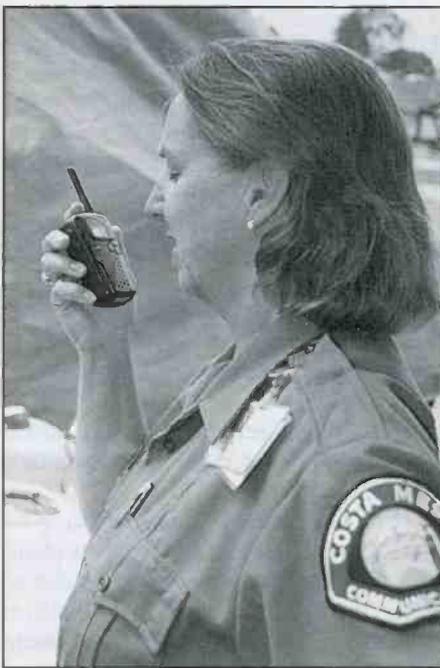
Family Radio Service (FRS) was just the answer, and many cities throughout the United States are quickly discovering FRS as a great way to send and receive local emergency reports.

“Here in the City of Costa Mesa, we have purchased over 50 simple half-watt FRS transceivers, and all are set to FRS Channel 4, 462.6375 MHz,” explains Teri Durnall, the CERT coordinator. “Every Monday night our local MESAC ham radio

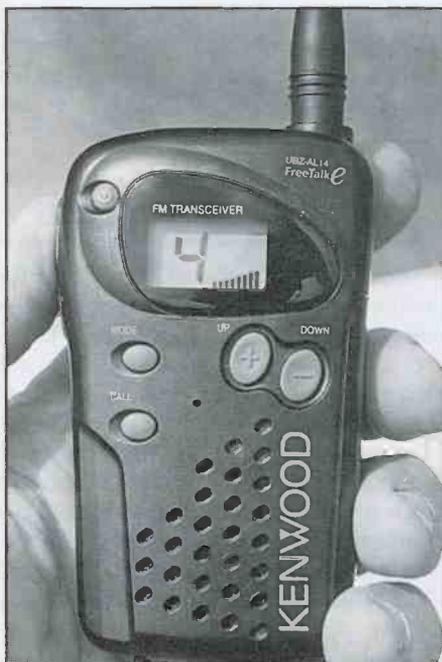


CERT using FRS channels with excellent results.

BY GORDON WEST, WB6NOA



A city worker using FRS equipment during a CERT demo.



The City of Costa Mesa uses FRS Channel 4.

city communications team conducts an FRS radio net as a test of the FRS Channel 4 radio system, and we were very impressed with the number of CERT volunteers and interested citizens coming up on the air to describe where they were, and any local observations within their block," adds Durnall.

"We want to share our FRS radio experience with every city in the country,"

comments Byron Grams, KC6YNG, the Monday evening net control operator for the city ham group MESAC, and one of the coordinators of the Channel 4 CERT check-in net. "We found FRS a great way to promote citizen community awareness to anyone listening in to our Channel 4 broadcasts with their little CERT radio. Because we have a more powerful net transmitter, we get reception reports more than 40 miles away — easily covering everyone within the five-mile city limits," adds Grams.

The "more powerful" net radio system is the tie-in with the general mobile radio service and the low-power, half-watt, Family Radio Service.

Family Radio Service equipment operates on 14 simplex UHF frequencies, interstitial to duplex GMRS channels. The little FRS handhelds shall not exceed 500 milliwatts (1/2 watt) effective radiated power, nor may they offer deviation greater than 2.5 kHz and an audio frequency response of 3.125 kHz. FRS Channels 1 through 7 fall in between (interstitial) two GMRS (General Mobile Radio Service) OUTPUT repeater and talk-around frequencies, and FRS Channels 8 through 14 fall between

GMRS handheld and mobile input frequencies to their local repeater systems.

FRS Channel 1	462.5625 MHz
FRS Channel 2	462.5875 MHz
FRS Channel 3	462.6125 MHz
FRS Channel 4	462.6375 MHz
FRS Channel 5	462.6625 MHz
FRS Channel 6	462.6875 MHz
FRS Channel 7	462.7125 MHz
FRS Channel 8	467.5625 MHz
FRS Channel 9	467.5875 MHz
FRS Channel 10	467.6125 MHz
FRS Channel 11	467.6375 MHz
FRS Channel 12	467.6625 MHz
FRS Channel 13	467.6875 MHz
FRS Channel 14	467.7125 MHz

GMRS operators are required to be licensed by the FCC. "The GMRS is a radio service intended primarily for use by people communicating with their family and friends during recreational activities, such as fishing, camping, and boating," explains Ken Collier, sales manager for Pryme Radio Products, the manufacturer of one of the country's most popular GMRS and FRS handheld, CLEAR CONNECT. In their two-way radio instruction book, they give easy steps on filing for a GMRS license through the Internet or fil-

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GMRS (left) and FRS may indeed intercommunicate on FRS channels 1-7.

Plus.” “Because Channels 1-7 in both our GMRS and FRS equipment are the same Family Radio Channels 1-7, you can use your micro-connect portables to intercommunicate with any FRS radios in your group.” This illustrates that a licensed GMRS user could indeed use the more powerful Pryme handheld to communicate over greater distances to an FRS handheld user. Technically, increasing the power at only one end of the circuit is not going to increase communications range, but a more powerful station operated by someone conducting city CERT exercises could certainly be heard further by others with simple FRS handheld transceivers.

How well is the program working for the City of Costa Mesa? “We were pleasantly surprised to see how far a half-watt FRS radio signal travel,” finalizes Durnall, indicating five to seven blocks range in most residential areas, and plenty of range for CERT city personnel to intercommunicate from all of the floors at City Hall. “Our ham operators are handling the FRS system well, and it is surprising how many check-ins we get from non-CERT members every Monday evening,” adds Durnall. This gives her great recruitment capabilities for the CERT program.

Good Radio Discipline

One other benefit of the little FRS radios is the development of good radio discipline. The little inexpensive transceivers are also a good “test” to see whether or not your kids may be get turned on to the excitement of ham radio. The Kenwood FRS equipment may also support Kenwood video communicator picture transmissions, just as long as the transmission lasts no longer than 15 seconds to meet FCC rules. The Kenwood VCH1 plugs right into the top of many Kenwood FRS transceivers for full-color, crystal-clear, slow-scan photo transmissions over FRS. Radio Shack is also producing an FRS “time delay” repeater.

It appears CERT and FRS, plus HAM, all spells out citizen involvement in a city’s emergency preparedness program. REACT International also suggests that FRS Channel 1, 462.5625 MHz, be used as a call channel, with privacy code disabled, especially in an emergency. Contact REACT’s Bob Leef at 949-770-9591 for more information on all you can do with FRS and REACT. Also check www.gmrs-info.com. ■

GMRS Channels — License Required For Operation

Repeater Output Fixed-Station or Mobile Talk-Around

Channel 1,	462.550 MHz
Channel 2,	462.575 MHz
Channel 3,	462.600 MHz
Channel 4,	462.625 MHz
Channel 5,	462.650 MHz
Channel 6,	462.675 MHz
Channel 7,	462.700 MHz
Channel 8,	462.725 MHz

Mobile Repeater Input, Control & Fixed

Channel 1,	467.550 MHz
Channel 2,	467.575 MHz
Channel 3,	467.600 MHz
Channel 4,	467.625 MHz
Channel 5,	467.650 MHz
Channel 6,	467.675 MHz
Channel 7,	467.700 MHz
Channel 8,	467.725 MHz

any channel, not just a specific channel.

Now here’s some recent good news: GMRS operators are indeed allowed to use FRS channels 1 through 7, and the rules have been clarified that GMRS comms may be conducted amongst themselves, and also to another radio group, like FRS. So what this means for a high-power operation to be received “all over town” by FRS users on, let’s say, the City of Costa Mesa’s Channel FRS 4, the higher power GMRS station would conduct its normal radio system and also attempt communications with FRS, the alternate radio service. There is nothing that would forbid all FRS users from overhearing all of the latest city news on their little FRS handhelds. And, of course, in an actual emergency, the rules also permit the more powerful GMRS station to communicate directly with FRS users.

Ham Operators

What the ham operators do when conducting FRS nets for their local city CERT team is to communicate within the GMRS rules amongst themselves with information that any FRS listener could eavesdrop and glean information. And when it comes time for FRS check-ins, the GMRS net controller has the local ham operators switch to their little FCC type-accepted, 1/2-watt, FRS communicators, or handheld GMRS equipment, and take check-ins from local CERT and citizen equipment users up to 5 to 8 blocks away.

Pryme Radio Products calls their powerful 4-watt transceiver “Family Radio

ing on the new FCC Form 605. Just use your FAX machine to call 202-418-0177 and request Form “000605.”

The Pryme Micro-Connect radio products may offer up to four watts on GMRS channels, and with the GMRS license you may also transmit this same amount of power on FRS channels 1 through 7. But again, higher power on these FRS channels is limited only to those GMRS operators who possess a valid license, and are communicating legally with their “family” of radio users under their same license. New rules now allow them to use

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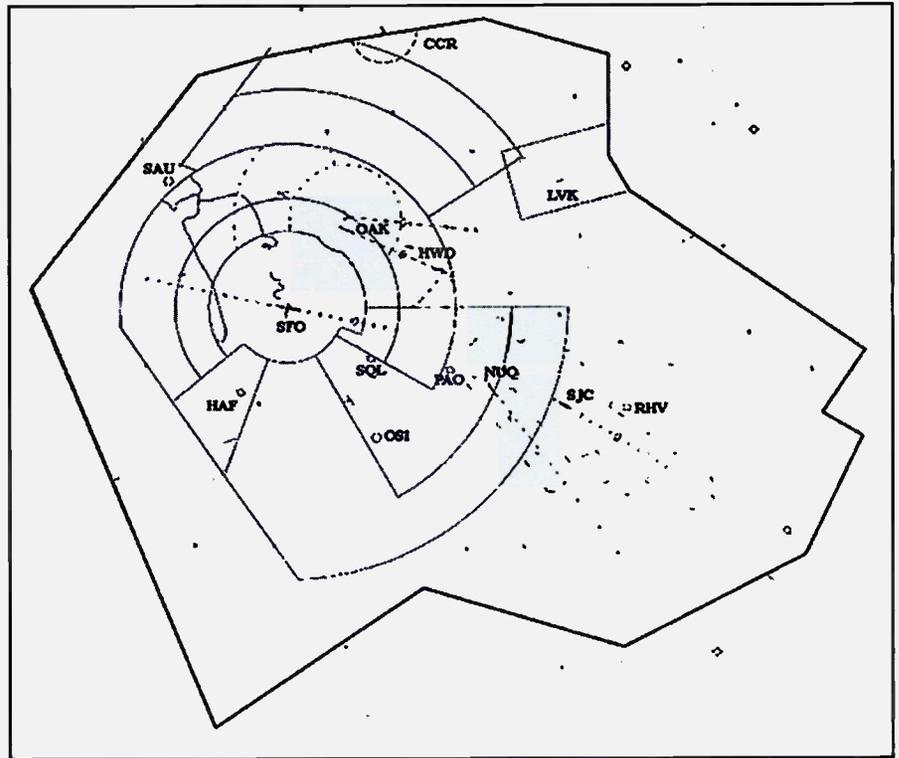
Approach Control Facility Communications

I apologize for a lack of a column last month. I had a family emergency that precluded me from getting a column up and going. Sorry.

This column is being written for the November issue but is being written on the heels of the Concorde tragedy. As a controller I cannot legally give an opinion on what happened or who, if anyone, was at fault. However, I can say that I admire what the pilot had done in order to minimize the deaths of those on the ground and will always be in awe of those pilots who, in the imminence of their own demise, still think of not only those they are transporting, but also of those on the ground. I will always hold those in a place of honor.

This column deals with the third aspect of ATC: the approach control facility. The pilot/controller glossary which is found in FAA Orders 7110.10 for Flight Service and 7110.65 for Towers, Approach Controls and Centers defines approach control service as: "Air traffic control service provided by an approach control facility for arriving and departing VFR/IFR aircraft and, on occasion, en route aircraft. At some airports not served by an approach control facility, the ARTCC provides limited approach control service." (The ARTCC is the Air Route Traffic Control Center. I'll talk about that next month.) There are two types of approach controls: Radar and Non-radar. There are few, if any, non-radar approach controls left in the country. I worked at the Albany Georgia Non-Radar Approach Control for most of the 1980s until it was absorbed by Jacksonville ARTCC.

The non-radar facility is defined as "An ATC facility providing approach control service without the use of radar." For many years this was the only way controllers talked to and controlled air traffic. Pilots were required to give position and/or altitude reports as specific intersections (the black triangles on the instrument charts I talked about in the July 2000 Pop'Comm) or at specific times or altitudes. While today radar covers most of



A typical chart used for training and area knowledge.

the U.S. and the location and altitude is known immediately to the controller, we had to wait for reports from the pilots in a non-radar environment before we could move another aircraft. For example, an aircraft into Albany, Georgia in the mid-'80s may have been given the following control instruction: "Cessna 5141 kilo, maintain 5000 until crossing AMAPO then descend and maintain 3000. Cleared to the Putney NDB via Victor 97 to the Albany VOR, direct. Expect the ILS approach to runway 4. Report crossing AMAPO and leaving 5000. Report reaching 3000 and crossing the Albany VOR. Albany weather is . . ." The pilot of Cessna 41K would maintain 5000 feet until he crossed the AMAPO intersection then descend at his discretion to 3000 feet. He had to report leaving 5000, reaching 3000, and crossing both AMAPO and the Albany VOR. He was also told what

approach to expect and the runway in use. He was also given the weather. If there were other aircraft ahead of him he may have been given instructions to hold at a Navaid or a fix or given a different altitude other than 3000. Other separation standards were used depending on if the aircraft were departing or arriving, departing and arriving, or merely flying through the airspace or over-flying.

Radar (Radio Detection and Ranging) of course is a product of World War II and is the primary means of separating aircraft today. The definition of Radar is "A device which, by measuring the time interval between transmission and reception of radio pulses and correlating the angular orientation of the radiated antenna beam or beams in azimuth and/or elevation, provides information on range, azimuth, and/or elevation of objects in the path of the transmitted pulses.

a. Primary Radar- A radar system in which a minute portion of a radio pulse transmitted from a site is reflected by an object and then received back at that site for processing and display at an air traffic control facility.

b. Secondary Radar/Radar Beacon (ATCRBS)- A radar system in which the object to be detected is fitted with cooperative equipment in the form of a radio receiver/transmitter (transponder). Radar pulses transmitted from the searching transmitter/receiver (interrogator) site are received in the cooperative equipment and used to trigger a distinctive transmission from the transponder. This reply transmission, rather than a reflected signal, is then received back at the transmitter/receiver site for processing and display at an air traffic control facility."

The Radar Approach Control Facility is "A terminal ATC facility that uses radar and non-radar capabilities to provide approach control services to aircraft arriving, departing, or transiting airspace controlled by the facility

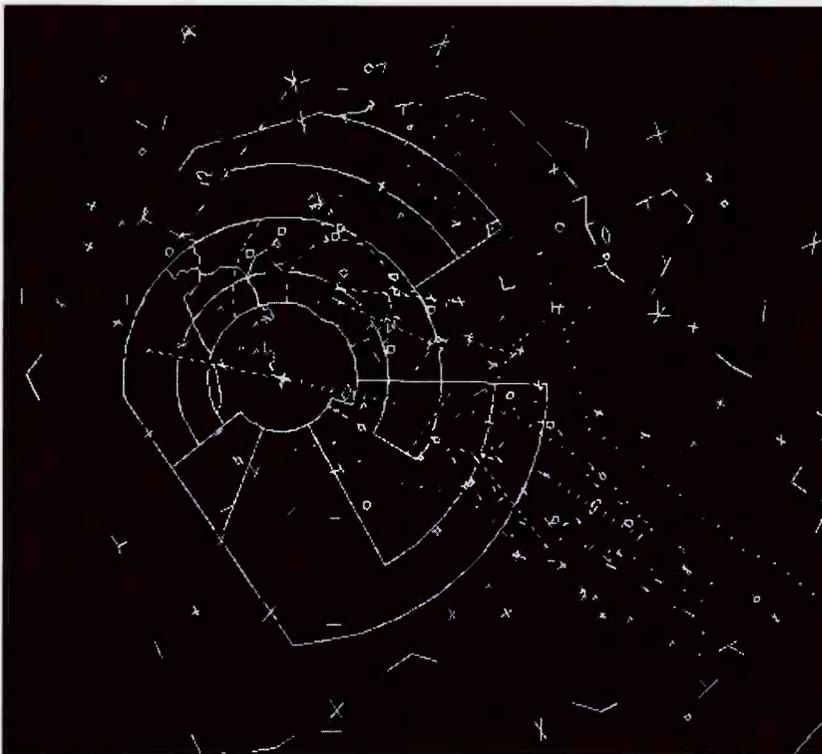
a. Provides radar ATC services to aircraft operating in the vicinity of one or more civil and/or military airports in a terminal area. The facility may provide services of a ground-controlled approach (GCA); i.e., ASR and PAR approaches. A

radar approach control facility may be operated by FAA, USAF, US Army, USN, USMC, or jointly by FAA and a military service. Specific facility nomenclatures are used for administrative purposes only and are related to the physical location of the facility and the operating service generally as follows:

1. Army Radar Approach Control (ARAC) (Army).
ADVANCE \d4
2. Radar Air Traffic Control Facility (RATCF) (Navy/FAA).
ADVANCE \d4
3. Radar Approach Control (RAPCON) (Air Force/FAA).
ADVANCE \d4
4. Terminal Radar Approach Control (TRACON) (FAA).
ADVANCE \d4
5. Air Traffic Control Tower (ATCT) (FAA). (Only those towers delegated approach control authority.)"

What it boils down to is the aircraft is seen on radar and controlled. However controllers at the radar facilities are still required to be able to kick into a non-radar mode of thinking when the need arises. It is rare and all controllers are required to go through non-radar training for just a contingency because, face it, radar does fail, fortunately not that often.

Radar has improved over the years. The definition above talked about primary and secondary radars. Primary radar is often called "raw radar." The only thing really seen is a "blip." It gives only position and no other information. Secondary radar is the information placed on a radar screen to assist the controller in identification, speed, altitude etc. Earlier secondary radar only gave the transponder code given to the pilot and sometimes the altitude and nothing else. Modern secondary radar is far more efficient and is a real boost to the safety of aircraft and pilots.



The same chart, but as radar.

The approach control area is, obviously, much larger than the area of the control tower airspace. In an ideal environment it would be from the radar antenna out to a roughly 40 or so mile radius, and from the surface up to 12000 or 15000 feet above the airport. Of course reality keeps that from happening. Proximity to other approach controls, restricted areas and even terrain dictate the size, shape and height of the approach control. The white and black chart (though not entirely readable) is roughly the airspace found at San Francisco. The other photo is what a San Francisco approach controller may see on his radar scope. If it

could be cut into two pieces vertically through the center, it has a vague shape of a wedding cake. (I'll discuss airspace next year.) Other approach controls' airspace is different and designed for anticipated aircraft flow and terrain.

If I may make reference to "Pushing Tin" again, you will see that the radar controllers were sequencing aircraft into the various airports and giving them speed restrictions. You may notice that the controller may give additional spacing between aircraft. This could be for insertion of aircraft such as emergencies, or to keep a pilot from being vectored all over creation. Also, additional spacing may be needed because the first aircraft may be substantially slower, the following aircraft may be substantially faster, the lead aircraft may be a heavy aircraft and is producing wake turbulence. Or it could even be a specific airplane like Air Force 1. (On radar the datablock would say A1 for Air Force 1.) The controllers would be giving traffic point outs to the pilots and giving clearances on the type of approach the pilots would be given. Most approaches are visual approaches where the pilot sees the airport and flies directly for the airport. The pilot may even keep his own separation from the preceding airplane. Instrument approaches are flown when visual approaches cannot be flown. The pilots need to be profi-

cient in the different types of instrument approaches flown into a specific airport. Some approaches are called non-precision, such as the VOR or NDB approaches, while others are precision, such as the ILS, MLS or GPS approaches. I'll talk about those next year, too.

I have only been able to touch approach controls. If I can I may go into greater details in an article next year about non-radar approaches or other aspects of the radar approach. I hope I have whetted your appetite about them.

Before I get into E-mails and letters, here's a trivia question. In the history of aviation there has been one and only one airplane that changed his call sign while flying. It is a famous aircraft and I'll give you one hint: it was in August of 1974. Answer at the end of the column.

Your Letters

Scott Berry recently E-mailed me. Scott is totally blind and does a show on the Internet concerning scanners. It is found at <http://www.berryscorner.net/blind-scanner.htm>, I may be assisting him in the future on aviation articles. Great site.

David T. (KB9WIQ) in Hobart, Indiana wrote to comment on an E-mail report I had put in an earlier column. He wrote to talk about Duane Mís letter. According to David the tankers are actually located in Indiana when the unit was taken from the now-defunct Strategic Air Command and assigned to the Air Force Reserve. Most of the military air traffic in that MOA (Military Operations Area) comes from the 122nd Fighter Wing located in Fort Wayne. The unit flies F-16C and F-16D Falcons and has been active during times of high tension. The unit is known as the Black Snakes. He has also heard the call-signs of ìBulldogî and ìWizardî but he is not sure if they assigned or visiting units. He notes the use of frequencies 139.75 MHz, 138.05 MHz and 138.4 MHz.

Irv (KK5QQ) commented on my taking to task of the Hollywood view of air traffic control. He notes that his hobby of railroads and his job are both being trashed by those in Hollywood. And he agrees with me that talking to someone in the industry and doing a minor tweaking in set or dialog can change the general populace's view immensely.

Vince H. reports that he enjoys the 'education' he has received about ATC. He doesn't knock the Police/Fire monitoring that gets most of the press. He, like others, has had the impression that the "tower con-

New/Changed/Deleted Frequencies

NEW

Jackson Hawkins Field, MS (HKS)
ASOS - 120.625 MHz

Mattoon/Charleston - Coles County Memorial, IL (MTO)
ASOS 109.4 MHz

Miami AIFSS - Miami, FL (MIA)
Primary 127.9 MHz

Mount Hawley Auxiliary, IL (3MY)
Clearance Delivery (from Peoria, IL) 121.6 MHz

Ord - Evelyn Sharp Field, NE (ODX)
ASOS 119.92 MHz

Peoria, IL (PIA)
Clearance Delivery 121.6 MHz

Springfield - Capital, IL (SPI)
ASOS 127.65 MHz

CHANGED

Alpena County Regional, MI (APN)
Approach Control - was 118.5 MHz - now 128.425 MHz

Asheville Regional, NC (AVL)
Approach Control (340-159) - was 226.8 MHz - now 269.575 MHz

Athens Ben Epps, GA (AHN)
Local Control - was 336.2 MHz - now 338.275 MHz

Atlanta DeKalb-Peachtree, GA (PDK)
Local Control - was 228.3 MHz - now 281.5 MHz

Boise Gowen Field, ID (BOI)
ATIS - was 265.5 MHz - now 290.4 MHz
Approach Control (North) - was 379.8 MHz - now 351.85 MHz

Cadillac Wexford County, MI (CAD)
AWOS - was 128.350 MHz - now 128.325 MHz

Chattanooga Lovell Field, TN (CHA)
Approach Control - was 321.2 MHz - now 323.075 MHz

Cleveland, OH ARTCC (ZOB)
Altoona, PA High Sector - was 119.925 MHz - now 132.125 MHz

Fort Myers Page, FL (FMY)
Local Control - was 316.7 MHz - now 306.95 MHz

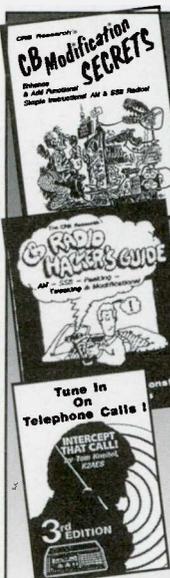
Indianapolis, IN ARTCC (ZID)
Bluefield, WV Low Sector - was 128.4 MHz - now 126.575 MHz
Lynch, KY Low Sector - was 253.5 MHz - now 257.85 MHz

Kinston Regional Jetport, NC (ISO)
Local Control - was 338.0 MHz - now 335.55 MHz

troller" was the "ATC" system, but did not realize there were so many layers to the system. I'm glad I could clear that up.

Most of my mail has been E-mail, but I got a letter relayed to me via *Pop'Comm* from Leonard B. in Toronto, Ontario. He's only been scanning for about three years and monitors two airports, Toronto Pearson International and Toronto Downsview. He reports Downsview frequencies in use - 126.2 MHz - Tower/Unicom, 123.275 MHz - Bombardier Aerospace, 130.35 MHz - Bombardier/DeHavilland, 295.6 MHz - Tower/Military Ground; and Toronto Approach frequencies in use - 358.1 MHz, 363.8 MHz, and 151.055 MHz - Air deHavilland at North York. He also asked a non-ATC question. He heard some pilots request the use of an APU and wanted to know what an APU was.

APU is short for Auxiliary Power Unit. It is a large gas or diesel driven generator that can be hooked up to an aircraft so they would not need to run the engines while at the terminal. It's also used in helping to get the engines started. It's normally about the size of medium to large U-Haul trailer. I hope that answers your question.



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HEARD
NOTHIN'..
YET

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Lompoc Vandenberg AFB, CA (VBG)
Clearance Delivery - was 121.1 MHz - now 121.75 MHz with Ground Control
Clearance Delivery - was 289.4 MHz - now 275.8 MHz with Ground Control
PMSV - was 344.6 MHz - now 343.3 MHz
Range Control - was 296.5 MHz and 386.6 MHz - now 256.0 MHz and 266.0 MHz

Louisville Bowman, KY (LOU)
Local Control - was 248.2 MHz - now 257.625 MHz

Ogden Hill AFB, UT (HIF)
PMSV - was 375.2 MHz - now 375.2 MHz and 342.3 MHz

Salt Lake City ARTCC, (ZLC)
Boise, ID Low Sector - was 272.7 MHz - now 269.05 MHz
Bryce Canyon, UT Low Sector - was 271.2 MHz - now 269.25 MHz
Glasgow, MT Low/High Sector - was 272.75 MHz - now 305.2 MHz
Hanksville, UT Low/High Sector - was 271.2 MHz - now 269.25 MHz
Judith Mountain, MT Low/High Sector - was 272.75 MHz - now 305.2 MHz
Miles City, MT Low/High Sector - was 272.75 MHz - now 305.2 MHz
Waterford City, ND Low/High Sector - was 272.75 MHz - now 305.2 MHz

Tampa International Airport, FL (TPA)
Approach Control - was 362.3 - now 353.575

Twin Falls Joslin Field, ID (TWF)
Local Control - was 319.9 MHz - now 317.5 MHz

DELETED

Columbia AFSS, MO (COU)
Hannibal, MO RCO 122.55 MHz

Homestead Regional Airport, FL (HST)
CTAF 133.45 MHz

CHANGED AIRPORT IDENTIFIERS

Frozen Calf, AK - was FRZ - now FRP

Fryeburg, ME - was B20 - now F26

Knob Ridge, AK - was KNO - now CSJ

Mentasa, AK - was MEN - now MET

Naked Island, AK - was NKD - now ISL

Tok, AK - was TOK - now TGO

**Answer To Our Trivia
Question**

In August of 1974 President Nixon resigned from the presidency. When he boarded Air Force 1 he was still president. Gerald Ford was sworn in as President when Nixon was somewhere about Missouri heading toward California. The call sign Air Force 1 could only be used by a USAF plane with the President on

board. This plane no longer carried President Nixon, but private citizen Nixon and the call sign was changed to SAM 27000. SAM was from Special Air Mission and 27000 was the serial number of the aircraft. So it took off as Air Force 1 and landed as SAM 27000.

Hope you have a great Thanksgiving. We'll have call letter changes again next month. The Christmas issue will be on the final part of air traffic, the Air Route Traffic Control Center. ■

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 . . .

Eavesdrop on the World

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

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.

Receives strong, clear signals from all over the world. 20 dB attenuator, gain control, ON LED.

Switch two receivers and auxiliary or active antenna. MFJ-1024 \$139⁹⁵

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

Rival outside long wires with this tuned indoor active antenna.

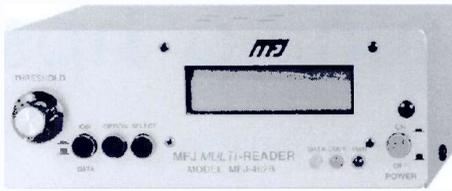
"World Radio TV Handbook" says MFJ-1020B is a "fine value... fair price... best offering to date... performs very well indeed."

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

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. 3/8x1/8x4 in.



-- all over the world -- MFJ-462B
Australia, Russia, Japan, etc. \$179⁹⁵
**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 --

Eliminate power line noise!



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



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



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



High-gain, high-Q receiver pre-selector 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



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

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 \$99⁹⁵

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

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.

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. 5/8x2 1/8x5/8 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.

MFJ Antenna Switches



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. \$64⁹⁵ \$24⁹⁵

World Band Radio Kit

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. \$69⁹⁵ \$89⁹⁵ wired

21 Band World Receiver

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! \$39⁹⁵

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Pop'Comm's World Band Tuning Tips

November 2000

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. A "v" after the frequency indicates the frequency varies.

UTC	Freq.	Station/Country	Notes	UTC	Freq.	Station/Country	Notes
0000	3310	Radio Mosoj Chaski, Bolivia	SS/QQ	0200	15084	Voice of the Islamic Republic of Iran	Farsi
0000	4754	Radio Educacao Rural, Brazil	PP	0200	15345	Radio Taipei Int'l., Taiwan, via WYFR	CC
0000	4875	Radio Super Roraima, Brazil	PP	0200	15355	Radio Sultanate of Oman	AA
0000	6055	Radio Exterior de Espana, Spain		0200	17675	Radio New Zealand Int'l.	
0000	6145	Radio Japan/NHK, via Canada		0200	17820	Voice of America, via Philippines	
0000	11585	Kol Israel	HH	0230	4830	Radio Tachira, Venezuela	SS
0000	11870	Radio Yugoslavia		0230	4885	Radio Clube do Para, Brazil	PP
0000	11940	National Voice of Cambodia		0230	4915	Radio Anhanguera, Brazil	PP
0000	11985	YLE/Radio Finland		0230	4960	Radio Villa, Dominican Republic	SS
0000	12110	Voice of Greece	GG	0230	9835	Radio Budapest, Hungary	
0030	4815	Radiodifusora Londrina, Brazil	PP	0230	10330	All India Radio	
0030	9640	Radio Ukraine Int'l.,		0230	11815	Radio Brazil Central, Brazil	PP
0030	17525	Radio Free Asia, via Tajikistan	Burmese	0230	11920	RTV Marocaine, Morocco	AA
0030	4052v	Radio Verdad, Guatemala	SS	0230	11980	Radio Rossi, Russia	RR
0100	3280	La Voz del Napo, Ecuador	SS	0230	21630	UAE Radio, Abu Dhabi	AA
0100	4801	Radio Oriental, Ecuador	SS	0230	6956v	La Voz del Campesinos, Peru	SS
0100	4919	Radio Quito, Ecuador	SS	0245	9965	Voice of Russia, via Armenia	SS
0100	5019	Ecos del Atrato, Colombia	SS	0300	4980	Ecos del Torbes, Venezuela	SS
0100	6896	Galei Zahel, Israel	HH, SSB	0300	5134	Radio Mayak, Russia, via Belarus	RR
0100	9440	Radio Slovakia Int'l.		0300	5955	Radio Cultural, Guatemala	SS
0100	9560	Radio Budapest, Hungary		0300	9605	Vatican Radio	
0100	11870	Radio Yugoslavia		0300	11615	Radio Prague, Czech Republic	
0100	11990	Voice of Russia		0300	11655	Voice of Turkey	
0100	17720	China Radio Int'l.	SS	0300	11730	BBC via Seychelles Islands	
0130	3250	Radio Luz y Vida, Honduras	SS	0300	13590	Radio Ukraine Int'l.,	
0130	4890	Radio Chota, Peru	SS	0300	15415	Radio Australia	
0130	4965	Christian Voice, Zambia		0300	15435	Radio Jordan	AA
0130	13625	Radio Sweden		0300	5009v	Radio Madagasikara, Madagascar	vern
0130	13730	Radio Austria Int'l.		0330	9795	Voice of Vietnam, via Canada	
0130	15425	Sri Lanka Broadcasting Corp.		0330	15160	Radio Exterior de Espana, Spain	SS
0145	5905	Radio Ukraine Int'l.,	GG	0330	15245	Radio Sweden	
0145	12055	Vatican Radio		0330	15285	Radio Cairo, Egypt	AA
0200	3300	Radio Cultural, Guatemala	SS	0330	15400	UAE Radio, Dubai	AA
0200	4895	Colombia Estereo, Colombia	SS	0400	4955	Radio Nacional, Colombia	SS
0200	6000	Radio Havana Cuba		0400	7275	RTT Tunisienne, Tunisia	AA
0200	9400	Radio Bulgaria		0400	9925	Radio Croatia, via Germany	EE/Croat
0200	9737	Radio Nacional, Paraguay	SS	0430	6010	Radio Mil, Mexico	SS
0200	9795	Wales Radio Int'l, via England		0430	6030	Radio Marti, USA	SS
0200	9835	Radio Budapest, Hungary		0430	6165	Radio Netherlands, via Bonaire	
0200	11600	Adventist World Radio, Slovakia	Punjabi				
0200	11710	Radiodifusora Argentina al Exterior					

UTC	Freq.	Station/Country	Notes	UTC	Freq.	Station/Country	Notes
0500	4770	Radio Nigeria, Kaduna		1530	11690	Radio Jordan	
0500	6250	Radio Nacional, Equatorial Guinea	SS	1530	11730	Radio Japan/NHK	
0500	7120	BBC, via South Africa		1600	11570	Radio Pakistan	
0500	9745	HCJB, Ecuador		1600	15100	Radio Pakistan	
0500	11720	Channel Africa, South Africa		1600	15395	UAE Radio, Dubai	
0500	11955	Radio Nacional, Angola	PP	1600	17605	Radio France Int'l.	
0530	5047	Radio Lome, Togo		1630	11615	Radio France Int'l.	
0530	7195	Voice of America, via Morocco		1630	13730	Radio Austria Int'l.	
0600	4760	ELWA, Liberia		1700	15375	Radio Sultanate of Oman	AA
0600	4915	Ghana Broadcasting Corp.		1700	17860	Channel Africa, South Africa	
0600	4996	Radio Andina, Peru	SS	1800	17870	Channel Africa, South Africa	
0600	5100	Radio Liberia Int'l.		1800	18910	WSHB, USA	
0600	7125	RTV Guineenne, Guinea	FF	1800	21630	BBC, via Ascension Island	FF
0600	15215	Channel Africa, South Africa		1800	21720	Swiss Radio Int'l.	FF
0645	9870	Trans World Radio, Monaco		1815	15760	Kol Israel	HH
0700	5985	Radio Vlaanderen Int'l., Belgium		1830	9885	Radio Kuwait	
0700	6185	Radio Educacion, Mexico	SS	1830	13725	Radio Telefis Eireann, Ireland, via Canada	
0700	9660	Radio Australia		1830	17720	Radio Pilipinas, Philippines	
0700	15240	Radio Australia		1900	11787	Radio Iraq	
0700	15490	Voice of Russia		1900	13775	Swiss Radio Int'l.	AA
0830	6115	La Voz del Llano, Colombia	SS	1930	9022	Voice of the Islamic Republic of Iran	
0830	11765	KNLS, Alaska		1930	15190	Radio Pilipinas, Philippines	Tagalog
0830	11770	Voice of Mediterranean, Malta, via Italy		2000	15160	Radio Algiers Int'l., Algeria	
0900	4890	NBC Port Moresby, Papua New Guinea		2030	12085	Radio Damascus, Syria	
0900	4960	Radio Vanuatu, Vanuatu	vern	2030	17895	Qatar Broadcasting Service	AA
0900	6673v	Radio Andina, Peru	SS	2100	9815	Radio Novas de Paz, Brazil	PP
0930	5020	Solomon Islands Broadcasting Corp.		2100	9910	All India Radio	
1000	3925	Radio Tampa, Japan	JJ	2100	13610	Radio Damascus, Syria	
1000	11720	Radio New Zealand Int'l.		2100	13680	Radio Havana Cuba	SS
1030	11715	Radio Korea Int'l., S. Korea, via Canada		2100	15435	Radio Jamahiriya, Libya	AA
1030	11795	KSDA, Guam		2100	17760	UAE Radio, Abu Dhabi	AA
1030	12085	Voice of Mongolia		2100	21740	Radio Australia	
1100	3220	Radio Morobe, Papua New Guinea	vern	2130	9780	Radio San'a, Yemen	AA
1100	9675	NBC, Port Moresby, Papua New Guinea		2130	17825	Radio Japan/NHK	
1130	11760	Voice of Indonesia	II	2130	21470	HCJB, Ecuador	SS
1130	15240	Voice of America, via N. Marianas		2130	21670	Radio Japan/NHK	
1200	9590	Radio Singapore Int'l.		2145	17860	Deutsche Welle, Germany, via Rwanda	GG
1200	11820	Radio Polonia, Poland		2200	9375	Voice of Greece	GG
1200	15075	All India Radio	unid	2200	9505	Radio Record, Brazil	PP
1200	15160	Voice of America, via Greece		2200	9530	Radio Tirana, Albania	
1200	15280	BBC, via Thailand		2200	9675	RAI Int'l, Italy	
1200	15375	Voz Cristiana, Chile	SS	2200	11820	Broadcasting Svc of the Kingdom of Saudi Arabia	AA
1200	15400	YLE/Radio Finland	Finnish	2200	11915	Radio Gaucha, Brazil	PP
1200	15465	Radio Pakistan	CC	2200	13640	Voice of Turkey	TT
1230	17735	RTT Tunisienne, Tunisia	AA	2200	15345	Radiodifusora Argentina al Exterior	SS
1300	9700	All India Radio	Sinhala	2200	15600	Radio Taipei Int'l, Taiwan, via WYFR	
1300	11580	Radio Moldova		2200	17510	KWHR, Hawaii	CC
1300	13670	Radio Korea Int'l., S. Korea		2200	17680	Voz Cristiana, Chile	SS
1300	17480	Radio Prague, Czech Republic		2230	9900	Radio Cairo, Egypt	
1300	17775	Radio Tashkent, Uzbekistan	Hindi	2230	15545	Radio Prague, Czech Republic	
1330	17795	University Network, via Samara, Russia		2230	15565	Radio Vlaanderen Int'l, Belgium, via Bonaire	
1345	13710	All India Radio		2300	13800	Radio Freee Asia, via N. Marianas	CC
1400	9535	Radio Veritas Asia, Philippines	various	2300	13805	Radio Norway Int'l.	NN
1400	13650	Radio Pyongyang, North Korea		2300	15105	Radio Romania Int'l.	
1400	18950	Radio Norway Int'l.	NN	2330	9845	Radio Netherlands	
1430	18950	Radio Denmark, via Norway	DD	2330	11700	Radio Bulgaria	
1430	21705	Broadcasting Svc of the Kingdom of Saudi Arabia	AA	2330	11715	Radio Romania Int'l.	
1500	15285	Central People's Broadcasting Station, China	CC	2330	11800	RAI Int'l., Italy	
1500	17505	Radio Norway Int'l.	NN	2330	15495	Radio Kuwait	AA
				2330	15575	Radio Korea Int'l., S. Korea	KK
				2345	15760	Reshet Bet Home Service, Israel	HH

PRODUCT PARADE

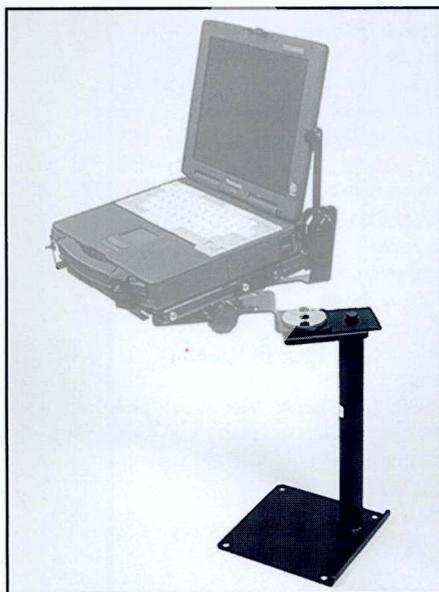
Review Of New, Interesting And Useful Products

Gamber-Johnson's Docking Solution Simplifies Mobile Computing

The demand for mounting communications equipment in vehicles is increasing. The challenge of finding room in the vehicle for the laptop, pen computer, GPS system, printers, and radios leave managers frustrated. Additionally, the cab vibration combined with rough driving conditions can put your expensive investment in jeopardy. Gamber-Johnson is the industry leader in innovative and quality mounting equipment for all of your communication needs for all types of vehicles.

Realizing that the mobile docking needs of customers are not always alike, nor do they stay the same, Gamber-Johnson has developed the NotePort line of mobile docking stations to be easily customized and upgraded. Their full line of mobile docking stations internally replicates all of the I/O ports available on a particular computer. In addition, they can make additional ports (serial, USB, etc.) available to increase the number of peripherals that can be connected. One of the newest members of the NotePort line of docking stations is their Panasonic CF-27 docking solution.

The three parts that make up the



Gamber-Johnson's docking station.

Panasonic CF-27 docking station includes the Panasonic Port Replicator (*Order No. PAN-CF27-PORT*) for the CF-27 series personal computers, Lind Automobile Power Adapter (*Order No. PAN-CF27-POWER*), and the mounting interface plate (*Order No. GJ-PAN-CF27*). Together these parts make up a complete docking solution for the ruggedized Panasonic CF-27 computer.

The Panasonic Port Replicator was designed and built by Panasonic. The port replicator features a ruggedized construction, docking engagement latch, security lock, 2 serial ports, USB port, parallel port, and other features needed for full port replication. The Panasonic CF-27 computer slides into the port replicator and by simply docking the computer using the docking engagement latch, your computer has full port replication without having to make any external connections.

The Panasonic-approved Lind automobile power adapter features power surge protection, power-input regulator and a rugged design for dust, moisture, and high humidity protection.

The adapter connects to the docking station and can be plugged into the vehicle's cigarette lighter adapter or hardwired to the battery.

In order to utilize all of Gamber-Johnson's mobile mounting equipment, the mounting interface plate must be used in conjunction with the Panasonic Port Replicator. This easy-to-attach mounting interface plate will enable the versatile docking station to have full motion and mounting capability.

Gamber-Johnson also offers several value-added accessories that enhance the overall performance of the port replicator.

These exclusive accessories include the USB hub for additional serial ports, front retainer brackets for maximum safety, screen support, and DC power cable restraint.

In addition to docking stations, Gamber-Johnson also offers a complete line of heavy-duty bases, motion attachments, pole accessories, and mount heads that secure everything from laptops and ruggedized computers to printers, FAX machines, and radios. Plus, if you need a

product currently not developed, they have a qualified design team that can customize the product to your specifications.

For more information contact Gamber-Johnson LLC at 3001 Borham Avenue, Stevens Point, WI 54481 or phone 800-456-6868. You can also visit their Website at www.gamberjohnson.com or E-mail them at gamber@gamberjohnson.com. Be sure to tell them you read about their mounts in *Popular Communications*.

CIRCLE 100 ON READER SERVICE CARD

Midland Makes FRS With Weather For Consumers With Champagne Taste

As the old saying goes, "everyone talks about the weather, but no one ever does anything about it." Although they don't claim to be able to change the weather, Midland Consumer Radio has made it easier to talk about it by introducing a new Family Radio Service (FRS) two-way radio with the ability to receive National Weather Service broadcasts. According to Robert J. Thetford, Midland's Vice-President of Sales, "Our surveys reveal this as one of the most requested features for FRS radios." Available in a new "Champagne" gold color, their Speak-Easy model 75-517 is an attractive addition to their full line of two-way radios.

Thetford feels that the 75-517 will be a top seller, because "the 75-517 has the same basic design as our incredibly popular model 75-515, plus it has the new color and weather reception. We have packed an incredible amount of features into a value-priced FRS radio."

FRS radios have become extremely popular across the country, due to their low cost, ease-of-use and clear FM transmission on any one of 14 channels for up to two miles. In some areas, such as a crowded ski slope or amusement park, it is recommended to have a "privacy code" system to filter out the signals of others on the same channel. Midland's 75-517 not only has the standard 38 CTCSS codes for this purpose, but also has 83 digital DCS codes, bringing the total code/channel combinations up to an incredible 1694, the most of any FRS on the market.

BY HAROLD ORT AND R.L. SLATTERY

With this impressive choice of coding options, as well as a page button to send an attention grabbing alert tone, users can be sure to use their FRS radio without receiving unwanted transmissions, even at the busiest amusement park or ski slope. Plus, you don't have to be afraid to use your radio out in the weather, because it's water resistant design gives you improved reliability for indoor or outdoor use.



The new Midland 75-517 SpeakEasy FRS.

Midland has also included an improved 36-setting voice activation they call "eVOX," which allows "hands-free" use without a headset. Six sensitivity levels and six delay settings allow eVOX use in almost any setting. Optional headsets

are available for times when quieter operation is desired, such as while hunting.

Nine channel memory settings make it easy to switch to a predetermined channel/code combination, and both busy or open Channel Scan are available. Dual Watch allows easy monitoring of two channels. Midland's Stealth Squelch circuit automatically quiets annoying popping noises at the start and end of transmissions, and maximum FCC allowed output power provides up to a two-mile range over land and five miles over water, depending on conditions and terrain.

Additional features of the 75-517 include a large backlit LCD panel that is easy to read and displays 12 different functions. Button locking prevents accidental changes. A five-note roger beep and power-on tone can be user disabled for extremely quiet operation. Belt clip and hand strap is included.

The 75-517 has dependable Surface Mount Technology (SMT) circuitry for years of trouble-free use. A flexible rubber antenna adds durability. The battery save option helps extend battery life, and a battery indicator warns when the three "AA" batteries are low (batteries not included). A convenient jack is provided for in-unit charging of optional NiCd bat-

teries, when used with the optional wall charger, model 18-396 or the drop-in desk charger 18-383. A two-unit desktop charger (18-385) is also available separately. Use the built-in microphone and speaker, or an optional speaker/microphone or headset (sold separately).

The SpeakEasy 75-517 measures 2-1/16"W x 3-7/8"H x 1-1/16"D, and is expected to be available in stores in the fall of 2000. The 75-517 has a general retail price of \$79.95 each.

Midland Consumer Radio was the first to introduce a 14-channel FRS radio to the market. In addition, Midland is the oldest manufacturer of CB radios in the U.S., and a leader in weather/hazard alert radios. Since 1959, Midland has stayed on the forefront of two-way radio technology, offering the latest features at value prices. They offer a full line of CB and FRS handheld and mobile radios, Marine radios, antennas and accessories.

For more information, contact Midland Consumer Radio, Inc. 1670 N. Topping Ave., Kansas City, MO 64120-3865; phone: 816-241-8500; FAX: 816-241-5713; E-mail them at midlndcb@midlandradio.com, or visit Midland's Website at www.midlandradio.com

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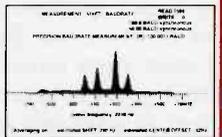
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CLANDESTINE COMMUNIQUÉ

Tuning In To Anti-Government Radio

New African Clandestine Targets Zimbabwe

A new, "sorta" clandestine, has come on the air in Southern Africa. **Voice of the People (also IDing as Radio VOP)** is an alternative broadcaster focusing on Zimbabwe and the Zimbabwe Broadcasting Corporation's control of the broadcast media in that country. The station is operating on **7215** but, unfortunately, not at the best of time slots for North American reception (1700–1915) which will put it out of reach for all but East Coast listeners, and then mostly during the winter months. Apparently the transmitter used is not located within Zimbabwe.

There are a couple of new anti-Castro broadcasts being carried on **WRMI-9955**: **La Voz de CAMCO** is the voice of the Cuban-American Military Council. This one goes out Tuesdays, Thursdays, and Saturdays (UTC days) from 0030–0100 on 9955.

Cuba Siglo XXI is produced by Manuel Gonzalez Becena and concentrates on providing "historical truths and national solutions." It airs Sundays from 1700–1715 on 9955.

Cuba continues to jam WRMI and the few checks we've made for the above broadcasts were unsuccessful. However, the effectiveness of the jamming does vary from day to day, so it's worth continuing to try for these programs. Most stay on the air only as long as their funds hold out.

Another addition to WRMI's schedule is an opposition broadcaster focusing on Peru. **La Resistencia Democrática Peru** promotes free elections and free speech in that country. The program is produced by Dr. Paul Caro, Peru's former Minister of Health. It's on UTC Wednesdays and Fridays from 0030–0100 on 9955. The address is Program Radial VLC, P.O. Box 836534, Miami, FL 33283.

Note that the other programs via WRMI can be reached via the station's address at P.O. Box 526852, Miami, FL 33152. Use the program name in the first line of the address. You can also reach the broadcasters via e-mail at info@wrmi.net. Updates on programming (WRMI carries several opposition broadcasts) can be found at www.wrmi.net.

Radio Freedom, the Voice of the Ogadeni People is operated by the Ogaden National Liberation Front against Ethiopia's government, which it sees as too dominated by Tigrays. Broadcasts are aired over Germany's Deutsche Telekom facil-

ities. The station is on the air in Somali on Tuesdays and Fridays from 1630–1700 on **15175**.

More action in this area includes **Radio Rainbow — the Voice of Peace and Brotherhood**, operated by something called the Research and Action Group for Peace in Ethiopia and the Horn of Africa. This, too, airs over DTK facilities, Fridays from 1600–1700 on **15105** and Saturdays from 0100–0200 on **9855**, and 0900–1000 on **5995**. All programs are in Amharic. The address is RAGPEHA, P.O. Box 140104, 53056 Bonn, Germany.

The **Voice of Democratic Eritrea — Voice of the Eritrean Liberation Front Revolutionary Council** opposes the current government of Eritrea. Also broadcast via DTK transmitters at Julich, it airs Tigrigna Saturdays from 1300–1400 on **6045**, Sundays 0100–0200 on **9855** and Mondays 1600–1700 on **15365**.

Yet another broadcaster is the **Voice of Ethiopian Salvation**, programming against the Ethiopian government and in favor of the views of the Ethiopian Salvation Democratic Party. These broadcasts are on the air via DTK Sundays and Thursdays in Amharic from 1600–1700 on **15365**.

And, there's the **Voice of Oromo Liberation** (abbreviation SBO from its initials in the Oromo language) also uses DTK facilities. This one is on in Oromo on Thursdays, Fridays, and Sundays from 1700–1800 on **15715**. Address is SBO, P.O. Box 510610, 13366 Berlin, Germany.

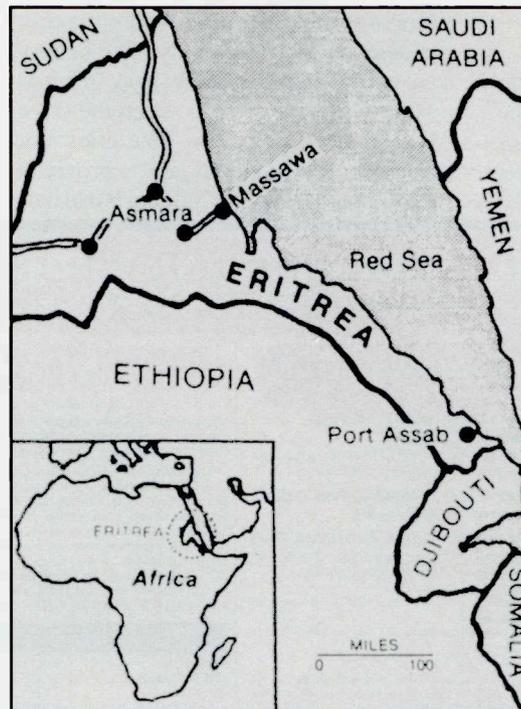
Still another broadcaster involved in this war of words is the **Voice of the Democratic Path of Ethiopian Unit** on the air via DTK Wednesdays from 1600–1700 on **15105** and 1830–1930 on **15715**, and Sundays 0700–0800 on **21550** and 0800–0900 on **15715**. You can send a report to: Finote Democracy, P.O. Box

88675, Los Angeles, CA 90009. Their website is at www.finote.org or you can E-mail them at efdpu@finote.org.

Yet another one is **Radio Huriyo**, Tuesdays and Fridays from 1230–1700 on **15715**, via DTK facilities.

Note that there have been some quasi peace agreements signed between some of the parties warring over the Ethiopian-Eritrean border, so some of these stations may have left the air.

The **Falun Gong** — a religious/exercise/political (pick the



Eritrea, Ethiopia, and various Ethiopian provinces are the center of a radio war involving half a dozen or so broadcasters and groups.

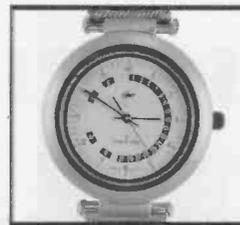
BY GERRY L. DEXTER

word that fits your view) group being picked on by the authorities in Beijing, has its own broadcast, intended to get their story to the people on the mainland. It's on the air in Mandarin from 1400-1500 on **9370**.

Anti-Vietnamese station Que Hong Radio is now using **12150**, from 2300-2359. The broadcasts are believed to be via a Russian government transmitter in the Far East.

Radio (Tele) Liberte is back on the air. The Ugandan-backed station operated by the rebel group Movement for the Liberation of the Congo (how many times is the Congo going to need liberating?) is operating on **15725** and has been reported at various times through North American afternoons, with sign-off running as late as 2300 or even beyond. Your editor hasn't found them yet, despite several checks.

That covers things for this time. Remember that we always welcome — and need — your input, whether it's in the form of loggings you've made of clandestine stations and broadcasts or copies of QSLs you've received from these broadcasters, or background information such as addresses, who's broadcasting from where and the like. Thanks for your continued support! ■



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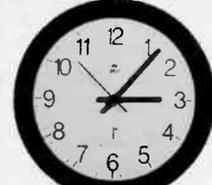
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PRODUCT SPOTLIGHT

Pop'Comm Reviews Products Of Interest

RadioShack's PRO-2052

RadioShack introduced the PRO-2052 without a lot of fanfare recently. This is a replacement for their popular base series of receivers with trunking capabilities. The 2052 includes the ability to receive EDACS systems, one of very few base radios able to do that at this point (although that will change quickly, I'm sure).

The PRO-2052 is a triple-conversion design, which will help to minimize interference. The 2052 receives a wide range of frequencies; it's one of very few receivers on the market that receives military air services from 225-400 MHz. Specifically, the coverage of the 2052 runs from 29-54, 108-174, and then, with a curious gap, picks up again at 179.75 and runs continuously to 512 MHz. Then the usual gap for TV services and coverage resumes at 806 and runs to 824, 851-869, 916 to 956 and finally 1240-1300 for the 1.2 GHz ham band (let me know if you hear activity up there).

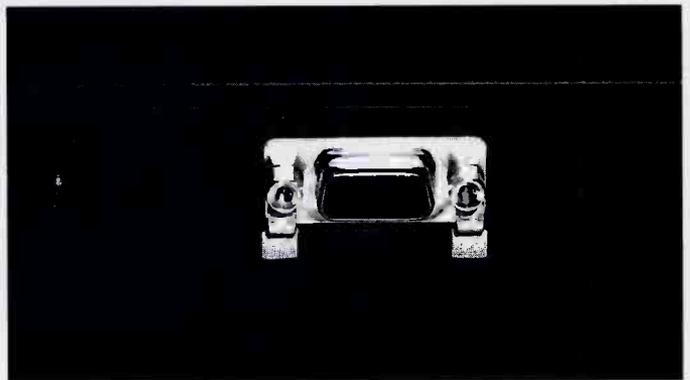
Upon further examination, the curious gap isn't quite so curious, nor is it really a gap. The detailed specifications for the radio list this band as "VHF Television, and sure enough, channel 7 runs 174-180 MHz, with the audio carrier at 179.750. This band has default steps of 6 MHz so it is obviously intended just for TV audio reception. Now the curious thing is that the radio does not cover channels 2 through 6, or the UHF TV channels.

The 1,000 channels are divided into 20 banks of 50 channels each. Unlike the PRO-94, the 2052's handheld cousin that we reviewed a few months back, the PRO-2052 has all 1,000 channels available all the time, rather than divided into groups. Unfortunately, just like the PRO-94, the PRO-2052 can scan in trunked mode or conventional mode, but can not mix the two. So if your primary interest is in a trunking system, you'll find the 2052's one thousand channels unnecessary, since only one trunked bank can be scanned at a time.

On the plus side, the PRO-2052 does track EDACS and Motorola systems. It will also allow for scanning Motorola type

II systems in the VHF- Hi, UHF and 900 MHz ranges, so most trunking systems should be pretty well covered.

Each trunking bank has room for five scan lists or 10 trunking ID numbers. These are used like channels once you're in the trunking mode. So a total of 50 ID's can be assigned to any one trunking bank, and by extension, you could program the same trunking system into another bank and get fifty more, for a total of one thousand ID numbers if you used all 20 banks for the same trunking system. Good luck keeping track of what's where if you choose to set your scanner up this way!



Rear panel computer connection on the RadioShack PRO-2052.

The PRO-2052 also features a unique priority system in the trunked banks. Each of the five scan lists can have one ID assigned as priority. The Priority ID in list one has priority over all other ID's. The priorities don't work exactly like the priority in a conventional scanner, but rather the special priority ID's are checked more often according to the manual than the regular ID's in a scan list. This way, the priority channel has a better chance of being found active than others. However, once activity has been found on any channel and you are listening to the voice channel, the data is not being checked for higher priority activity. In practice, it increases the chances of finding activity on a priority channel, but you'll still miss things if you're listening to other ID's that are busy.

Another nice feature of the 2052 is twenty banks, but unlike its handheld sibling, the PRO-94, the PRO-2052 features 20 banks that are completely switchable at will. You may recall that the PRO-94 was divided into two groups of 10 banks each. Either bank, or any combination of banks within one group could be active, but not both at the same time. With the PRO-2052, you'll have to press a function key to access banks eleven to twenty, but that's easy to get used to.

Computer Interface!

The PRO-2052 features a computer interface, with a standard nine pin DB-9 type connector on the back panel. This interface



Front view of the RadioShack PRO-2052.

BY KEN REISS <Armadillo1@aol.com>

"The PRO-2052 can decode both the levels and the geographic encoding. It's the geographic encoding that is most important, as it will keep you from listening to warnings and watches a couple of counties away."

allows access to all of the scanner's programming functions, and will aid greatly in quickly programming the radio. And, in a move we hope to become an industry standard, the protocol is included in the manual! Let's hope Uniden and ICOM are watching!

SAME Weather

For years the National Weather Service has used a single tone alert to indicate an upcoming alert notice on their weather broadcast stations. Recently, that system was upgraded with the Specific Area Message Encoding, or SAME system. SAME has the ability to encode messages just for a particular geographic area, and it is for this feature that it has gotten such wide acclaim. People don't have to listen to weather alerts three or four counties away.

The SAME system can also encode the severity of the alert as a level 1, level 2 or level 3. Level 1 is used for Warnings, and generally the most severe or impending danger warnings. Level 2 is used for Watches, and Level 3 is used for weather statements. Of course, all of these are merely alerts to get you to turn your weather receiver on and actually listen to the watch or warning message.

The PRO-2052 can decode both the levels and the geographic encoding. It's the geographic encoding that is most important, as it will keep you from listening to warnings and watches a couple of counties away. Right now, most of the SAME system is at the county level, but in time the National Weather Service is promising to break up some of the larger counties.

The PRO-2052 can not be in standby weather mode and scan at the same time. So when you're using the radio for a weather monitor, you'll be out of business otherwise. It's a good standby feature for when you're not using the receiver.

The Bottom Line?

The PRO-2052 works well and seems to be a reasonable well-rounded unit for base operation. Of course, you'll have to judge for yourself if it suits your needs.

RadioShack guarantees your satisfaction and backs it up with a very generous return policy, so you really have nothing to lose.

There is a version of WinScan for the 2052 available from Pozilla software (15248 North 38th St, Phoenix, AZ

85032-4365). It was in the process of being upgraded as this review is going to press, so we'll feature that in an upcoming Product Spotlight. With computer software, the PRO-2052 becomes a highly desirable unit that can be quickly programmed and repurposed without spending the whole day!

The PRO-2052 is available from your neighborhood RadioShack. It's \$369.99 in the 2001 catalog, but watch for sale pricing. You can get a good deal on a nice radio. I'm going to see if I can catch this one myself, and you should check it out too!

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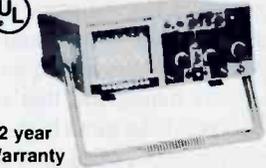
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21.5MHz Model 4070 \$1295 10MHz Model 4017 \$325 5MHz Model 4011 \$255	Elenco 10Hz - 1MHz Digital Audio Generator Model SG-9300  \$225 Features: built-in 150MHz frequency counter, low distortion, and sine-square waves. SG-9200 (w/ w counter) \$124	Elenco Educational Kits <table border="1" style="font-size: small;"> <tr> <td style="text-align: center;"> Model AR-2N6K  \$34.95 2 Meter / 6 Meter Amateur Radio Kit </td> <td style="text-align: center;"> Model AM-780K  \$11.95 2 IC Radio Kit </td> </tr> <tr> <td style="text-align: center;"> Model M-1005K  \$19.95 18 Range 1.3" x 0.5" LCD Diode Test </td> <td style="text-align: center;"> Model RCC-7K  \$29.95 Radio Controlled Race Car Kit 7 Functions </td> </tr> </table>	Model AR-2N6K  \$34.95 2 Meter / 6 Meter Amateur Radio Kit	Model AM-780K  \$11.95 2 IC Radio Kit	Model M-1005K  \$19.95 18 Range 1.3" x 0.5" LCD Diode Test	Model RCC-7K  \$29.95 Radio Controlled Race Car Kit 7 Functions
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Four Functions in One


Elenco Model MX-9300B **\$450**

Features:

- One instrument with four test and measuring systems
- 1.3GHz Frequency Counter
- 2MHz Sweep Function Generator
- Digital Multimeter
- Digital Tripple Power Supply - 0-3V @ 2A, 5V @ 2A, 15V @ 1A

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SCAN TECH

Trunking, Tips, Techniques, And Mods

Probe Turns 6!

If you've been reading this column for some time, you'll know that I'm a big fan of computer-controlled scanning. And you'll also know that Probe is one of my favorite programs for doing computer-controlled scanning on a daily basis. If you've just joined us, let me take a few minutes to introduce you to this strange world, and then we'll talk about what's new in 6.0 for those regular readers. You can skip ahead if you like, but you might learn something new if you keep reading.

Basic Computer Scanning

Computer connections to radios have been available for quite some time. However, most scanner enthusiasts don't take advantage of that connection, while many others use it for programming the radio and then revert to normal operation of the scanner. That's great, and in fact, that's fantastic compared to typing in all those frequencies by hand. On some radios, particularly handhelds, that's really all you'd want anyway.

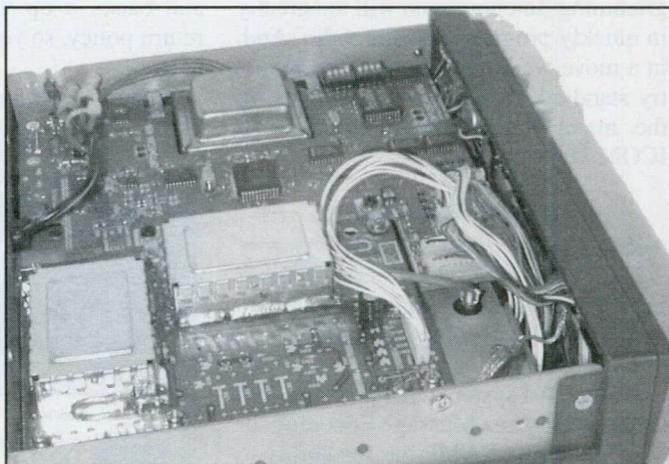
Some of the more high-end receivers and many of the newer generation of radios have a computer interface. What that interface is capable of varies quite a bit from manufacturer to manufacturer, and may severely limit your options. At the other end of the spectrum, the new generation of so-called "black box" receivers that have a power switch and no other controls on them are obviously meant to be under complete computer control all the time.

One particular family has stood apart in the crowd — the Optoscan series from Optoelectronics. Originally, the OS-456 interface was designed not as a computer-controlled scanner, but rather an add-on computer interface for the much-touted PRO-2005 and 2006 receivers from RadioShack. Many of these receivers are still on the used market, and command a premium if they're in good shape because of the combination of its excellent features and receiver design. Many scanner enthusiasts swear by their 2006s and have done many extensive modifications to the radio over the years.

Other computer interfaces are made available. The HB-232 interface (now marketed as the CE-232 from Commtronics) requires extensive connection to various parts of the receiver, but allows for all radio functions, plus a few add-ons to be controlled by the computer. It makes an excellent programmer, but it's not a project for the novice!

The status of this unit may also be in question with the recent death of Bill Cheek (from lung cancer), Commtronics founder and owner. Many of Bill Cheek's publications dealt with modifications to the PRO-2004/2005 and 2006 series of receivers, which were internally very similar. Those books are widely available through many electronics stores and have projects ranging from very simple to quite complex if you have one of these receivers and are interested.

What makes the Optoscan unit so unique starts with the philosophy of the controller. It was designed from the ground up



It's hard to pick out, but the board at the top part of the photo, wrapped around the metal transformer, is the OS-456 board installed inside a PRO-2006. It's a very clean installation, and once complete, unless you look at the back of the scanner, you can't tell it's been modified.

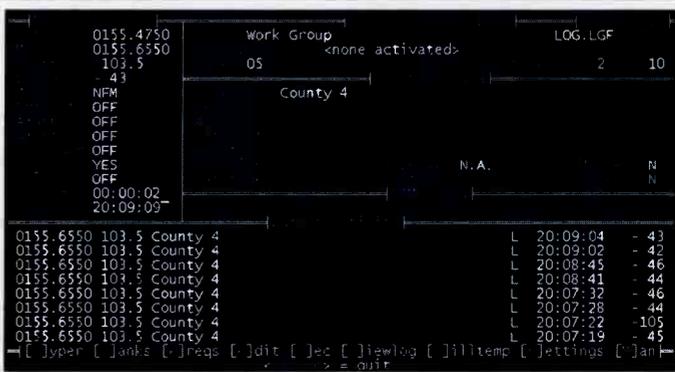


The front-mounted volume and squelch controls can be over-ridden by software controls. You have to keep this in mind when you start wondering why the radio is making noise with the volume turned all the way down!

as an add-on controller to an existing receiver, not as an external interface that can communicate with many devices, but as an internal unit that literally takes control of the receiver away from it's own internal processor.

What this means is that while you're under computer control, the radio's own processor is not only *not* used, but it's completely unavailable. Even the display goes blank. While this seems at first blush like an undesirable situation, in reality, it makes for a very powerful combination. The Optoscan controller is capable of many things that the internal unit is not, while at the same time, when the computer is turned off, you

BY KEN REISS <armadillo1@aol.com>



The connections on an Optocom receiver are quite extensive. This is one of the only computer-controlled receivers or "black box"-type radios that can at least function without the computer connected.

Very little has changed from version 5's main scanning screen, but a host of new features are lurking just below the surface. If you've never seen this program operate, you'll find that the display is very concise, but full of useful information.

have your same old scanner with its 400 memories fully functional. It's a lot like having two scanners in one, although I almost never find myself wanting to turn off the computer and return to the stock scanner mode of operation.

The OS-456 was followed by the OS-535, the same kind of interface for the PRO-2035 and later PRO-2042 receivers that followed when the PRO-2006 was discontinued for compliance with the Electronic Communications Privacy Act.

One of the main features of these boards is that they add a signal strength function, and a tone decoder. While operating under control of the 456/535 interface board, the radio can report back to the computer on the status of CTCSS and DCS (tone squelch) tones, as well as read DTMF tones (touch tones used for dialing autopatch systems and other control). It's then up to the software to make something of this information.

There is a third interface board in this series, the OS-456 Lite. This board is essentially the OS-456 interface without tone decoding, and without signal strength. It is much more economical and easier to install. A key component of the OS-456 became unavailable some time back, and so the OS-456 Lite board and the OS-535 interface are the only ones currently available. You'll have to locate a used receiver to put the unit into, since none of these radios is available.

There is one unit still available: the Optoscan. This is a scanner in the so-called "black box" category of computer controlled receivers. There are volume, squelch, and power controls on the receiver, and all other functions, including programming, are done via the computer interface. There's no display on the unit

either, so you'll need a computer to tell what frequency the unit is listening to.

The Optoscan represents a complete, plug and go solution to computer controlled scanning. It is essentially a GRE receiver (same one used in the 2035/2042) combined with an OS-535 interface and a few extras added in. One of those extras is the ability to program up to 100 memories on-board the radio for use without the computer. There are no lockouts or display available to see what it's doing, but it does allow the radio to function independently, which is quite an unusual feature in this category of receiver.

One additional feature of the Optoscan unit is that with software, the radio is capable of trunked system scanning. Both Motorola and EDACS is used by many public safety agencies, and the Johnson LTR system is used by many businesses. Alas, Probe is not capable of any trunking operation with this radio, but there are several others including the unique TrunkTrac software from Greg Knox, Scanstar from Signal Intelligence, and Trunker and E-Trunk which are available in the public domain on the Internet.

Probe 6

Part of what makes Probe such a unique product is its design from the ground up to support the Optoscan series of radios only. If you have another type of radio, you'll have to find another piece of software, as Probe is not your ticket. However, if you have an Optoscan 456, 535 equipped radio or an Optocom receiver, this program is worth looking at closely.

Probe runs in DOS — yes, DOS. It can be run from a window under Windows 95 or 98, and I believe it has been run under

NT and 2000, although I've never tested this configuration and Datafile (the program's developer) does not claim that these operating systems are supported. A bit of experimentation with Windows settings was all that was required to get the program up and running well under Win-95, although I prefer to run under pure DOS mode.

"Why DOS?" I hear you cry. Well, two reasons, one historical, and one completely practical. The historical one is that during the time Probe was first being developed, Windows 95 was relatively new, and it was common for serial and communications software to have problems with the implementation of serial protocols in the new operating system. Communications with the radio were slow at best, and often erratic.

The practical one is just how effective the whole thing is. I found that once I got used to Probe and how it operated, and the conveniences of logging, up to 99 banks, on-screen display of all sorts of information and tone squelch, just to mention a few, I wanted those features all the time. In short, I wanted a dedicated scanning system rather than a timeshare arrangement with my main system.

It wasn't long before I'd found something — that old computer in the basement. DOS requires very little overhead, and Probe doesn't take much either. Any 386 or higher processor works just fine, and 2MB would probably be plenty of memory, while 4 or more is fantastic. I used an old 386 in this mode for a long time, but recently, with the falling prices of used and new computer systems, sprang for a major upgrade that fit into my system a bit better. It was all of \$20 for a 486 with 4MB of memory and 500 MB of hard disk. It's

way more machine than I need for Probe, but it's now a dedicated on-all-the-time scanning system. That computer is just a radio listening accessory. The external speaker cost more!

Basic Functions

Probe was designed from the ground up as a scanning program for control of the Optoscan units only. Because of this, it has many features specifically designed to take advantage of the Optoscan while making the life of the user much easier.

Probe is based on a standard dbf-type database file that can be read by almost any database program. It can also import data from many different programs providing they can write the data in a form that's acceptable. Once in Probe, you'll never have to re-type the data. There are very extensive and convenient features to assist in managing data, moving frequencies or copying them from bank to bank or group to group. You can also take log data back into a bank of the program and start scanning just those channels that were active.

In practice, however, this proves unnecessary most of the time. Probe features a "mark" tool that will mark or highlight a frequency when particular things occur — after a number of transmissions have been received, for instance. If you're searching, you can choose to not only mark a frequency after it's been active, but also lock it out so that you don't waste any more time searching a frequency you know to be active. You can also tell it to resume scanning after the frequency has been active continuously for a certain length of time. This ensures that your search won't get hung up on a birdie or other interfering signal.

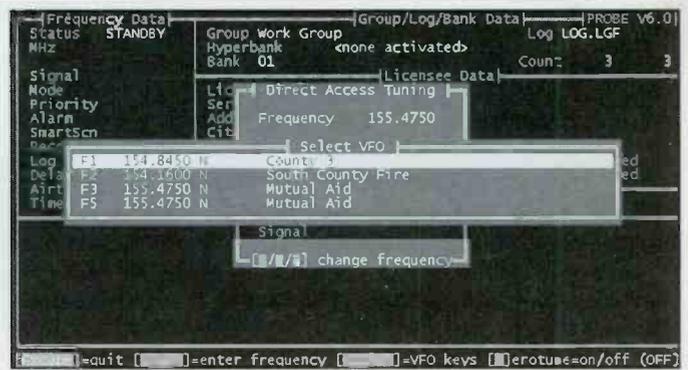
Once all this has been done, you simply copy or move the frequencies that have been marked to another bank and start scanning. It's easy as can be, and terribly helpful in searching out unknown activity. In fact, when you create the search file, you can tell it to check against another group's frequency file and not duplicate anything you already know about.

For daily operation, 99 banks of up to 1,000 frequencies each provide a lot of versatility. And there are extensive settings controls to deal with taping, logging, tone squelch, scan speed, and many other factors that might be of interest at some point. One of Probe's strongest features, however, is that you can have it up and running in a very short time without ever knowing that much of this stuff exists. It's an easy program to get into, and you can grow into the advanced features as you wish.

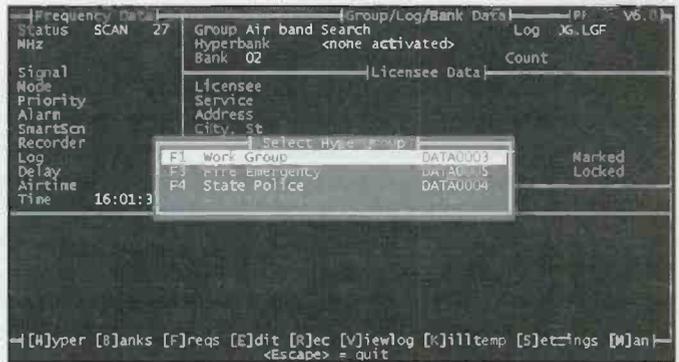
So What's New?

How often does something happen in your area that causes you to want to reprogram the scanner? Around here, it used to happen with some regularity, but the scanner never quite got reprogrammed. It was just too much trouble, or I wasn't home to do it at the right time, or just having the 99 banks of Probe available per group made this much easier.

One of my favorite features of Probe in the last couple of versions has been the hyperbanks feature. You can assign a group of banks and settings to an F-key, so that when you press F1 for instance, you're scanning your normal day-to-day stuff. Pressing F2 takes you to a configuration for fire only, F3 for state police, F4 for police only with priority on local stuff, F5 for frequencies used during a VIP visit, F6 for mutual aid and point-to-point frequencies that go active during a major disaster and so on. It's up to you to figure out how best to configure these for your local setup, but with some experimentation, you can get some pretty impressive setups which can be accessed in a hurry.



The VFO keys menu shows a few assigned keys and their purpose. They can be chosen from this menu screen, or by pressing control and the F key appearing at the left side of the menu.



By pressing a single F-key, Probe's HyperBanks function can reprogram, activate, and deactivate banks. By pressing ALT and an F-key, you can switch to another group file on disk instantly. Shown here is the selection menu for what keys are assigned if you can't remember them. (Very handy for old folks like Harold, or those of us like yours truly with no memory).

Version 6.0 adds a new dimension to this capability: HyperGroups. Probe stores frequency information in "group files" each of which has the 99 banks that we mentioned. And each group also has 10 HyperBank settings. With HyperGroups, you can set ALT-F-Key combinations to take you to another group. Quickly, you can go from normal operations to emergency operations, and have 10 f-keys in that group for different kinds of emergency. Or an Alt-F-key can take you to searching groups for use when you're going to be away from the computer. Pressing Alt-H brings up a list of the Hypergroups that you have assigned, for folks like me with no memory for details. I'm just starting to get these configured, but already it looks to be a very powerful combination and addition to the arsenal of tools that Probe already provides.

Kind of along the same lines, Probe 6.0 also offers VFO keys. These keys act like VFO's on communications receivers that can be used for just tuning around, or almost like temporary memories. Probe also features a full "manual" mode for quick access to a frequency or tuning anything anywhere. The VFO keys simply preset the manual mode tuning for you.

I've found that putting some dispatch frequencies into these, as well as some fire call-back channels, has made it very easy to get to those channels when I hear activity there, or notice it on the screen. (You can also set Probe to beep when particular frequencies become active.)

Of course, the real way to deal with many of these "key frequency" situations is to set up Probe's "SmartScan" feature. It's

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by M.A. Coletta

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not new in 6.0, but very powerful indeed. You designate a key frequency and a bank. When the key frequency becomes active, that bank is turned on (exclusively or just added to the mix) for a certain time period. If there's no activity during a preset time, the program returns to normal operation. It takes a bit of thought to get this set up correctly, but there is no question in my mind that I'm hearing much more follow up and continuity to the calls that I'm listening to with this amazing feature.

Probe 6.0 also adds a feature that has been widely requested, according to Datafile, Inc. President Perry Joseph — mouse control! I did set this up on my dedicated machine, and I can see how it might be convenient in many circumstances, or if you were running the program under Windows while trying to do other things, but I found I just prefer the keyboard.

The Bottom Line

There are some excellent Windows-based systems out there if you're not willing to dedicate a computer. But you're likely to find yourself re-arranging windows on screen to see what's going on. If you have a radio other than the Optoscan series, you'll have to look at one of these alternatives, but for Optoscan units, I'd strongly recommend Probe!

Probe is available for \$129.95 plus 7.95 S/H from DataFile Inc. P.O. Box 20111, St. Louis, MO 63123. If you mention you read about it in "ScanTech," there's a \$30 discount. You can contact Perry Joseph directly via E-mail at datafiles@aol.com. Existing users should contact the company to find out about upgrade information. Check it out, it will change your whole scanning hobby!

Frequency Of The Month

This month our frequency takes a trip

into the aviation bands. What's on 118.5 where you are? Just E-mail or write in and let me know. We'll enter all the names into the quarterly random drawing for a six-month extension on your subscription. Please be sure to include the frequency 118.5 in the subject line of your E-mail or on the outside of the envelope so that it will get entered correctly.

Send your frequency info, or other questions and comments to Ken Reiss, 9051 Watson Rd. #309, St. Louis, MO 63126, or via E-mail at armadillo1@aol.com. Until next month, good listening!

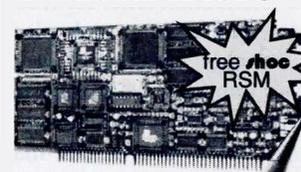
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WMAQ: We Must Ask Questions — Gone, But Not Forgotten

Two Infinity-owned all-news radio stations in Chicago have finally combined resources at WBBM, ending the long illustrious history of WMAQ. In a verification letter for reception just before the change took place, WMAQ's Donald Coleman wrote, "WMAQ radio transmits from suburban Chicago, Illinois, USA with a power of 50,000 watts at 670 kilohertz. Our main tower is 740 feet tall. We have three transmitters. Our main is a Continental 317C, our standby is a Harris MW-50, and our emergency backup is an RCA-5R4 5-kilowatt transmitter."

"Originally licensed in 1922, WMAQ became, by default, Chicago's oldest radio station in 1934 when Westinghouse transferred the license of KYW to Philadelphia. (WGN remained — and still remains — the city's oldest station under its original ownership.) WMAQ celebrated its 75th anniversary in 1997. WMAQ (We Must Ask Questions) was originally licensed to the Chicago Daily News and the Fair Store (a Loop department store). The station was purchased by NBC in 1931 (the network's second Chicago acquisition) and remained a key NBC owned-and-operated station until General Electric (which purchased RCA, NBC's parent, in 1985) sold it to Group W on February 1, 1988. In 1996, Westinghouse changed its name to CBS Corporation, and with the spin-off of the radio division, we are now Infinity radio, still wholly owned by CBS/Viacom."

"WMAQ will cease to exist as of 7/31/2000. The call will change to WSCR and will be a sports/talk format. This will leave only one all-news station in Chicago, WBBM — which is also an Infinity station."

WMAQ signed on April 13, 1922 with the original call letters WGU, changed shortly thereafter to avoid confusion with another Chicago station, WGN, and coinciding with the Chicago Daily News taking full ownership from the Fair Store. WMAQ was the original source of many

popular old-time radio shows including Amos 'n Andy. During the last overnight broadcast, memories from WMAQ's 78-year history were shared between "When Radio Was" old-time radio programs and announcements telling listeners to "make the change" to Newsradio 780 WBBM. WMAQ is now "The Score" WSCR Sportsradio 670 featuring the best in local sports conversation. WSCR was formerly on 1160 in Chicago. The WMAQ call letters will remain in use on channel 5 television in Chicago.

AM Radio Blowtorches Scorch The Ratings

News, sports, traffic, and weather prove to be a lethal combination to the benefit of AM radio in the ratings race. FM may have AM beat when it comes to music, but AM is on top of the overall ratings in many major markets by providing continuous essential information updates for commuters and listeners on the go.

"Newsradio 1030" **WBZ** Boston continues its long reign over **WXKS** "Kiss 108" and **WMJX** "Magic 106.7," with "The Talk Station" **WRKO** 680 AM not too far behind in fourth. All-news 1060 **KYW** Philadelphia is the champ, knocking out nearest competitors **B-101** **WBEB** and "Philly's Best" **WDAS-FM**. **KDKA** Pittsburgh steals first place from **WDVE** FM and **WDSY** Y-108 country. In Cincinnati, "The Big One" **WLW** 700 is number one, ahead of **B-105** **WUBE** and **WEBN** FM. "News/Talk 1100" **WTAM** rocks the Cleveland ratings, on top of **WGAR-FM** and "Magic 105.7" **WMJI**. "The Spirit of St. Louis" **KMOX** 1120 flies high above **Soft Rock** 102.5 **KEZK** and **WIL-FM**. San Francisco has two dominant AM stations, **KGO** 810 followed closely by **KCBS** 740, with **KMEL** FM in third. Hot Talk **KOGO** 600 San Diego is too hot for south of the border rivals "Jammin' Z-90" **XHTZ** and "91-X" **XETRA** (commercial FM sta-

tions operate below 92 MHz in Mexico). These AM powerhouses may have survived FM competition, but not all 50,000 watt AM stations are immune. For example, in New Orleans, **WWL** 870 is in third place behind "Q-93 Jamz" **WQUE** and **WYLD-FM**.

A true survivor, the voice of the Grand Ole Opry, **WSM** Nashville at 650 AM is celebrating 75 years of service. "Inside WSM's First 75 Years," a compilation of magazine articles, and a 75th anniversary print commemorate the occasion. www.wsmonline.com to get you

IBOC Digital Radio Update

Experimental digital radio station **WL2XAM** Warren, New Jersey, has been licensed to Lucent Digital Broadcasting for in-band on-channel (IBOC) digital radio testing at 1700 kHz. Lucent IBOC digital broadcast system has already been tested on FM. The first live tests were conducted on **WBJB** Lincroft, New Jersey, and later on **WPST** Princeton, New Jersey, at 97.5 FM. A demonstration was conducted over **KNPR** Las Vegas, Nevada, at 89.5 FM during the National Association of Broadcasters (NAB) convention. According to a press release from media relations manager Chris Luce, the multi-channel problem-solving system "solves problems related to digital radio and improves radio station signal coverage." Lucent has merged with USA Digital to become Digital Corporation in an effort to speed development of a digital radio standard. USA Digital first demonstrated IBOC digital radio on 1660 AM in Las Vegas during the 1995 NAB convention. IBOC digital signals over existing facilities will be working simultaneously with analog broadcast signals. Kardon will be working to develop and manufacture receivers. Lucent will also

BY BRUCE CONTI <BAConti@aol.com>

its multi-streaming technology to XM Satellite Radio for their new service.

Satellite Radio Update

XM Satellite Radio is scheduled to begin broadcasting 100 channels of satellite radio by the end of the year. The first Sirius satellite has been successfully launched and tested. Two more satellites should be launched by November. The orbit of the three-satellite system will allow for high-angle reception to reduce blockage and maximize line-of-sight reception across the U.S. This will be supplemented by a network of terrestrial transmitters located in major cities to overcome reception problems caused by tall buildings, overpasses, and other man-made structures. XM Satellite Radio just moved to new headquarters in Washington, DC, which include a performance studio large enough to accommodate a full orchestra. The satellite radio service will deliver 50 channels of commercial-free music, and 50 news, sports, and information channels. The monthly subscription cost will be \$9.95. Alpine, Delco, Mitsubishi, Pioneer, Sharp, and Sony will manufacture and market AM/FM/XM radios.

Remember WorldSpace? The concept was first reported here in the June 1998 *Popular Communications*. The WorldSpace digital satellite broadcasting service is now on-the-air in Africa. According to an online press release, "Crystal clear, fade-free news, music, education, and entertainment programs are available to more than one billion people in Africa and the Middle East via the WorldSpace AfriStar satellite. The free, multi-lingual programs can be heard on portable receivers specially designed and built for WorldSpace by Hitachi, JVC, Matsushita (Panasonic), and Sanyo." The receivers range in price from \$250 to \$400, and are available from retailers in parts of Europe and throughout Africa.

QSL Information

750 CJVR Melfort, Saskatchewan, received full data QSL letter in 78 days, signed Bayne Opseth, CE. Slogan: "Today's Best Country." URL: www.cjvr.com. The address is Box 750, Melfort, SK S0E 1A0. (Griffith, CO)

1400 KLBB St. Paul, Minnesota, received nice QSL letter, fridge magnets, and bumper sticker in seven days after fol-

low-up, running 1 kW, signed Kim Koday. The address is 331 11th Street South, Minneapolis, MN 55404. MW QSL #2683. (Martin, OR)

1570 CKMW Winkler, Manitoba, received QSL letter in 20 days after follow-up, signed Sanford Hildebrand — Tech. The address for CKWW is P.O. Box 1570, Winkler MB R6W 1G3. Manitoba QSL #15. (Martin, OR)

1700 WEUP Huntsville, Alabama, received E-mail QSL in one day from Steve Murray-PD. The address is weup@hiwaay.net. Running only 1 kW at the moment, until they get their 10 kW transmitter installed. (Martin, OR)

Broadcast Loggings

In this month's selected logs, Patrick Martin takes advantage of solar activity to catch some transpacific DX. For those wondering how he does it, Patrick uses a Drake R8 receiver with a terminated EWE antenna, a 400-ft north-northwest terminated wire, 1500-ft east terminated Beverage, and ANC-4 phasing unit. The long wires combined with a Pacific coast location make it possible.

Mark Connelly enjoys the benefits of

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sea gain from choice coastal Massachusetts sites, mobile DXing from the car with Drake R8A and Collins-filterized Palstar R30 receivers, using phased loop and whip antennas. Mark has also been experimenting with a Pennant antenna.

Sterling Marcher listens to San Francisco's top stations with a Drake SW8 receiver and 15-ft wire antenna. These DXers may have an impressive arsenal of equipment, but it's their ocean-side locations that really make the difference. All times are UTC.

531 1XP1 Auckland, New Zealand, at 1240 good signal next to local Astoria TIS on 530, with man in Samoan. (Martin, OR)

531 RDP Porto Santo, Madeira, at 0052 bits of Portuguese talk by man, slightly over Spain, Algeria, and a het from R. Vision Cristiana-530. (Connelly, MA)

540 1XC/2XV Radio Rhema, New Zealand, "local-like" with soft Christian instrumental music, Radio Rhema ID monitored at 1300. Best heard in a long time. (Martin, OR)

549 2XC Radio Rhema, New Zealand, at 1301 parallel 540 kHz. (Martin, OR)

549 Alger Chaine 1, Les Trembles, Algeria, loud at 0051 Arabic talk by man, with guitar and violin interludes. (Connelly, MA)

549 Deutschlandfunk, Germany, monitored at 0151 parallel 1422 kHz with classical music, slightly over Algeria. (Connelly, MA)

550 KFYR Bismarck, North Dakota, fair at 0820, on top of jumble with sports scores, tagged by "On 55 K-Fire." I haven't heard this one in years. (Martin, OR)

576 1XLR Hamilton, New Zealand, good at 1252, on top of 2RN with soft Christian music. Announcer spoke briefly mentioning "Southern Star" into more music. This has been a tough one to QSL as they have few announcements, at least when I hear them. (Martin, OR)

612 RTM Sebaa Aioun, Morocco, fair at 0145, string music with Arabic vocal parallel 11920 SW. (Conti, MA)

620 WVMT Burlington, the signal was not very good; a lot of static and a buzz type noise. Larry King doing an ad for garage "620 WVMT," then an ad with Williams. (Walker, CT)

640 WFNC Fayetteville Carolina, at 0500 with Jim Boh Westwood One and ID, "1940 to proud years. . . WFNC Fayetteville WFNC-FM Lumberton" into CI over CBN. (Conti, NH)

670 WWFE Miami, Florida 0505, weather with "la temperatura Miami" and ID as "la Poderosa Miami." (Conti, NH)

738 RFO Mahina, Tahiti, very fair at 1256 with a man and woman in French. (Martin, OR)

740 KCBS San Francisco, California, excellent at 0455 with local financial news, "KCBS San Francisco All News 74." (Marcher, CA)

740 WMBG Williamsburg, Virginia fair at 0450, "740 WMBG" ID

Pending							
New Call	Location	Freq.	Old Call				
WVBB	Richmond, VA	1380	WTVR	KSJM	Winfield, KS	107.9	KSOK
KNJR	Ontario, CA	93.5	KREA	WTNK	Hopkinsville, KY	97.5	New
				WLLE	Mayfield, KY	94.7	WIVR
				WQMR	Snow Hill, MD	101.1	New
				WTCU	Fife Lake, MI	95.9	New
				WDQV	Mackinaw City, MI	88.5	WAAQ
				WPQZ	Muskegon, MI	88.1	New
				WLSN	Grand Marais, MN	89.7	New
				WMLS	Grand Marais, MN	88.7	New
				KWBZ	Monroe City, MO	106.3	KDAM
				KRZN	Billings, MT	96.3	KCMT
				KRRN	Las Vegas, NV	105.1	KVBC
				KJZS	Sparks, NV	92.1	KSRN
				WOGF	East Liverpool, OH	104.3	WELA
				WFJX	Marysville, OH	105.7	WZAZ
				WXQQ	Wauseon, OH	96.9	New
				KMKZ	Enid, OK	96.9	KNID
				KNID	Lahoma, OK	95.7	KMKZ
				KRCO-FM	Prineville, OR	95.1	KIJK
				KWPK	Warm Springs, OR	96.5	KWEG
				WQFX-FM	Russell, PA	103.1	WRLP
				WKVC	North Myrtle Beach, SC	88.9	WMIW
				WKTS	Kingston, TN	90.1	New
				WYKW	Shelbyville, TN	91.3	New
				KMOA	Dilley, TX	98.9	New
				KTBS	Houston, TX	94.5	KLDE
				KLDE	Lake Jackson, TX	107.5	KTBS
				KXXS	Marble Falls, TX	104.9	KBAE
				KWBU-FM	Waco, TX	107.1	KWBU
				KYBG	Brigham City, UT	100.7	New
				KPKK	Oakley, UT	101.5	New
				WLFE-FM	St. Albans, VT	102.3	WLFE
				WRSB	Middlebourne, WV	91.5	New
				WVVV	Williamstown, WV	96.9	New

"America's best music," nostalgia over WJIB. (Conti, NH)

790 CIGM Sudbury, Ontario, at 0444 a country music station, and the signal was pretty good. (Walker, CT)

810 KGO San Francisco, California, at 0330 some static but an excellent signal, Gene Burns talk show. Distance to San Francisco 450 miles. (Marcher, CA)

810 SER R. Madrid, Madrid, Spain, at 0110 parallel 873 with talk in Spanish, light music, over WGY, no sign of CJVA or Latin Americans. Surprisingly loud. (Connelly, MA)

918 R. Intercontinental, Madrid, Spain, monitored at 0016 bits of Spanish teletalk, in CJCH slop with WHJJ phased. (Connelly, MA)

954 R. Espana, Madrid, Spain, at 0015 Spanish talk, then romantic female vocal, excellent right after local WROL 950 sunset power cut. (Connelly, MA)

980 CKRM Regina, Saskatchewan at 0403 good, on top with news, ID as "CKRM News," best heard in a while. (Walker, OR)

1110 WSWF Seneca Falls, New York, at 0500 "This is AM 1110 WSWF Seneca Falls, and AM 1590 WAUB Auburn" and CBS news, easy listening

music, apparently another daytimer now on full-time. (Conti, NH)

1260 KICN Idaho Falls, Idaho, fair at 0800, on top with ID going into network news "... your talk stations, KICN Idaho Falls and KBLI Blackfoot-Pocatello." (Martin, OR)

1341 BBC R. Ulster, Lisnagarvey, Northern Ireland, at 0138 English talk, possibly a drama, poor with CJLS/WNBH/W MID 1340 slop. (Connelly, MA)

1390 WKDR Burlington, Vermont, at 0500 the ID "1390 WKDR" done by Bruce Williams into AP network news. (Walker, CT)

1500 WGHT Pompton Lakes, New Jersey, at 0029, the signal was pretty clear, fading in and out every so often. I heard the end of a song, then the sign-off announcement. "This now concludes the traditional broadcast day of WGHT Pompton Lakes/Paterson" into details telling listeners they can be heard overnight at ghradio.com. WTOP Washington, DC, normally heard here. (Walker, CT)

1530 WVBF Middleboro, Massachusetts, at 0705 "You're listening to the Massachusetts Reading Network, 1530 WVBF AM Middleboro, 91.5 WJUL FM

Lowell, 91.5 WNMH FM Northfield, 91.5 WBIM FM Bridgewater, 91.3 WDJM FM Framingham, and 91.3 WSHL FM Easton" and reading from the book U571. Former daytimer, now 24 hours. (Conti, NH)

1570 KHPN Loveland, Colorado, heard with C&W music, CNN News at 0900 with ID as "KHPN Ft. Collins-Loveland" under/over an unidentified sports talk station. (Martin, OR)

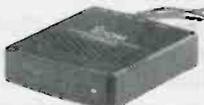
1680 WTTM Princeton, New Jersey, good at 0715, on top of WJNZ with sports news and tag "... you can hear it on WTTM." (Martin, OR)

1700 WEUP Huntsville, Alabama, heard at 1025 in and out of jumble with Black Gospel and a little "stinger" and "WEUP" ID, lots of WAFN, KBBG, etc. interference. Thanks to Lee Freshwater for the tip. Don't know if WEUP is running 10Kw or not, but they seem to get out quite loud at times. (Martin, OR)

One final note: Gary Jackson recently talked to Jaime Arbona at KSXX Roseville, California, who says they should be on the air shortly at **1690 kHz**. Thanks to Michael McCarty, Mark Connelly, Patrick Griffith, Gary Jackson, Sterling Marcher, Patrick Martin, and Paul Walker. 73 and good DX! ■

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THE LISTENING POST

What's Happening: International Shortwave Broadcasting Bands

The Radio Australia Debacle

It looks fairly certain that Radio Australia's transmitting site at Darwin on the Cox Peninsula in the far north of the Northern Territory will be active again soon, if it isn't already. There is also a chance it will not be broadcasting any *Radio Australia* programming! The government has leased (some reports say sold) the Darwin facility to the religious group Christian Vision, which also owns and operates Voz Cristiana in Chile and Christian Voice, based in Zambia. Christian Vision Australia intends to broadcast English language programming to China, India, and Indonesia. The lease agreement leaves Christian Vision responsible for all programming broadcast from Darwin, which gives CV's leaders pause when it comes to letting anyone else use the facility. Unless that stipulation can be changed, Christian Vision is not anxious to have any other voices going out over its transmitters.

Even if this changes, Radio Australia will still have to go to the government, hat in hand, for the funding it would need to lease time on a facility to which it once had full and complete access! The government cutback and resulting closure of Darwin in 1997 virtually cut off Radio Australia's coverage in Asia and narrowed its main thrust to mostly the Pacific islands. All this is thanks to government bureaucrats and

white paper writers who didn't quite know what they were talking about.

The Radio Australia debacle — and the many other stories of governments cutting back on their shortwave voices we've heard about over the last few years — remind yours truly of the early to mid-1950s. TV was rapidly taking over the land. Radio was "dying." Especially this new FM thing. Many AM station owners decided it was as good as dead and turned their licenses back to the FCC. Some years and an ulcer later they were scrambling to get them back. Some never did.

We are many years away from the day when satellites and computers/real audio will reach the kind of numbers most broadcasters are looking for. It may well never happen. We predict that we'll be seeing some governmental about-faces on the subject of international broadcasting in the first years of this new century.

Other News

Adventist World Radio has received permission to construct a new station in Argentina, in northern Italy. The new facility will beam AWR programming to the Middle East, North and West Africa, as well as a big chunk of Asia. Some 15 new language services are to be added to the current 60 now being aired. Construction

on the new station is now underway. Our knowledge there's been no on-air set yet.

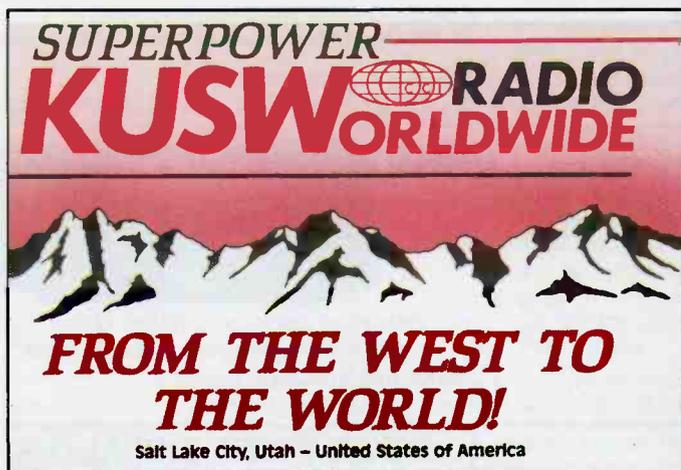
One of Canada's private shortwave stations — CHNX in Halifax, Nova Scotia (6130) — is off the air due to transmitter problems. The engineer is going to try to fix it but apparently the management is at all hot for this minor sideline of the AM service and is very careful about undoing the purse strings. Bottom line we may have lost 'em.

The Voice of Nigeria has moved up kHz from its longtime 7255. It still signs on at 0500 for two hours of English broadcasts. Anyone know if 15120 is still operating with an international service?

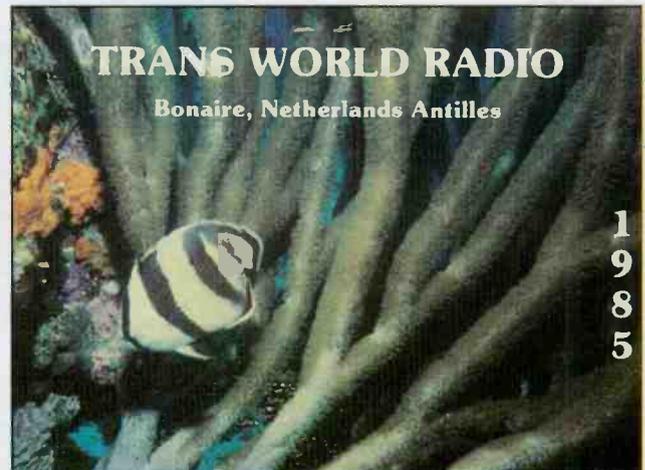
Radio Austria International is also in a cut-back mode. Broadcasts in Arabic and Esperanto will be dropped by the end of the year and transmissions from station's Moosbrunn transmitter site will be cut by about 50% and the station will go silent on some shortwave frequencies. No rationale for these steps was given.

India, on the other hand, continues its huge, multi-year expansion of All India Radio's facilities. Another 250 kW transmitter is active from Delhi and apparently several more of equal power are coming on later.

You might want to pay more attention to Swiss Radio International. One of the



Remember this station? They couldn't cut it with DJs, rock, and commercial spots. (Thanks Jack Linonis, PA)



Trans World Radio issued this card to Jack Linonis in 1985 for retention of its now ceased Bonaire shortwave transmissions.

BY GERRY L. DEXTER



Radio Korea issued this card to commemorate the 1986 Asian Games. (Thanks Jack Linonis, PA)

officials has said that the station would be off shortwave in another four years. Tune in and send cards, letters, reception reports. Let them know you are out there.

Lithuanian Radio should have a new antenna up by now at its Sitkunai site — designed to put a better signal into North America. For a while now, some of the station's broadcasts have been relayed by Germany's Julich site.

Has anyone QSL'd Radio Budapest in recent months? Robert Montgomery in Pennsylvania says he's sent them "six or so reports in the last 18 months" and hasn't received a single card.

Two shortwave stations in the Dominican Republic — Radio Barahona on 4930 and Radio Villa on 4960 — are active again. Check during North American evenings or during the early morning hours — 1000 or 1100.

This month's book winner is Tricia Ziegner of Westford, MA, whose reports always include at least one or two loggings from the Near East or Central Asia, areas which many people don't pay a lot of attention to. Tricia wins a 2001 edition of *Passport to World Band Radio*, courtesy of CRB Research Books. They have an absolutely fascinating catalog of books for the radio hobbyist as well as books on

privacy, spying, the Internet and a lot more. Call them for your personal copy at 631-532-9169, or drop them a line at P.O. Box 56, Commack, NY 11725.

Remember that your reception logs are always welcome. Please be sure to list your logs by country, provide at least a double space between each one (so we can navigate scissors more easily) and also add your last name and state abbreviation after each logging. Logs are cut and sorted so be sure to use only one side of the paper — otherwise some of your logs won't make it into the column. Other things we can use are spare QSL cards you don't need returned (or good quality copies), station photos and other items from stations, including schedules, brochures, etc. We'd love to feature a photograph of you at your listening post, too! As always, thanks so much for your continued interest and cooperation!

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.

ANTIGUA — Deutsche Welle relay, 6160 with "Newslink" at 0920. (Barton, AZ) 17810 at 2154 in GG. ID by woman and off at 2155. (MacKenzie, CA) BBC relay, 5975 at 0433. **Parallel to 6175** (Delano). (MacKenzie, CA)

ARMENIA — Voice of Russia relay, 9965 in SS at 0245. (Brossell, WI)

ASCENSION ISLAND — BBC relay, to Africa on 7160 at 0539. (Barton, AZ) 15400 to West and Central Africa at 1951. (Jeffery, NY) 21630 at 1810. (MacKenzie, CA)

AUSTRALIA — Radio Australia, 11650 at 1215 with country songs. (Brossell, WI) 12080 (and 9660 in parallel) at 0700. (Barton, AZ) 15415 at 0250 with discussion on pollution in Japan. (Foss, Philippines) 21740 at 2115. (MacKenzie, CA)

AUSTRIA — Radio Austria Int'l, 9870 at 2354 to 0000 with multi-lingual ID — "This is Radio Austria International" and "Goverit Austria." (Brossell, WI) 13730 at 0135 with "Weekly Roundup." (Barton, AZ) 1637. (Burrow, WA)

BELGIUM — Radio Vlaanderen Int'l, 15565 via Bonaire at 2230 sign-on with ID and news. (MacKenzie, CA)

BRAZIL — Radio Brazil Central, 11815 in PP with clear ID at 0228, into music. (Brossell, WI)

CHILE — Radio Voz Cristiana, 15375 with impassioned SS talk at 1220. (Brossell, WI) 17680 at 2200 in SS with ID, music. (MacKenzie, CA)

CHINA — China Radio Int'l, 11910 at 1700 with ID and news. (Burrow, WA) 15400

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

in CC at 2300. (MacKenzie, CA) 17720 in SS at 0118. (Foss, Philippines) Central People's Broadcasting Station, 11740 in CC at 0320 and 15285 in CC at 1520. (Brossell, WI) 15710 at 0238 in CC. (Foss, Philippines)

COLOMBIA — Radio Nacional, 4955 in SS at 0420 with man announcer and local music. (MacKenzie, CA)

COSTA RICA — RFPI, 15050 at 2300. (MacKenzie, CA) 1505 and 2230. (Brossell, WI) 21814.9 USB at 2305. (MacKenzie, CA)

CROATIA — Croatian Radio, 9925 at 0400 in presumed Croatian with discussion until 0410. No EE. (Burrow, WA) (This is via Germany. Ed.)

CZECH REPUBLIC — Radio Prague, 11615 at 0305 with re-broadcast of the 1968 Soviet invasion of Czechoslovakia. (Brossell, WI) 15545 at 2233 with sign-on and news. (MacKenzie, CA)

ECUADOR — HCJB, 21470 at 2139 in SS with news. (MacKenzie, CA)

ENGLAND — BBC, 7120 via South Africa monitored at 0455 with "Talk About Africa." 15400 at 2254. Off at 2259. (MacKenzie, CA)

EGYPT — Radio Cairo, 9900 at 2230 with "The Holy Koran and its Meaning." (Ziegner, MA) 2230 and 2350. Also 15285 at 0340. (Brossell, WI)

FINLAND — YLE/Radio Finland, 11985 at 0004-0100 with "Midsummer Music Festival." 15400 at 1225. (Brossell, WI)

FRANCE — Radio France Int'l, 12015 (via Gabon — Ed) and 17850 at 1613 with sports, African news, highlights from French newspapers, ID, top news stories. (Burrow, WA) 17605 at 1603 with news, correspondents. (Barton, AZ)

GERMANY — Fritz Love Radio, 9525, 0003 with hip-hop and GG talks. Special broadcast for the Love Parade in Berlin. (Watts, KY) (Also Silvi, OH, who noted some EE IDs. but no times given) (This was a special one-time SW broadcast to North America — Ed)

GREECE — Voice of America relay on **15160** heard at 1205 with world news. (Brossell, WI)

GUATEMALA — Radio Verdad, **4052.47** at 0220-0303 close, with SS talks, a variety of religious music. Off with long version of Guatemalan national anthem. On later than usual. (Alexander, PA)

HAWAII — KWHR, **17510** in CC at 2210. Woman with long talk. (MacKenzie, CA)

HUNGARY — Radio Budapest, **9800** at 2357-0000 with IDs in EE, FF, GG, and SS and IS. Into unidentified language at 0000. (Brossell, WI) *(New frequency? — Ed)* **9835** at 0230 with news, ID, "DX Blockbuster" program. (Burrow, WI)

INDIA — All India Radio, **10330** at 0228. (Foss, Philippines) **13710** at 1345 with news. (Barton, AZ) **15075** in unid language at 1200. (Brossell, WI)

IRAN — Voice of the Islamic Republic of Iran, **15084** in Farsi with talks and music at 0210 and 1515. (Brossell, WI) 2305. (MacKenzie, CA)

ISRAEL — Galei Zahel — Israeli Defense Forces Radio, **6985.64**, 0110 with talk in HH, local pops. Slowly drifting up to **6895.83** by 0253. (Alexander, PA) 0143-0230 with tentative ID at 0200. Mostly U.S. pops. Heavy QRM from jammer. (Montgomery, PA) **15785** presumed at 2030 with call-ins and news headlines at 2100. (Watts, KY) Kol Israel, **11585** in HH at 2350. (Brossell, WI) **15650** in HH at 2220. (MacKenzie, CA) **17735** monitored at 0407 with Mideast and international news, into another language at 0415. (Burrow, WA) Reshet Bet home service, **15760** at 1815 in HH. (Watts, KY) 2345. (MacKenzie, CA)

ITALY — RAI Int'l, **11800** with clear ID at 2340, into talks in II. (Brossell, WI)

JAPAN — Radio Japan/NHK, **9505** at 1701 with news and ID. (Burrow, WA) **9695** at 1020 with pops, haiku. (Barton, AZ) **11730** at 1530 with "What's Happening in Asia." (Brossell, WI) **17825** at 2148 and **21670** at 2130, both in EE. (MacKenzie, CA)

KUWAIT — Radio Kuwait, **15495** heard at 0213 and 2330. (Brossell, WI) 2235. (MacKenzie, CA)

LIBYA — Radio Jamahiriyah, **15435** at 0230 in AA. (Brossell, WI) Voice of Africa program, **15435**, 1728-1736 with EE ID, news. Also EE from 2033-2038. The 1728 broadcast always has co-channel interference from Saudi Arabia. The 2033 broadcast is in the clear but has muffled audio. No EE heard during checks at 2330 and 0130. (Alexander, PA)

MADAGASCAR — Radio Mada-gasikara, **5009.62** monitored from 0256 sign-on with IS, anthem, opening announcements and local news, vernacular talk. (Alexander, PA)

MEXICO — Radio Mil, **6010** in SS at 0435 with man announcer and local pops. (MacKenzie, CA)

MONGOLIA — Voice of Mongolia, **12080** with EE from 1030-1100. Still being heard very well in NE Ohio. (Silvi, OH) **12085** 1030-1100 giving frequency schedule at



It took many years of effort and creative thinking to pry a reply out of Radio Tanzania a Zanzibar, but Robert Brossell of Pewaukee, WI, finally pulled it off! No one has ever had an easy time QSLing this station.

1035. Poor audio and frequent rapid fades. (Montgomery, PA)

MOROCCO — RTV Marocaine, **11920**, in AA at 0233. (Brossell, WI) VOA relay, **7195** with news at 0533. (Barton, AZ)

NETHERLANDS — Radio Netherlands, **9845** monitored at 2350 with commentary on media exploitation of children. (Brossell, WI)

NETHERLANDS ANTILLES — Radio Netherlands via Bonaire, **6165** at 0445 and **15315** at 2325. (MacKenzie, CA)

NEW ZEALAND — Radio New Zealand Int'l, **17675** at 0240 with pops. (Brossell, WI) 0417 with gardening program. (Burrow, WA) 2203 with news. (MacKenzie, CA)

NORTH KOREA — Radio Pyongyang, **11710** at 1725 with martial music. **13650** in KK at 2348 with comments, music. **13790** at 1810 in CC. (MacKenzie, CA) **13650** at 1415 with revolutionary choral music. (Barton, AZ)

NORWAY — Radio Norway Int'l, **13805** at 2320 in NN. Comments and ID. (MacKenzie, CA) **17505** at 1500 with sign-on in NN. (Barton, AZ)

NORTHERN MARIANA ISLANDS — VOA Tinian relay, **15240** monitored at 1125. (Jeffery, NY) 1205 with news. (Brossell, WI)

OMAN — Radio Sultanate of Oman, **15355** in AA with Holy Koran recitations at 0220. (Brossell, WI)

PAPUA NEW GUINEA — NBC Port Moresby, **4890** with news at 0906. (Barton, AZ) **9675** at 0933 with talks about villages and the road system. Phone number for reporting potholes. Other items included talk of a campaign using children to clean up along the roadsides in preparation for Independence Day celebrations, several other interesting local notes and announcements. 4890 is not parallel. (Montgomery, PA)

PERU — Radioidifusora Huancabamba, **6535.8**, 0136 in SS with ID, lots of mentions of San Francisco (*not the one in CA! — Ed*) Peruvian music, great sound effects with announcer, echoes and reverbs. Apparently not on every night. (Montgomery, PA) Radio Altura, **6479.7**, 0203 with man/woman announcers. ID is tentative due to heavy QRM. Poor modulation, mostly guitars.

(Montgomery, PA) 0240 to past 0300 with Peruvian folk music, SS announcements (Alexander, PA) Radio Andina, **6673.21**, a 0913 with Peruvian folk music, SS announcements, IDs. (Alexander, PA) La Voz de Campesinos, **6956.65** at 0240 to 0255 close SS pops, Peruvian music, ID, sign of announcements and anthem by a local band (Alexander, PA)

PHILIPPINES — VOA relay, **15160** heard at 1119. (Jeffery, NY) **15290** at 2308 (MacKenzie, CA) **17820** at 0220. (Foss Philippines) Radio Pilipinas, **17720** at 184. with news, ID at 1858, IS, music (MacKenzie, CA)

QATAR — Qatar Broadcasting Service **17895** in AA at 2034. Music, woman announcer. (Jeffery, NY)

ROMANIA — Radio Romania Int'l **15105** at 0445 with feature on development of Bucharest, DX program, schedule, IS an off at 0456. IS again and into FF at 0500 (Burrow, WA) 2310 with news about Romania. Also **15180** at 2157 with IS, ID, int PP. (Brossell, WI)

RUSSIA — University Network (Gen Scott) via Samara, **17795** at 1350. (Watts, KY) Radio Rossi, **11980** at 0235 with music, tall in RR. (Brossell, WI) Deutsche Welle relay with ID in GG at 1000. (Barton, AZ)

RWANDA — Deutsche Welle relay **17860** at 2145 in GG. (MacKenzie, CA)

SAUDI ARABIA — Broadcasting Service of the Kingdom of Saudi Arabia, **11820** a 2220 with Koran in AA. (Brossell, WI) **2170**: in AA at 1430. Off at 1456. (Ziegner, MA)

SEYCHELLES ISLANDS — BBC relay **11730** at 0312. (Brossell, WI)

SLOVAKIA — Adventist World Radio **11600** with program in Punjabi to India a 0200. (Watts, KY)

SOUTH KOREA — Radio Korea Int'l **9515** at 1635 with "Let's Learn Korean." ID web address, music. (Burrow, WA) **13670** a 1305. (Barton, AZ) 15575 in KK at 2335 (MacKenzie, CA)

SPAIN — Radio Exterior de Espana **15160** heard at 0330 with SS ID, music (Brossell, WI)



One of the many attractive QSLs issued by the AWR's now silent Radio Lira International in Costa Rica. (Thanks Dr. Adrian Peterson)

SOUTH AFRICA — Channel Africa, 17860 at 1703 with news, ID, frequencies for World Cup soccer coverage. (Burrow, WA) 17870 at 1825 with "Newsstand," ID. (MacKenzie, CA)

SWEDEN — Radio Sweden, 9495 with news at 0330. (Burrow, WA) 15245// 15265 at 0333 with news of heavy rains, "Review of News Week." (Brossell, WI)

SWITZERLAND — Swiss Radio Int'l, 13775 in AA at 1903 with discussion about Lebanon. (Ziegner, MA) 21720 at 1805 with commentary. (MacKenzie, CA)

SYRIA — Radio Damascus, 12085 at 2028 with soft music. Barely audible. (Jeffery, NY)

TAIWAN — Radio Taipei Int'l, 5950 at 0430 in CC; 15600 at 2225 in EE; 17750 at 1835 in FF, all via WYFR. (MacKenzie, CA) 15345 (direct) at 0157 in CC with pop vocals. (Foss, Philippines)

THAILAND — BBC relay, 15280 with a radio drama at 1210. (Brossell, WI) VOA relay, 9550 at 1710. (MacKenzie, CA)

TURKEY — Voice of Turkey, 11655 at 0310 with news. (Brossell, WI) 0333 with "Impressions of Turkey." (Burrow, WA) 13640 at 2220 in TT. (Barton, AZ)

UNITED ARAB EMIRATES — UAE Radio, Abu Dhabi, 17760 in AA at 2157. Off at 2159. (MacKenzie, CA) 21630 at 0235 in AA. (Foss, Philippines) UAE Radio, Dubai, 15395 at 1600 with ID, "The Role of Proverbs in Arab Society." (Jeffery, NY) 15400 in AA at 0328. (Brossell, WI)

UZBEKISTAN — Radio Tashkent, 17775 heard at 1304 in possible Hindi. At 1330 in EE with program on modern Uzbek composers. At 1400 in what was probably Urdu. (Ziegner, MA)

VATICAN — Vatican Radio, 9605 at 0252. ID 0307, IS and off 0308. (Burrow, WA) 12055 at 0140 to 0200 close. EE news, sign-off with IS. (Alexander, PA)

VIETNAM — Voice of Vietnam, 9795 via Canada in EE at 0341. (Burrow, WA)

YEMEN — Republic of Yemen Radio, tentative, 9780v at 2139 in AA with music. (Ziegner, MA)

ZAMBIA — Christian voice, 4965 at 0130 with EE religious messages, contemporary Christian music, IDs. (Alexander, PA)

Let's have a Godzilla-size roar of approval for the following folks who sent in their "stuff" this time: Robert Brossell, Pewaukee, Wisconsin; Tricia Ziegner, Westford, Massachusetts; Robert Montgomery, Levittown, Pennsylvania; Lee Silvi, Mentor, Ohio; Dave Jeffery, Niagara Falls, New York; Rick Barton, Phoenix, Arizona; R.C. Watts, Louisville, Kentucky; Brian Alexander, Mechanicsburg, Pennsylvania; Bruce



Bäuerliche Tracht aus dem Walsertal, Vorarlberg
Rural costume from the Walsertal, Vorarlberg
Costume traditionnelle paysan de la vallée de Walsert au Vorarlberg
Traje típico del Walsertal, Vorarlberg



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RADIO AUSTRIA
INTERNATIONAL
RADIO AUTRICHE
INTERNATIONALE
RADIO AUSTRIA
INTERNACIONAL

Radio Austria International sent one of their stylish "costume cards" to Jack Linonis back in 1988.

Burrow, Snoqualmie, Washington; Stewart MacKenzie, Huntington Beach, California, and Marty Foss, Talkeetna, Alaska, listening from the Philippines. Thanks to each one of you!

Until next month, good listening! ■

Rave Review
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CIRCLE 72 ON READER SERVICE CARD

WASHINGTON BEAT

FCC Actions Affecting Communications

Driving With Your Cell Phone: What They Haven't Said

What if the FCC gave a cellular Priority Access Service party and you weren't invited? The FCC is always full of surprises, so business-as-usual at the Commission, *isn't*. Also, it's time to face up to *Truth or Consequences* concerning the safety of driving while using a cellular phone. Though you may be shocked at what the government comes out with, you may be equally astonished by what researchers *haven't* said.

If you are one of the many cellular or PCS subscribers who bought their cellular phone mainly for emergency and security purposes, you may soon find that when you need it most, your wireless phone may fail you. On July 13, the FCC established its new rules for Priority Access Service (PAS) for Commercial Mobile Radio Service operators, in FCC 00-242. CMRS includes the various radio services offering wireless telephone service. These include cellular, PCS, and SMR systems, among others. Priority Access is a scheme to allow particular government officials and other influential parties to gain access to the first channels available on a given wireless telephone system during a disaster or national emergency. Regular *Pop'Comm* readers will not be caught by surprise on this matter. In the September 1999 issue, we described what was then an obscure proposal to establish Priority Access, WT Docket 96-86.

Little Fanfare

Despite the magnitude of this action, it has received almost no publicity. As of this writing, it is not mentioned in the news releases on the FCC's Web home page, nor does it appear among the Wireless Telecommunications Bureau's wireless headlines on the WTB Web page. I did not see word of it at the CTIA Web site, either. Given the potential impact of Priority Access to wireless telephone subscribers, and the lack of press notices, Priority Access could be considered the cellular industry's Dirty Little Secret.

The FCC's action in establishing wireless Priority Access is unprecedented. It is true that the president, under the War Emergency Powers, Section 706 of the Communications Act (47 USC §606), has long had broad authority to seize regular channels of communications for defense or national security use. But never has the rate-paying public been preempted from wireless telephone channels at the behest of government users as a matter of regular policy. It is easy to see why officials would want or need to gain immediate access to communications channels during a disaster. Anyone who has attempted to use a cellular phone during a disaster or even while caught in a traffic gridlock knows how easily circuits can become overloaded. The public safety community has actually complained to the FCC that cellular usage by the general public leads to congestion on cellular networks, "severely curtailing" use by emergency personnel. When landline phones are out of service or when folks are on the road en masse, such as during an evacuation order, the first thing they do is pick up their wireless phones in order to communicate. And why shouldn't they? They are *paying* for this valuable service that the industry has consistently promoted as being useful "anytime, anywhere." Of course, disaster relief personnel have a pressing need to communicate during a widespread emergency, so why shouldn't they have first crack at getting a cellular channel?

Consider that prior to about fifteen years ago, the public had extremely few wireless communications alternatives. In the pre-cellular days, mobile telephone service had very few channels and was only within the financial reach of the very wealthy. GMRS, or Class A Citizens Band, as it was once known, was then functionally little more than another Part 90 business two-way radio band. The Family Radio Service did not exist. Other than ham radio for those motivated enough to become involved, this left only 27 MHz Citizens Band. Yet government and public safety has always had their

own sets of frequencies and their own radio systems and infrastructure.

With the coming of the cellular era John Q. Citizen finally had sophisticated dependable, mobile communications at an essentially affordable price. Meanwhile, public sector communications systems have become more sophisticated with expanded use of repeater systems and the advent of trunked radio networks. So, when is enough never enough? Well, when you're the government of course! According to the FCC Report and Order on Priority Access government services, as well as utility operators, need even *more* communications channels than they already have. In reality, that becomes more channels than they have *ever* had. The issue goes deeper than just disaster response, though. The Public Service Wireless Advisory Committee commented in FCC 00-242 that Priority Access during peak period of traffic congestion would be required for commercial systems to be a reasonable alternative to spectrums dedicated for public safety communications. Day-to-day public safety dispatch use is something for which cellular systems were never designed.

There are a few key technical and regulatory facts about Priority Access Service that one should know. PAS is intended for what the FCC refers to as National Security and Emergency Preparedness (NSEP) personnel. These include public safety personnel at the federal, state, and local levels. Surprisingly CMRS operators are *not* required to offer Priority Access Service. They may simply elect not to participate in the PAS program. Priority calls will not preempt call already in progress, nor will it guarantee the completion of PAS calls. Certain private businesses, utilities in particular may qualify for PAS. There will be five levels of priority, with *one* being the highest level. Applications for PAS and the assignment of priority levels are to be administered by "Authorizing Agents." These agents are to be established by the various state governments for all non

BY ALAN DIXON, N3HOE/KST8678 <n3hoe@juno.com>

federal PAS applicants, and one Authorizing Agent will be established for federal users. The Report and Order does stipulate that PAS authorizations be limited to an unspecified minimum number of personnel, and suggests that those personnel be limited to those with command and control functions. PAS is to be available at all times to NSEP personnel. Although Priority Access is clearly intended for emergency calls, FCC 00-242 offers little to protect consumers from abuse of the PAS system.

The National Communications System (NCS), originally created by Executive Order 12472 in 1984, will be charged with the day-to-day administration of PAS. Indeed, it was the NCS that petitioned the FCC to establish a cellular priority service, in 1995. Additionally, the Executive Office of the President (EOP) will administer the PAS system. This office will resolve disputed PAS assignments in the event the president invokes his War Emergency Power under Section 706 of the Communications Act. The EOP may issue supplemental PAS regulations and procedures, and must "periodically" report the status of PAS to the FCC. The FCC will provide regulatory oversight and enforcement for Priority Access Service and will act as final authority for approval and for dispute resolution of PAS assignments in peacetime situations. Finally, the Telecommunications Service Priority Oversight Committee will review "systemic" PAS problems and recommend corrective action.

The five Priority Access Service levels are: 1.) Executive leadership and policy makers; 2.) Disaster response/military command and control; 3.) Public health, safety and law enforcement command; 4.) Public services/utilities and public welfare; and 5.) Disaster recovery. Additionally, a limited number of CMRS service technicians essential to network restoration will be granted highest priority status. No particular technical standard for implementing PAS is specified by the FCC. The FCC says that authorized users would activate the feature on a per-call basis by dialing a feature code such as *XX (where X represents any digit.) *The PAS rules make no provision for any level of priority to be assigned to 911 emergency calls.* Yet the FCC has declared its PAS rules to be *prima facie* lawful, in order to grant service providers some protection from liability from possibly violating the anti-discrimination provisions of Section 202 of the Communications Act (47 USC §202) in the pro-

vision of Priority Access to the authorized preferred users.

Was the Commission paying attention to important details? A footnote in FCC 00-242 claims that Priority Access will not be available with analog systems. This is nonsense, since the AMPS cellular systems have for years had the Overload Access Class mechanism built in. This is a 16-level access priority function that has never been systematically used because it has not been lawful to do so. In spite of FCC 00-242, which established PAS by amending §§64.401 and 64.402 of the FCC rules, Section 22.901 still requires that cellular system licensees *must* provide service "upon request" to subscribers and roamers in good standing. How will this remain possible in a disaster situation? The FCC also states that no members of the public filed objections to the Commission allowing commercial wireless providers to offer members of the public safety community priority over the general public in emergencies. Yet I am aware of at least one such filing in opposition to priority access schemes. One must wonder who is minding the store down at the Portals.

"What can consumers do to ensure that they have the best possible wireless telephone coverage in an emergency situation?"

What can consumers do to ensure that they have the best possible wireless telephone coverage in an emergency situation? Are you bothered by the notion that a politician may surreptitiously decide that his routine business call during a rush-hour traffic jam is more important than your 911 call to get your injured child to a hospital? The savvy cellular user will inquire among his or her local wireless telephone service providers as to which of them *doesn't* offer PAS. Regular emergency communicators not part of a government agency will, as always, want to have a variety of redundant radio communications media at their fingertips. Amateur radio, GMRS, FRS, CB, and now MURS (see below) remain as viable alternatives for disaster operations.

Reality Check, Please

Regardless of where you stand in the debate over whether individuals should be barred from using cellular phones while driving, let us at least keep our facts

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CIRCLE 11 ON READER SERVICE CARD

straight. Every time I see a press release or read an article describing another community planning to outlaw mobile cellular use by drivers in their town, I predictably read the same misinformation over and over again. Local politicians and reporters love to mis-report to it. Contrary to what has been referred to by the media on numerous occasions, there are no figures from a Canadian university study to show that there is a four-fold increase in the risk of collision while on a cellular call, while driving. None. This is yet another urban legend, perpetuated by one report quoting an errant source, then another misquoting others, and so forth.

Such reports almost invariably refer to an article published in *the New England Journal of Medicine* that appeared in February, 1997: "Association between Cellular-Telephone Calls and Motor Vehicle Collisions" (Redelmeier and Tibshirani 1997, 336:7). This study only correlated vehicle collisions occurring after the driver had made a mobile phone call. That's right — *after the call was completed!* The researchers studied the subjects' mobile calls during the day of the collision, and during the previous week. Any student of Statistics 101 can see that a standard statistical method was employed in the "study." Then what does this study tell us? *Anything?* As a matter of convention, researchers universally agree that a mathematical correlation in itself does not establish a cause-and-effect relationship.

Has anyone bothered to or misquoting from this *Journal* article ever actually read it? Please, enough of hearsay. The report simply does not prove that mobile telephone use while driving carries a four-fold increase in the risk of collision or the level of risk of driving drunk. Nor does it claim to. Don't take my word. Do something bold that few others have done. Go to the library and read it for yourself.

Part 90 Changes

The FCC has just removed the requirement for individual licensing of the Part 90 VHF "color dot" low power frequencies. These frequencies are **151.82, 151.88, 151.94, 154.57, and 154.60 MHz**, and have been used for handheld portable two-way communications. They have been removed from Part 90 regulation and placed in a newly designated service known as the Multi-Use Radio Service (MURS), now one of the Part 95 Citizens Band services. Frequency coordination for these channels had previously been elim-

inated last year in WT Docket 97-153. Power limits have been set at two watts, even for those frequencies that were previously restricted to one watt. Unlike 27 MHz CB and FRS, the "color-dot" channels are authorized for voice, data, and image. According to the FCC, this action was the brainchild of Motorola and Tandy.

WT Docket 98-182 (FCC 00-235) made a number of rule changes for Part 90 services. Another significant change is that the duration of all Part 90 licenses will be changed from five years to 10 years.

Here Comes CORES, Again

On July 19, 2000, the FCC again took steps to implement the Commission Registration System. Although presently voluntary, in the future the FCC may choose to make CORES registration mandatory for anyone doing business with the Commission. Registrants will be issued a ten-digit FCC Registration number (FRN). Entities filing applications or making payments to the FCC may register with CORES online at the FCC Web site at <www.fcc.gov> or by filing FCC Form 160. Entities already registered with the Universal Licensing System prior to June 22, 2000 will automatically be registered in CORES. While the ULS is for Wireless Telecommunications Bureau licensees, CORES will involve all FCC bureaus.

Other FCC News

Quickly, here are a couple of other interesting things the FCC has come up with: Starting in the second quarter of 2002, many of your favorite network TV programs will have a narrative sound track available. The inserted narration is to be broadcast on your television's SAP audio channel. Like all SAP audio, its presence will be user-selectable. This **Video Description** is the result of MM Docket 99-339 (FCC 00-258), and will be primarily for visually-impaired persons, and will complement the closed captioning available for hearing impaired individuals.

Also, the FCC has announced three new easy-to-remember three-digit dialing codes for quick access to selected services. Community information and referral services may use 211, and traffic and transportation information may soon be found by dialing 511. Dialing 711 will one day connect callers to the Telecommunications Relay Service (TRS). This new number will replace the various seven or ten-digit numbers now

in use among numerous states. In one type of TRS, text telephone (TTY) users call a TRS relay center where a communications assistant places a call to the desired voice user, reading the text aloud for the voice user, and vice-versa. Currently, 911 and 311 are in use or reserved for emergency and non-emergency public safety contact, respectively. Since there are only eight usable "N11" codes, the usefulness of assigned codes will be reevaluated in five years. Details were not available at press time as to how information service providers for these numbers will be chosen and administered. Full information will be found in CC Docket 92-105, as soon as it is released.

"Telecommunications law and policy, like all legislation and regulation, is established in response to needs, whether real or imagined."

Telecommunications law and policy, like all legislation and regulation, is established in response to needs, whether real or imagined. Politicians and bureaucrats are rarely experts in any given matter at hand. They rely on what they are told. And in matters of technology, Congress, and sometimes the FCC, choose only to hear what they are told by industry leaders. These industry executives have their own political business-case axes to grind. I have met a number of top telecommunications industry movers and shakers in the course of my work, and I am dismayed to observe that more than a few of them are inexperienced technological newbies who hardly know a transceiver from a toaster oven. If you, as a telecommunicator or as a consumer of communications services, are surprised by the actions of the FCC, Congress, or other governing bodies, then it is time to get involved with your elected and appointed officials. The new Congress is about to reconvene soon after the November general elections. Pick up the phone and let them know how you feel. Then enjoy the coming holiday season. ■

Editor's note: Writer Alan Dixon will be turning the Washington Beat column reins over to Laura Quarantiello next month. Alan will continue to advise our staff and write for *Pop'Comm* as his schedule permits.

UTILITY RADIO REVIEW

News, Information, And Events In The Utility Radio Service Between
30 KHZ And 30 MHZ

Monitoring Emergency Services

This month I will be looking at some utility radio services that are dedicated to providing HF radio communications before, during and after an emergency. This is a large topic and covers many different services that provide support when things go wrong. I will only be touching upon a few of these this month, coming back to cover them in more detail in later columns.

In the United States today many government organizations and civilian volunteer groups are dedicated to emergency planning and response. Emergencies can be something that affect one or two people, such as a fire in an apartment, to something that could affect the entire population of one or more States, such as a nuclear power plant having its core melt down. Likewise emergencies can be natural disasters of a massive scale such as takes place during earthquakes, hurricanes or tornadoes.

In order to ensure that the right resources are provided to deal with each situation properly, a nationwide master plan with co-ordination taking place between different levels of government has been put into place.

To put things into perspective I will start with an overview of the highest level of emergency planning, which is managed by the Federal Emergency Management Agency or FEMA. They are responsible for coordinating the SHARED RESOURCES (SHARES) High Frequency (HF) Radio Program that is part of the National Communications System (NCS).

Along with a brief description of each of their roles and activities I will also provide a partial listing of the HF radio frequencies that they use so that you can follow many of their activities on the air.

In doing the research for this topic I found that there is one big question being asked today about this service; that is how much longer will HF radio communications be used for emergency work? There has, after all, been a significant shift to VHF, UHF and satellite for voice, RTTY, and wireless computer networking.

FEMA Multi-Radio Vehicle



FEMA MRV van with HF antenna and satellite disk deployed.

The MRV is a 30-foot long communications van mounted on a Kenworth chassis with a total weight of 44,000 pounds. The rear section of the roof opens to reveal a 2.4 meter satellite antenna, while the rest of the roof contains antennas for use with its radio suite. The inside of the van houses the MRV's screen room that contains its communications equipment and a small office/work area in the front. The truck has two built-in 20 kW generators, which provide self-contained power for the entire operation. There is also a Second Antenna System that is mounted on another truck which can be connected to provide a second satellite link. An MRV is assigned to each of the FEMA Mobile Emergency Response Support (MERS) Detachments.

The MRV provides an interface to a variety of communications medium. It contains High Frequency (HF) Radios; Very High Frequency (VHF) Radios and Ultra High Frequency (UHF) Radios, all with telephone interface capability. It also contains a Ku band satellite system which can provide connectivity for telephones, Local and Wide Area Network (LAN/WAN), compressed video teleconferencing, and Broadcast Video. There are also computers with scanning, printing, copying and facsimile capabilities. The MRV also has a small telephone switch to provide limited telephone support.

The MRV provides a mobile communications platform that can quickly deploy to provide the initial means of communications for the disaster response team and/or the Disaster Field Office (DFO) until permanent communications mediums can be restored to the area.

The MRV will normally be deployed in response to disasters as part of FEMA's initial response. When authorized, the MRV can also be deployed to support other special events and exercises. The operational costs include normal salaries for 4-6 personnel, satellite time, and fuel for the vehicle.

Source: <http://www.fema.gov/>

BY JOE COOPER <ur-review@provcomm.net>

The answer seems to be, interestingly enough, that the simplicity found setting up and operating an HF radio station during an emergency will ensure its continued role in emergency services well into the foreseeable future.

I also found when doing my research that there are a great many emergency organizations to be found throughout the world that make good use of HF radio frequencies for communication as well. One good example of this is found in Australia. The large desert area found in the central part of that country is not serviceable by cell phones. For many people who live and work in the "Outback" the cost of using a satellite service for an extended period is prohibitive. For this reason the use of HF radios are still the preferred method of communication over long distances.

To coordinate the use of frequencies for emergencies, and to ensure that all areas of the country are properly serviced, the Australian Outpost HF Radio Services has been established. This is a network of radio stations operated by numerous services organizations, private businesses and civilians with one purpose in mind - keeping travelers in the remote areas of that country safe through good communication. I will look at some of the radio operations that take place through that service and provide monitoring frequencies for each of them.

I should mention that the look at software-based RTTY and FAX demodulators promised last month will be put over to the next (December) issue. So many new software packages are now available on the Internet I am going to have to look at this topic in greater depth than I had originally planned.

And last but not least, there are some excellent reader's logs this month, as well as letters and emails. Please keep them coming, folks. Each and every contribution is appreciated.

So now that the housekeeping is done, let's get to the main topics.

Emergency Management In The United States

The most important aspect of managing an emergency is being properly prepared for it. However, being prepared is more than simply reacting to a catastrophic event when it happens. It is to have the capability of surviving the event while helping others to survive at the same time. This means creating an orga-

Table 1 SHARES Emergency Frequency Short List

Frequency in kHz - Upper sideband (Voice)

3311 4041 4585 4590 5203 5211 5755 6826 6870 6999 7302 7635 7743
8125 10493 11045 13457

nization that is completely dependable before, during and after the catastrophe.

The United States has chosen to coordinate disaster planning through the advice and assistance of a number of different services that are maintained by many different levels of government. Community volunteers and the private sector organizations (such as the Red Cross) also provide assistance in disaster planning efforts.

Overall coordination of emergency preparedness handled by the Federal Emergency Management Agency or FEMA. This is an independent agency of the federal government with more than 2,600 full-time employees. With headquarters in Washington D.C., the agency also maintains regional and area offices across the country, as well as a training center in Emmitsburg, Maryland.

FEMA has nearly 4,000 standby disaster assistance employees who are available to help after disasters are over and support services are needed. FEMA also works in partnership with other organizations that are part of the nation's emergency management system, such as local emergency management agencies and 27 federal agencies, including law enforcement.

SHARES HF Radio

As part of its emergency preparedness strategy, FEMA has created the National Communications System or NCS. Those working for FEMA who are responsible for planning and preparing for emergency preparedness have undertaken a number of initiatives to provide communications to support all-hazards situations.

One of these initiatives, developed through the combined efforts of the 23 NCS member organizations, is the SHARed RESources (SHARES) High Frequency (HF) Radio Program.

The SHARES program was established by NCS Directive 3-3, Shared Resources (SHARES) High Frequency (HF) Radio Program, approved by the Executive Office of the President in January 1989. SHARES further implements Executive Order No. 12472 - Assignment of National Security and

Emergency Preparedness Telecommunications Functions, dated April 3, 1984.

The purpose of SHARES is to provide a single, interagency emergency message handling system by bringing together existing HF radio resources of Federal and federally affiliated organizations when normal communications are destroyed or unavailable for the transmission of national security and emergency preparedness information.

The SHARES network consists of 1067 HF radio stations, representing 78 Federal, state, and industry resource contributors. SHARES stations are located in every state and at 16 overseas locations. Three hundred thirty-five emergency planning and response personnel also participate in SHARES.

How SHARES Works

SHARES (SHARed RESources High Frequency) is a coordinated program designed for use by many government HF radio systems. It is a nationwide HF network and uses Federal, state and industry resources to provide back-up communications in support of national security and emergency preparedness.

What makes the service interesting is that it is not a formally operated network. While SHARES traffic can be passed over the network, the traffic of an individual agency using the system will always take precedence over SHARES traffic.

SHARES is an initiative of the National Communications System (NCS) which also includes agencies other than FEMA and state emergency services. During an emergency you can hear traffic originating from the Departments of Commerce, Defense, Justice, State, Treasury, Transportation, Federal Reserve System, Veterans Affairs, being carried over the network, as well as from the U.S. Postal Service, NASA and the FCC.

The motivation to create the SHARES network was to rationally use existing HF radio resources of Federal and federally affiliated organizations. The mission of the network is to provide a single message handling system for the transmission of emergency preparedness information

when normal communications are destroyed or unavailable.

In this regard SHARES resembles the Internet in its operating philosophy. In the same way that no one "owns" the Internet because it is simply a rational interconnection of existing computer network technology, so to is SHARES simply the rational use of existing HF radio services and networks.

When And How To Listen

The National Coordination Center (NCC) monitors FNARS and SHARES (Shared Radio Resources) nets following any regional disaster or emergency. There are two frequencies that are used around the clock, all year round:

DAY 10493 kHz USB

NIGHT 5211 kHz USB

Over 250 HF frequencies are earmarked for use in SHARES (see Table 1 for a partial listing). Federal call signs for state emergency operations centers and FEMA facilities nationwide and are typically in the WGY### group.

The SHARES Coordination Network holds weekly check-ins every Wednesday from 1600Z to 1800Z. These check-ins are intended to give SHARES stations practice in sending Station Availability Reports, to allow propagation checks to different Coordination Stations, and to provide the opportunity to test equipment and antennas.

A SHARES message consists of information that is Federal government business and must be communicated because of its importance in the preservation of life and the protection of property.

Participation in the SHARES program is voluntary; with network operations conducted on a basis of non-interference with-in the mandate of the participants mission responsibilities. Because many participating SHARES stations operate on a 24-hour a day basis, SHARES is always available to provide emergency radio communications.

What will make monitoring the SHARES network difficult at times is that there is no coordination or activation of the network. Like the Internet, the network exists in a passive form. As a result a SHARES transmission may take place at any time.

When an authorized agency wishes to make use of the network they simply con-

tact the nearest SHARES station for assistance in processing emergency message traffic. To move traffic through the SHARES network all that is needed is to have the flag word SHARES included in the header of the traffic.

Voluntary on-air exercises are also held roughly twice a year. These are open to all stations in the network and take place for several hours on a single day. These exercises allow station personnel to become familiar with network procedure, creating messages in the approved form and to practice transferring information between different organizations. Notice of these exercises is posted on the SHARES web page. For more information on SHARES contact: National Communications System, Operations Division (N3), SHARES HF Radio Program, Arlington, VA, 22204-2198, or check out their webpage at <http://www.ncs.gov/~shares/shares.htm> and <http://www.ncs.gov/ncs/html/NCSProjects.html>.

Australian Outpost Radio Service

Emergency preparedness in Australia has always been a challenging task for those who live there. Its unique geography and climate has always presented the greatest problem.

The outer coastline of the country is tropical, and the social and communications infrastructure that is found is as advanced as any modern nations. However, the interior, which covers an area of more than six million square kilometers, or four fifths of the land area of the country, is a harsh desert.

Despite the harsh conditions and isolation found in "the Outback", many people can be found living there. In order to provide a mantle of protection for these people, the Royal Flying Doctor Service of Australia has been established.

This unique medical assistance organization can reach a patient anywhere in that vast area of the Outback in 90 minutes or less. This service assists the 5000 outposts scattered through out the interior of the country. An Outpost may be a station (ranch) homestead, prospector's camp, a mission station, nursing home or a small hospital. No other service in the world operates over such a vast territory and provides such a comprehensive health service.

Despite the formidable climate and conditions found in the interior, it has

come to attract a large number of temporary residents. Many of these people are tourists, miners, road workers, railway worker and surveyors. Anthropologists and archaeologists also head out into the outback in surprisingly large numbers on a regular basis.

To coordinate this significant population of permanent and temporary people, and to keep as many from harm as possible, the Outpost Radio Service has been established to coordinate frequencies, services, and area coverage.

The Outpost Radio Service is comprised of numerous radio stations, operated by several different organisations. Each station offers different facilities and hours of operation and includes a mix of commercial, medical, first aid and volunteer groups.

One of the largest users of the service is the operator of 4WD off-road vehicles. Using especially rugged HF rigs mounted on their vehicles they may be running at power up to several hundred watts. As they are operating in ideal conditions, with little or no man-made electrical interference, their signals have the potential of travelling great distances.

I will start first with the Flying doctors, looking at their service and extensive HF communications network.

Flying Doctor Service

The Very Reverend John Flynn of the Presbyterian Church established the Royal Australian Flying Doctor Service in 1927. In its first year, the Aerial Medical Service, as it was called, flew 32,000 km from the Cloncurry base and treated 259 patients.

The Service grew quickly, and by 1933 Flynn saw that the vast organization required was placing a heavy financial burden on the Australian Inland Mission. He planned a new organization, the Australian Aerial Medical Service, with sections in each state coordinated under a federal organization. It worked smoothly, and in 1941 the name was changed to the Flying Doctor Service of Australia. In 1955 it became the Royal Flying Doctor Service when the Queen granted the use of the royal prefix.

To give an example of the distances traveled each year, the aircraft of the Royal Flying Doctor Service flew 8,691,540 km in 1993-94.

The communications network used by the flying doctors was established over seventy years ago, and next to the airplane, has been a primary tool of the ser-

**St. John Ambulance Service
Northern Territory**

Operating hours for voice calls are 8am-5pm NT time weekdays and 8am-12am Saturday. For Emergency Calls outside these hours, use your Emergency Alarm Call Button. VJY handles both Emergency and Radphone Calls

VJY Darwin Freqs. 2360 4010
Tel: 08 8922 6262 **6840 7975**

**Telstra
Radphone**
Ph: 12458
Stations located at
Brisbane, Darwin
Perth & Melbourne

Tel: 1800 810 023 for Information

VJB Derby	Freqs. 2792 5300 6945
VKL Port Hedland	Freqs. 2280 4030 6960
VJT Carnarvon	Freqs. 2280 4045 6890
VKJ Meekatharra	Freqs. 2280 4010 6880
VJQ Kalgoorlie	Freqs. 2656 5360 6825

All West Australian stations are now remote controlled from Jandakot Airport, Perth.

Enquiries Tel. 08 9414 1200

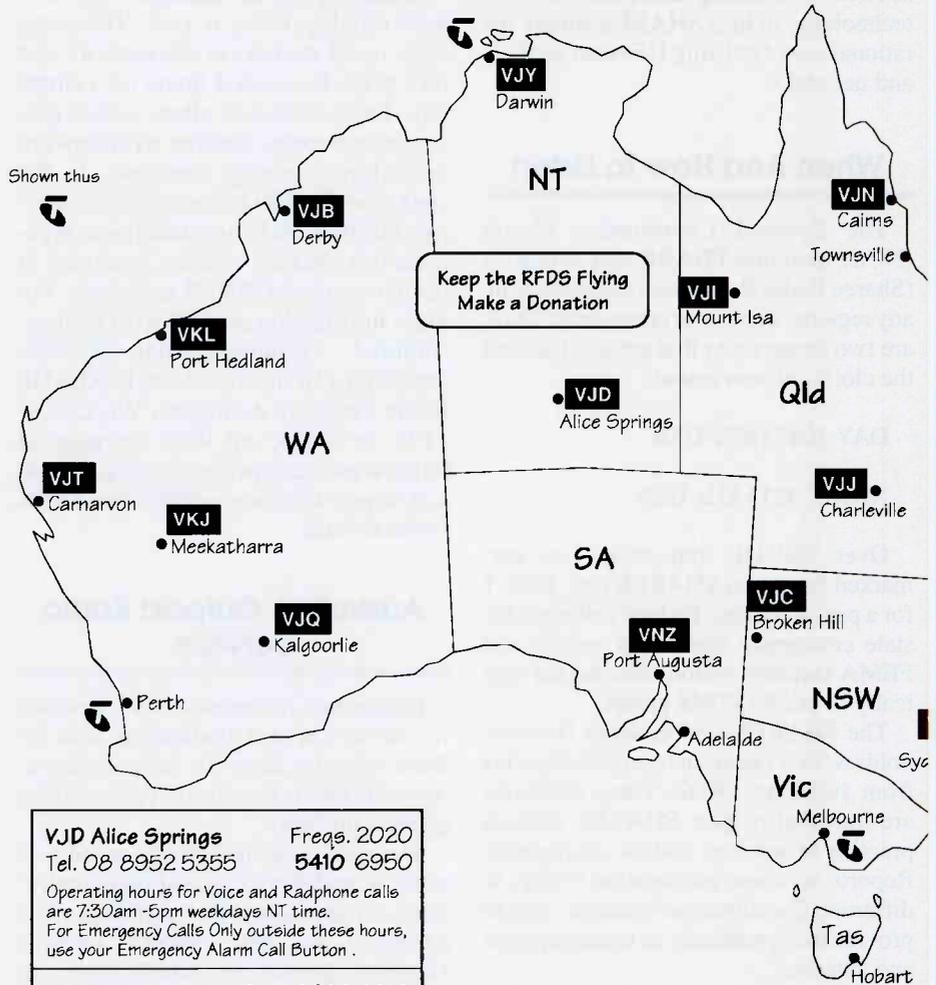
Radphone Calls Tel. 08 9414 1300

- Operating hours West Australian time are:
Week days 7am-5pm (Kalgoorlie 8am-5pm)
Saturday 8:30am-10am (Carnarvon closed)
Sunday 8:30am-10am (Kalgo. & Meeka. Only)
For Emergency Calls outside these hours, use your Emergency Alarm Call Button.
- VJT Carnarvon is used for SOTA (School Of The Air) and Emergencies Only. Please use an other station for Radphone calls.
- ABC Radio 9 Country Hour is broadcast by Meekatharra, Carnarvon and Port Hedland on 6 MHz for one hour from noon on weekdays, followed by the News for 10 minutes at 1pm.
- At all other times 6 MHz frequencies are used for SOTA and emergencies, while 2 MHz frequencies provide night emergency backup.

**Royal Flying Doctor Service
Western Operations**

Map of Australian Outpost HF Radio Sta

Frequencies and times of operation are subject to change without notice
The primary radio frequency of each station is shown in BOLD print
Check details with each station before going bush



VJD Alice Springs Freqs. 2020
Tel. 08 8952 5355 **5410 6950**

Operating hours for Voice and Radphone calls are 7:30am -5pm weekdays NT time. For Emergency Calls Only outside these hours, use your Emergency Alarm Call Button .

VNZ Port Augusta Freq. 2020 4010
Tel. 08 8642 5555 **6890 8165**

Operating hours for Voice and Radphone calls are 7am-9pm SA time daily. For Emergency Calls Only outside these hours, use your Emergency Alarm Call Button.

**Royal Flying Doctor Service
Central Section**

PCA

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Map No: OPR-25 supplied

Philip Collins & Assoc.
HF Radio & Satellite Tele
<http://www.pca.cc> • en
1 Avon Road • North Ryde N:
Tel: +61 2 9888 9777 • Fax:

Australian Outpost HF Frequencies - Courtesy Philip Collins & Associates PTY Ltd.

vice. Each year more than 40,000 messages are transmitted over the network.

The real success in the use of radio in the Flying Doctor Service came from the early development of a portable radio that could generate its own power rather than depending upon batteries. The result was the pedal radio, a simple device that used bicycle pedals to turn a generator that provided electricity for the radio set.

By the late 1960s and early '70s tran-

sistorized receivers have replaced the pedal radios and provided a general communications system for the inland. With the completion of a re- equipment program and changeover to single sideband operations in 1978, the Service has probably the largest high-frequency radio network in the world, and certainly one of the most modern.

In addition to medical traffic, The Schools of the Air, which are established

at Flying Doctor Service bases in all states, are among the biggest users of the network. Run by state Departments of Distance Education, these schools supplement correspondence lessons sent to outback children who live hundreds of kilometers beyond the reach of normal Australian schools.

Today telephones are steadily being installed throughout the inland each year, seeing a steady fall in the use of HF radios.

Royal Flying Doctor Service Queensland Section

Each Queensland RFDS station only listens for voice calls weekdays from 9am-9:15am Qld time on the stations primary frequency and from 9:15am-9:30am on its highest frequency. At all other times you will hear automatic announcements every half hour advising you to use your Emergency Alarm Call Button. You will then be connected by telephone to the RFDS operator. Queensland stations no longer handle Radphone calls. Try VNZ Port Augusta, VJD Alice Springs, VJY Darwin, VZX Penta Comstat or Telettra.

VJN Cairns Freqs. 2020 2260
Enq. 07 4053 1952 **5145 7465**

VJI Mt Isa Freqs. 2020
Enq. 07 4743 2800 **5110 6965**

VJJ Charleville Freqs. 2020
Enq. 07 4654 1233 **4980 6845**

Royal Flying Doctor Service New South Wales Section

Operating hours for voice calls on 4055 and 6920 are 7am-6pm South Australian time weekdays. For after hours Emergency calls, use your Emergency Alarm Call Button. This station no longer handles Radphone calls. Try VNZ Port Augusta, VJD Alice Springs, VZX Penta Comstat or Telettra.

VJC Broken Hill Freqs. 2020
Enq. 08 8080 1777 **4055 6920**

Penta Comstat • VZX Firefly

Tel. 02 6559 1888 Fax: 02 6559 1885

Penta Comstat has wide ranging frequencies that cover most of Australia. Six Channels are scanned 24 Hrs a day for Emergency Selcalls. Service hours for subscribing land & marine members to collect messages or place phone calls are 7am-10pm NSW time daily. Contact the Station for a full schedule of HF email, weather and reporting services offered.

Chan	Rx	Tx	Chan	Rx	Tx
429	4354	4354	1234	12329	13176
608	6221	6522	1642	16483	17365
836	8713	8713	2243	22126	22822

Selcall No. 0090 Beacon No. 0099

Since the introduction in 1980 of a Radphon system, outposts can be connected through the Service's bases by a combination of radio link and the national trunk telephone network to telephone subscribers throughout Australia and elsewhere in the world.

To help you monitor the transmissions made through the Royal Flying Doctor Service, **Table 2** provides a list of the frequencies used. And please note in this

month's User's Logs the monitoring activity of Ian Julian of Hamilton New Zealand who has provided some good examples of the type of traffic you can hear on these frequencies.

Australian 4WD Radio

The progressive installation of telephones into most homesteads means that users of the Australian Outpost Radio Service are now mainly operators of 4WD off road vehicles. There is a 27 MHz and VHF CB service in Australia that provides an important mobile radio service, but it does not have access to the emergency frequencies of the Royal Flying Doctor Service.

The solution was to create a special service for those who wished to venture into the Australian outback in their 4WD vehicles. This is the Mobile Outpost Radio License. No examination is required, and the over the counter fee is 26 Australian Dollars.

What this license allows is for the use of an approved high-powered crystal controlled SSB transceiver. The set's main purpose is to provide emergency two-way communications. So much so that each radio can generate an in-band dual-tone of 880Hz and 1320Hz. By simply pressing a button on the radio the dual tones triggers an emergency alarm at a Royal Flying Doctor base.

While this radio service was originally intended to be for emergency use only, many could not resist using their sets for personal point-to-point communications. At first it was an annoyance, but later became life threatening as "illegal" users refused to clear channels when requested by a legal base operator.

In the early 1990's the Australian Communications Authority (The Aussie FCC) created a special 4WD network in response to the obvious demand.

The service began in November 1993 with a single frequency of 5455kHz with a base station located at Hilton near Adelaide. The Network at this stage was under the control of the South Australian Association of 4WD Clubs Inc. It later expanded to a total of five frequencies with four additional base stations (see **Table 3**) and came to be supervised by the VKS-737 Australian National 4WD Radio Network Inc.

Despite its strong connections to the owners of 4WD vehicles, the service is available to all outback travellers. Network also has affiliations with the fol-



The original emblem of the Flying Doctor Service, courtesy Philip Collins & Associates PTY Ltd.

lowing volunteer emergency service groups: Australian Citizens Radio Monitors Inc., Central Australia Radio Emergency Service Inc., Citizens Radio Emergency Service Teams Inc.

In 1997 a formal agreement was signed between the Australian National 4WD Radio Network Inc. and the South Australian Police to provide a joint safety communications network by having VKS-737 Network frequencies fitted into SA Police radios in country and remote area patrol cars and police stations.

Other government agencies, such as Customs, Department of the Environment, and the Nation Parks also use the network to communicate with travelers.

Paid operators assisted by volunteers run the base stations on a 24/7 basis. In addition to manned operation, the bases at Adelaide, Alice Springs, Perth & St. Marys can be remotely operated by telephone from anywhere in Australia should the need arise, thus ensuring complete system reliability.

A special thanks goes out to Marc Robinson, VK2BUA, Director of Philip Collins & Associates Pty Ltd for his kind assistance. The company specializes in the HF radio systems described in the column, particularly the 4WD and remotely operated units. They have been instrumental in helping to make life and travel in the Australian Outback safe for many people. See their webpage at <http://www.pca.cc> or by email pca@pca.cc. If you wish to contact them my more conventional means, their snail-mail is 1 Avon Road North Ryde NSW Australia 2113 and their telephones is +61 2 9888 9777 or Fax: +61 2 9805 0253

Reader's Mail

There has been some very good letters coming in with some constructive criticism. Letters like these are more than welcome. After all, the only way that the col-

Table 2 - The Royal Flying Doctor Service

Base	Organization	Frequencies
VJB Derby	RFDS Western Operations	2792, 5300, 6945
VKL Port Hedland	RFDS Western Operations	2280, 4030, 6960
VJT Carnarvon	RFDS Western Operations	2280, 4045, 6890
VKJ Meekatharra	RFDS Western Operations	2280, 4010, 6880
VJQ Kalgoorlie	RFDS Western Operations	2656, 5360, 6825
VJD Alice Springs	RFDS Central Section	2020, 5410, 6950
VNZ Port Augusta	RFDS Central Section	2020, 4010, 6890, 8165
VJC Broken Hill	RFDS NSW Section	2020, 4055, 6920
VJN Charleville	RFDS Queensland Section	2020, 4980, 6845
VJI Mt. Isa	RFDS Queensland Section	2020, 5110, 6965
VJN Cairns	RFDS Queensland Section	2020, 2260, 5145, 7465

Table 3 - VKS-737 Australian National 4WD Radio Network Inc. Frequencies (kHz)

5455 8022 11612 14977 3995

umn can continue to improve is through your input. Here is one example:

Dear Joe,

I have some comments about your column in the August Pop'Comm, but first let me wish you every success with your new venture. I know it's a lot of work, and you are to be congratulated on your willingness to accept the responsibility.

On Page 75 *Pop'Comm* you state that non-directional beacons operate between 200 kHz to 480 kHz. Actually, the usual limits are considered to be 190 kHz to 530 kHz.

Also, in referring to NDB transmitter power, you mention a range of 10 to several hundred watts. A number of U.S., Canadian, and foreign beacons operate at kilowatt power levels; these are usually at coastal locations to serve overseas flights. Examples are TUK-190, 4000 watts; DIW-198,

2000 watts; GNI-236, 2000 watts; YIO-248, 4000 watts; IPA-280, 3000 watts; and HA-367, 5000 watts.

Incidentally, the last two are out in the middle of the Pacific Ocean. IPA is on Easter Island and HA is in French Polynesia. I have logged both of these several times. Their distances are 5,004 and 5,657 miles from my QTH in Winchester, VA, which is 75 miles NW of Washington, DC.

I have not been actively logging NDBs at present due to severe line noise prob-

lems, which I hope to get cleared up before winter. Between January 1990 and October 1998 I logged 1,267 NDBs between 190 and 530 kHz. Many of these were 25-watt US beacons; some were as far west as Colorado, Montana, and New Mexico. Foreign stations included Mexico, Central America, the Caribbean area, and South America.

In your discussion of NAVTEX on Page 69 you were uncertain whether AMTOR software could be used to demodulate NAVTEX transmissions. Be advised that I have used the same software to demodulate AMTOR, NAVTEX, and SITOR. True NAVTEX software ignores a repeat of an earlier message that has been sent out on a previous transmission, while the AMTOR software can't make that distinction and reprints it.

Perry Crabill, W3HQX
pcrabill@visuallink.com

These are all excellent observations. Perry will be sharing his knowledge of logging NDBs with a guest article to appear in this column in the New Year.

I mention this because I welcome this kind of contribution. If you can put together 500 to 1000 words on a topic related to ute monitoring I would be happy to consider it for publication here. After all, there are many of you out there with years of experience that should be shared with the readers of Pop'Comm.

In addition to the criticisms that I have

received, we are beginning to see a greater number of people contributing to the logs. It turns out that a lot of people have simply been busy over the past few months with work and other distractions, and hopefully more people will be finding time to make a log or two. Here is one example from "Mac".

Dear Joe,

I contributed to the previous Utility column and would like to contribute to yours as well. Unfortunately I have been working on getting a new job and haven't had as much time to "play radio" as I would like to have. As soon as my work life becomes more stable and organized, I'll start sending in logs for the column. Until then, I'll try to send in a snippet here and there.

My primary interests on HF are Interdiction, SAR, and USN Link coordination nets. The interdiction logs I send in usually don't have times or dates on them in order not to give away when they were operating (to me the fun part of the Interdiction comms are discovering who is using what callsign). SAR logs and the link coordination net logs will usually have times/dates with them.

I use two radios and antennas for HF comms. The first is Kenwood TS-140 with a G5RV. The second is RS DX-394 with a RS multiband dipole.

My technique basically boils down to patience and the ability to listen to ANDVT for extended periods of time without going batty! Sooner or later, the interdiction units say something in the clear that give themselves away.

I hope to be able to include more in the future. I have enjoyed the columns so far, particularly the recent aeronautical radio column. Keep up the good work.

Roland R. "Mac" McCormick III
KF4LMT Savannah, Georgia rrmccormick@earthlink.net

Thanks Mac for taking the time to write, and welcome back to the fold. Likewise I am also beginning to receive some contributions from new readers.

Dear Joe,

I live in Dayton, Ohio. I have been a shortwave listener since the early eighties. My first radio was a Hallicrafters S-53A from the fifties. It is older than I am! But it works. I currently use a Kenwood R-2000 with a random length dipole. My radio interests are maritime, military and aviation. My other interests are history, photography and Amateur Radio. My

Sources of Information on Outback Radio

Australian National Four Wheel Drive Radio Network.
<http://www.4wdonline.com/News/AN4WDRN.html>

Coastal Radio Services
<http://www.pentacomstat.com.au/>

Royal Flying Doctor Service
<http://www.rfds.org.au/>

Australian Communications Authority Outback License
<http://public.sma.gov.au/publications/info/outpost.htm>

Using 4WD vehicles in Australian Outback
<http://www.getabout.com.au/tagextended.htm>
<http://www.bigvolcano.com.au/active/tours.htm>
<http://www.holidaynq.com.au/Cairns/OzTours/OzTours.html>

Getting a copy of the Outback Radio Services Map
<http://www.pca.cc/OUTPOST/outpost.html>

SW Frequencies in Australia
<http://www.swl.net/nsg/swpage.htm>

call sign is N8XCS. These are my latest loggings, please include them in *Pop' Comm* whenever possible.

James Deardoff rmdeardorf@aol.com

I've said it before, and I will say it again, please send in your logs. Thanks James for taking up the offer. Your efforts will be appearing this month.

One more time: I don't care if it is a single log, as each makes an important contribution to the column. Send them in.

Speaking of logs, let's get to them right away. There are a great many good catches to be shared this month, and we have some real hard working contributors sending in their excellent work.

Readers Logs

1216: On another day usual MIW2 hrd at 1515. Both in USB. (TY)

2749: VCS: Canadian Coast Guard Halifax 0117 USB w/MIB. (MADX)

3195: SLHFB-R, Izhevsk, MX, hrd in CW at 1812. This stn hrd a lot at East Asian midnight, Not hrd other "R" stns on 3322 and 4558kHz tonight. (TY)

3250: North Korean/YL nbrs, V15, hrd in powerful AM. Started with "The Red Flag Song" at 1500, then into nbrs. Also noted on 621, 657, 702, 720, 855, 6400 kHz. (TY)

3440: Unid stn 6PXJ repeating "V ABYZ DE 6PXJ" over and over in CW at 1846. (TY)

3458: Beijing Volmet, China, with avian wx in accented EE and distorted USB at 1210. (TY)

3557: Unid stn repeating NZ06 over and over in CW at 1327. On another day this stn hrd on 3557.4kHz at same time. This is an intruder on 80m amateur band. (TY)

3658: SLHFB-V, Khiva, MXV, sending non-stop Vs over and over in CW monitored at 1936. This stn hrd a lot at East Asian midnight. (TY)

4047.7: Unid stn L9CC repeating "V CP17 DEL9CC" over and over in CW at 1955. (TY)

4270: PCD, Israeli Mossad, E10, Israel, hrd in USB at 1900. (TY)

4331: 4XZ, Israeli Navy, Haifa, Israel, hrd in CW at 1960. (TY)

4461: FTJ2, Israeli Mossad, E10, Israel, hrd in USB at 1930. (TY)

4517: 1001: US National Guard 0209 ALE w/sounding call. (MADX)

4560: YHF, Israeli Mossad, E10, Israel, hrd in USB at 2030. (TY)

4567: Unid stn 6PXJ repeating "V CP17 DEL9CC" over and over in CW hrd at 1150. (TY)

4625: The Buzzer, Russia, hrd in AM. The siren-like tone for 30 secs at 1959 30sec, then into usual Buzzer exactly at 2000. (TY)

4635: E05: The Counting Station 0004 USB w/"872" and counts 1-10. (MADX)

4770: North Korean/ YL nbrs, V15, hrd in AM. Started w/an arranged version of the song of General Kim Ill Sung, then

melody of Cantata to Marshal Kim Sung, followed by female nbrs at 1400. Also on 5870 kHz. (TY)

4815: SLHFB-V, Khiva, Russia, MXV, sending non-stop Vs over and over in CW at 2005. (TY)

4880: ULX2, Israeli Mossad, E10, Israel, hrd in USB at 2030. (TY)

5058.5: QT9: FBI Quantico Training Facility 1840 ALE w/kg QT1: FBI Quantico Training Facility. (MADX)

5091: JSR, Israeli Mossad, E10, Israel, hrd in USB at 2100. (TY)

5145: VLN: School of Distant Education (SDE) Cairns, QLD Australia 0710 UTC USB 3 YLs with parent/ teacher meeting. (IJ)

5170: Abnormal Israeli Mossad transmission, VLB2, E10, Israel, call-up only for over 30 mins in USB at 1945. (TY)

5248.3: CCM: CN Magallanes Chile 0528 UTC RTTY 100 Bd/850 with 5LGs. (IJ)

5255: Dept of Land & Water Conservation stations, NSW Australia 0720 UTC USB 2 OMs with a chit-chat. Mentioned about drilling holes. (IJ)

5339: SYN2, Israeli Mossad, Israel, E10, hrd in USB at 2045. (TY)

5371: The CIA Counting nbrs, E5, hrd in USB at 1900. Also noted on 8125 kHz. (TY)

5390: 5390 CDG206: Alma Radio 2305 USB w/EE and FF pp. Bell of Canada HF station. Last time I saw this logged was in June 1998. (MADX)

5435: ART, Israeli Mossad, Israel, E10, hrd in USB at 2100. Also on 6986 kHz. (TY)

5465: SLHFB-R, Izhevsk, MX, Russia, hrd in CW at 1812. Not hrd usual 3322 and 4558 kHz of "R" stns tonight. (TY)

5600: Unid stn 6PXJ repeating "V CP17 DEL9CC" over and over in CW at 0927. (TY)

5696: RESCUE 1013: USCG CAM-SLANT-Chesapeake 0455z re poss SAR. (ALS)

5853: VLH: SDE Charleville, QLD Australia 0554 UTC USB YL with music lessons. (IJ)

5861: North Korean/YL nbrs hrd in powerful AM at 1000. This stn starts w/an arranged version of the song of General Kim Ill Sung, then melody of Cantata to Marshal Kim Ill Sung, followed by female nbrs. Usually hrd on 5870 kHz, malfunctioning tonight? Also on 4770 kHz. (TY)

5885: Radio Base, ? Relay, OV4 & OV7: Variety Club of Australia stations 0940 UTC USB three OMs & YL with a chit-chat. (IJ)

- 6215:** Presumed South Korean/ YL nbrs hrd in powerful and distorted AM at 1400. Started with a Korean pop song then into nbrs. Two nbrs transmissions were hrd simultaneously. According to the Asian Broadcasting Institute in Japan, this stn is coming from South Korea, not North. Oh my goodness! This frequency is a well-known worldwide maritime distress and safety freq. This stn hrd a lot on this freq at East Asian midnight. (TY)
- 6270:** ULX, Israeli Mossad, Israel, E10, hrd in USB at 2200. Also found on 4880 kHz. (TY)
- 6370:** MIW2, Israeli Mossad, Israel, E10, hrd in USB at 2115. Also on 5230 kHz. (TY)
- 6379:** 4XZ, Haifa, Israeli Navy, Israel, hrd in CW at 2055. (TY)
- 6483:** PBB: Dutch Navy Den Helder 0105 RTTY 75/820 w/CARB. (MADX)
- 6498:** PCD, Israeli Mossad, E10, Israel, hrd in USB at 2200. Also hrd on 8465 kHz. (TY)
- 6507:** RBSL: IN Mumbai India 2100 UTC RTTY 50 Bd/850 with RYRY & SGSG (IJ)
- 6513:** VFF: Canadian Coast Guard Iqaluit 0111 USB w/MIB from Coral Harbour xmtr site. (MADX)
- 6676:** Bangkok Volmet, Thailand, with avian weather in USB at 0540. (TY)
- 6721:** 270045: C-17A #97-0045 0108 USB w/kg OFF: Offutt AFB w/an attempted ALE-initiated pp. Operator at Offutt kept telling the aircraft that he needed to "get a better line." (MADX)
- 6765:** HSA, Bangkok R, Thailand, hrd in USB. YL opr with weather in EE and Thai. (TY)
- 6772:** Fishing Boats New Zealand 0518 UTC USB 2 OMs with a chit-chat. Complaining they weren't catching many fish. (IJ)
- 6785:** Unid stn Rptng i V ABYZDE6PXJ in CW over and over at 1235. (TY)
- 6817:** FDG: French Air Force Bordeaux 0114 CW w/call tape. (MADX)
- 6840:** 6840.0 EZI, Israeli Mossad, E10, in AM at 1930, also on 9130 kHz. On another day U/i stn Rptng "KDKV" over and over in CW at 0747. What is this? (TY)
- 6844:** FDC: French Air Force Metz 0104 CW w/call tape. (MADX)
- 6845:** LUA: Unid Luanda, Angola 2317 ALE w/sounding call. At 2332, HSP: unid w/sounding call. At 2344, ASI: unid w/sounding call. (MADX)
- 6845:** CYP: unid Cyprus 0054 ALE w/sounding call. At 0107, HSP: unid w/sounding call. (MADX)
- 6908:** ZERO ALPHA: Australian Army Relief Ops net/Bougainville Peace-keeping Force Papua, New Guinea 0840 UTC USB calling ECHO ZERO for radio check, with no joy. (IJ)
- 6912:** Unusual Israeli Mossad, VLB2, E10, hrd in USB at 2100. Mossad lady repeating callsign only for more than 30 mins. Also on 5170 kHz. (TY)
- 6913:** E10: MOSSAD Numbers Station 0237 AM w/VLB2. (MADX)
- 6945:** VLH: SDE Charleville, QLD Australia 0544 UTC USB with YL reading a story. (IJ)
- 6950:** VJD: RFDS Alice Springs, NT Australia 0728 UTC USB YL with WX forecasts. (IJ)
- 6959:** Lincolnshire Poacher nbrs, British MI6, E3, Cyprus, hrd in USB at 1900, also on 9251, 11545kHz. (TY)
- 6965:** VJI: RFDS Mt Isa, QLD Australia 0832 UTC USB OM with recorded announcement. "For calls to the RFDS operator please use your emergency alarm call button." (IJ)
- 6986:** ART, Mossad, E10, Israel, hrd in USB at 1500. Also on 5435 kHz. (TY)
- 6986:** ART: MOSSAD No station 2105 UTC USB with YL repeating ART, followed by "Message group text." (IJ)
- 7066:** Unid stn L9CC repeating "V CP76 DE L9CC" over and over in CW at 1817. This is an intruder on 40m amateur band, hrd a lot in East Asian midnight, and believed to be coming from Mainland China among Japanese listeners. On another day this stn hrd on 7043 kHz at 2010. (TY)
- 7337:** Lincolnshire Poacher nbrs, British MI6, E3, Cyprus, hrd in USB at 2100, also on 9251, 12603 kHz. (TY)
- 7445:** SYN2, Mossad, Israel, E10, hrd in USB at 2045. Also on 5339 kHz. (TY)
- 7482:** Presumed Suva Meteo Fiji 0730 UTC USB with OM reading back a long list of WX synopic numbers. (IJ)
- 7583:** The Cuban "atencion" nbrs, V2, Cuban Intelligence, Cuba, hrd in faint AM at 1005 with very low modulation. (TY)
- 7605:** Abnormal Mossad transmission, VLB2, Israel, E10, hrd in USB at 2045. Callup only for over 30 mins. On another day usual KPA2, Israeli Mossad, hrd in USB at 1915. (TY)
- 7636:** U.S. tuna fishing boats Pacific 0735 UTC USB 2 OMs with a chit-chat. Mentioned about albacore & looking at charts. (IJ)
- 7740:** Telecom Suva Fiji 2120 UTC USB with OM in EE passing phone numbers. (IJ)
- 7758:** Armed Forces of the Philippines (AFP) Counter-Insurgency net, the Philippines 0852 UTC USB with OM spelling out Msgs. "The Liberation Movement, Requirements, Expedite, Report & Arrest of suspects." (IJ)
- 7770:** VJQ503: Alan Brierley Limited Coast Station, QLD Australia 0820 UTC USB with OM calling. (IJ)
- 7786:** Russian Military 0825 UTC USB OM in RR with test counts. (IJ)
- 7792:** VLH: SDE Charleville, QLD Australia 0538 UTC USB YL with music lessons. (IJ)
- 7811:** MIW2: MOSSAD No station 2116 UTC USB with YL repeating MIW2. (IJ)
- 7898.5:** National Weather Service (NWS) station Papua New Guinea 0800 UTC USB OM with WX synopsis. (IJ)
- 7915:** AFA2NF: Air Force MARS Williamstown, WV 2338 FEC w/kg AFA2DB: Air Force MARS Griffin GA with simplex SITOR-B Opchat. (MADX)
- 7975:** Private Outpost stations, QLD Australia 0728 UTC USB 2 OMs with a chit-chat. Mentioned chemical analysis, Fuel, Pumps, Environmental Protection Agency & Mt Isa Mines are the only ones doing chemical analysis. (IJ)
- 7988.3:** DINY: UNID CN station Chile 0538 UTC RTTY 100 Bd/850 calling CCS. (IJ)
- 8005:** VLN: SDE Cairns, QLD Australia 2130 UTC USB YL with maths lessons. (IJ)
- 8019:** 8019 UNID: 0042 VFT Barrie-6028 7x75bd. Parallel and equal-strength signals on /2772/4083/5343/. Not ZLO, contrary to my prior posts. Anyone have any ideas as to a Western Hemisphere user? (MADX)
- 8019:** prob ZLO: Royal New Zealand Navy 2259 VFT 7x75/170 BARRIE 6028 system. (MADX)
- 8025:** CIO2, Israeli Mossad, Israel, E10, hrd in USB at 2045. Also on 10321, 12747kHz. (TY)
- 8050:** CLC32: unid 2255 ALE clg CLC321: unid. (MADX)
- 8077:** BRAVO REAR (USMC Unit): BOGUE FIELD (USMC Auxiliary Landing Field, near Swansboro NC) 0547z USB Tells BOGUE FIELD "Any msgs for Support Rear go through us." Related comms with OAK GROVE (Oak Grove HOLF, Helo Outlying Field, Pollocksville, NC). (ALS)
- 8097:** The Cuban "atencion" nbrs, V2, hrd in faint AM at 1009. (TY)
- 8125:** The CIA Counting nbrs, E5, hrd in AM at 1900. Also on 5371 kHz. (TY)
- 8125:** KLO87: FAA Eastern NCS

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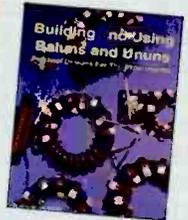
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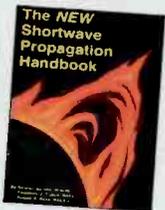
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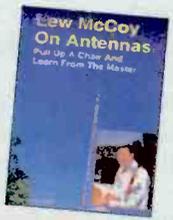
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Martinsburg, WV 1446 USB w/FAA Eastern Net Check-In already in progress. Active stations included KJB96: FAA Aurora IL, KCJ20: FAA Farmington, MN, KDM49: FAA Atlanta, GA, KUV64: FAA Hampton, GA, WHX45: FAA Burlington VT, KLN80: FAA Atlantic City NJ, and KEM80: FAA HQ Washington, DC. Other stations called included KLA25: FAA Oberlin, OH, KLB48: FAA Indianapolis, IN, KIA21: FAA Oklahoma City, OK, KJK79: FAA Hilliard, FL, and KDM52: FAA Memphis TN. (MADX)

8127: Unid Aeradio hrd in USB and accented EE at 0955. On another day CIO2, Israeli Mossad, Israel, E10, hrd in USB at 2145. (TY)

8127: CIO2: Mossad Nbr Station 2052 UTC USB with YL repeating CIO2. (IJ)

8152: UNID: 1241 USB w/private yacht net. Vessels checked in from various locations including Southwest Harbor Maine, Halifax Nova Scotia, Plymouth Mass, and other locations. (MADX)

8190.5: Unid stn L9CC repeating "V CP76 DE L9CC over and over in CW at 1320. (TY)

8375: Chinese/ YL nbrs, V22, hrd in AM at 1430. Female operator only repeating "All stations, this is Beijing speaking" in Mandarin Chinese for app. 5 min. (TY)

8495: SLHFB-F, Vladivostok, MXC, Russia, in CW at 1156. (TY)

8638: VNG, Sydney TS, New South Wales, Australia, with strong time pips and phone ID in AM at 1150: This stn sending UTC. (TY)

8725: HLS, Seoul R, South Korea, with melody mirror of "Ode to Joy" between pp in USB at 1258. (TY)

8903: Manila Aeradio, Philippines, contacts with various aircraft in USB at 1849. (TY)

8971: LY 771 (P-3 NAS Brunswick USNR VP-92 "Minutemen" Sqdn): Goldenhawk (TSCC Brunswick ME). 0138z USB Weak comms. 05/Aug/00 (ALS)

8971: PYTHON 06 (Poss U.S. State Dept C-27A acft): BLUESTAR (TSCC-Roosevelt Roads NAS, Puerto Rico. 2315z USB Comms re ops. (ALS)

8971: PYTHON 06: RAZOR 03 (Poss P-3 acft). 2320z USB Air-air comms. (ALS)

8971: LY 771 (P-3 NAS Brunswick USNR VP-92 "Minutemen" Sqdn): Goldenhawk (TSCC Brunswick ME). 0: 138z USB Weak comms. (ALS)

8971: PYTHON 06 (Poss U.S. State Dept C-27A acft): BLUESTAR (TSCC-Roosevelt Roads NAS, Puerto Rico. 2315z USB Comms re ops. (ALS)

8971: PYTHON 06: RAZOR 03 (Poss P-3 acft). 2320z USB Air-air comms. (ALS)

8983: U.S. customs aircraft Omaha has spotted liferaft adrift near St.Croix, via customs a/c will lead the S&R mission, along with coast guard aircraft that has illumination. USB aircraft is HH-60j helo out of Clearwater CGAS. They dropped a data marker buoy. Cg a/c was on law enforcement patrol. (JD)

8983: CAMSLANT: 1448 USB wkg X0Y: unid. "No joy on 3E11. Request you say again your destination." (MADX)

8992: (poss USCG acft/vessel): Andrews GHFS 2305z USB Radio check. (ALS)

8992: 9BX (Unk Mil sta): McClellan GHFS 0205z USB Radio check (ALS)

8992: SHARK 71 (poss USCG acft/vessel): Andrews GHFS 2305z USB Radio check. (ALS)

8992: 9BX (Unk Mil sta): McClellan GHFS 0205z USB Radio check. (ALS)

8992: SHADO 31 Flight (MC-130H, Kirtland AFB 58SOW): Hickam GHFS 0520z USB pp DSN 246-9482: (Kirtland 58SOW COYOTE Ops), returning from mission. (ALS)

8992: CHOPPER 71 (Unk type Mil acft): Hickam GHFS 0534z USB pp Omaha Metro re wx at 0730z ETA. (ALS)

8992: SHADO 31 Flight (MC-130H, Kirtland AFB 58SOW): Hickam GHFS 0550z USB pp DSN 246-9742 Kirtland Metro. Gets wx for 0130 Local. (ALS)

8992: MAGIC 73 (NATO E-3 AWACS): ANDREWS GHFS 1529z USB pp 884-5714 Tinker AFB Metro re wx at 1630z and 1700z. (ALS)

9007: HUDSON 33: & RAAF Sydney, NSW Australia 0701 UTC USB with terminating PP & OPs normal. (IJ)

9052: KNY90: NCS National Telecommunication Coordination network Arlington VA 2301 ALE w/sounding call. (MADX)

9064: The Cuban Cut CW nbrs, M8a, in progress at 0730. (TY)

9070: The CIA Counting nbrs, E5, hrd in AM at 1800, also on 1344kHz. (TY)

9110: NMF: USCG COMSTA Boston 1525 FAX 120/576 w/NE Atlantic Surface Analysis Chart Part 1. At 1538, part 2 of chart started, although signal went QRT at 1540 unexpectedly, then returned at 1541. (MADX)

9112: The Cuban Cut CW nbrs, M8a, in progress at 0705. (TY)

9130: EZI, Israeli Mossad, E10, Israel, hrd in USB at 2000. Also heard on 11565 kHz. (TY)

9328: The Cuban Cut CW nbrs, M8a, in progress at 0930. (TY)

9331: The Cuban Cut CW nbrs, M8a, in progress at 1207. (TY)

9340: RCH72: Tashkent 1 Meteo 2339 FAX 60/576 w/chart. Ident based upon RPM and freq. Chart was too faded to read properly. (MADX)

9924: OSCAR-ECHO: To OSCAR KILO 1911z USB "Going Secure at this time," followed by ANDVT. 10/Aug/00 (ALS)

10046: 4XZ, Haifa, Israeli navy, Israel, sending V-mkr in CW at 2137. (TY)

10126: The Cuban Cut CW nbrs, M8a, in progress at 0905. This is an intruder on WARC amateur band. (TY)

10236: The Cuban Cut CW nbrs, M8a, in progress at 0815. (TY)

10345: The Cuban Cut CW nbrs, M8a in progress at 1107. (TY)

10352: CIO2, Mossad, E10, Israel hrd in USB at 2245. (TY)

10352: E10: Mossad Numbers Station heard at 0049 AM w/CIO2. QRT at 0050. (MADX)

10352: E10: Mossad Numbers Station 2246 AM w/CIO2. (MADX)

10355: 4XZ, Haifa, Israeli navy, Israel, sending V-mkr in CW at 2137.(TY)

10392: HSP: unid 0122 ALE w/sounding call. (MADX)

10423: The CIA Counting nbrs, E5, in USB at 2200, also on 12197kHz. (TY)

10446: The CIA Counting nbrs, E5, in USB at 2202 (TY)

10527: 10527.0 The CIA Counting nbrs, E5, in faint USB at 2200, unable to find out parallel freq. (TY)

10529: 10529.0 The CIA Counting nbrs, E5, in AM heard at 1300, also on 9328 kHz. (TY)

10565: 10565.0 The Cuban Cut CW nbrs, M8a, in progress at 1315. (TY)

10566: The Cuban Cut CW nbrs, M8a, in progress at 1205. (TY)

10581: S72: Swedish Embassy Kinshasa 0225 ALE+QPSK Modem wkg S25: Swedish Embassy Lisbon. (MADX)

10587: The CIA Counting nbrs, E5, in USB at 2200, also on 9817 kHz. (TY)

10643: The CIA Counting nbrs, E5, in faint USB at 2200. Unable to find out parallel freq. (TY)

10648: EZI, Israeli Mossad, E10, hrd in USB at 1830. Also on 11545 kHz. (TY)

10722: FGS Augsburg (120A-class Frigate F-213) 2018 USB wkg DHJ59: German Navy Wilhelmshaven w/VFT coordination comms. (MADX)

10723.2: FGS Augsburg (120A-class Frigate F-213) 2015 VFT 3x 150/160 wkg DHJ59: German Navy Wilhelmshaven. (MADX)

10780: RAZOR 66 (E-8C JSTARS from Robins AFB 93ACW): Cape Radio

1803z USB pp to DSN 497-2612 (Raymond 19 CP at Robins), passes formatted report. (ALS)

10780: KING 63 (HC-130 from Moody AFB 71RQS): Cape Radio 1807z USB with Radio checks. (ALS)

10780: RAZOR 03 (E-8C JSTARS from Robins AFB 93ACW with OG Cmdr on board): Cape Radio 0010z USB pp DSN 468-1110 Robins AFB. (ALS)

10780: KING 24 (C-130 #60224, prob Moffet 129RQW): Cape Radio 1645z USB pp DSN 497-0680 Robins AFB AFRC CP "Gunrunner" re departure delay due to maintenance. (ALS)

10780: LU 001 (P-3C Willow Grove VP-64 "Condors" Sqdn): Cape Radio 1545z USB Repeated no-joy attempts to cctc. (ALS)

10780: KING 24 (C-130 #60224, prob Moffet 129RQW): Cape Radio 1645z USB pp DSN 497-0680 Robins AFB AFRC CP "Gunrunner" re departure delay due to maintenance. (ALS)

10780: LU 001 (P-3C Willow Grove VP-64 "Condors" Sqdn): Cape Radio 1545z USB Repeated no-joy attempts to cctc. (ALS)

10780: RAZOR 33 (E-8C JSTARS Actf, Warner-Robins AFB 93ACW): Cape Radio 1809z USB pp DSN 236-3849 Ft Bragg. Rqsts CPS(?) come up on UHF. (ALS)

10858: The Cuban Cut CW nbrs, M8a, in progress at 1209. (TY)

11202: CAMSLANT 1912 USB clg K0W: unid. At 1924, CAMSLANT wkg 6031: HH-60J. (MADX)

11202: CG RESCUE 1711: & CAMSPAC Point Reyes, CA USA 0554 UTC USB with PP to District 14 JRCC. Mentioned about co-ordinating the rescue of the Vsl Swordsman & co-ordinating comms with the Vsl *Sea Goddess* on 5555. (IJ)

11205: GOLDENHAWK: TSCC NAS Brunswick 1800 USB wkg unid w/"We are XAV, you are PU. Request you initiate." (MADX)

11250: REACH 2H5: Tail#191 1507 USB wkg ANDREWS w/pp to Travis Metro w/weather for Charleston at 1625z. At 1509z, a second pp to Charleston Command Post. (MADX)

11253: RAF VOLMET 2105 USB w/aviation wx. (MADX)

11384: Tokyo Aeradio, Japan, contacts New Zealand 33 at 1825 in USB. (TY)

11432: The Cuban Cut CW nbrs, M8, in progress at 0825. (TY)

11440: CESYP: Colombian Navy Special Command, San Andres and Providencia Islands 0133 ALE wkg RADGENA: and in CLOVER 2000. (MADX)

11443: S00: Swedish MFA 0133 ALE wkg S45: Swedish Embassy Ankara. (MADX)

11453: IMB33: Rome Meteo 0123 RTTY 50/788 w/meteo tfc. (MADX)

11455: ATLANTICO: Colombian Navy poss Atlantic Fleet HQ 0156 ALE clg COVENAS: Colombian Navy poss Covenas Airfield. (MADX)

11495: 0000001220: Unid 0131 ALE w/sounding call. (MADX)

11545: Lincolnshire Poacher nbrs, British MI6, E3, hrd in USB at 2100. Also on 6659, 9251 kHz. (TY)

11565: EZI, Mossad, Israel, E10, hrd in USB at 1830. Also on 9130, 10648 kHz. (TY)

12088.1: 12088.1 UNID: 1501 PACTOR 100/170 unable to get synch. Sounded like short callups. No tfc noted. (MADX)

12101: S53: Swedish Embassy Amman 0130 ALE w/sounding call. (MADX)

12197: The CIA Counting nbrs, E5, hrd in USB at 2200, also on 10423kHz. (TY)

12221: The CIA Counting nbrs, E5, hrd in USB at 1100. Unable to find out parallel freq. (TY)

12353: USB CAPTAIN OF MOTOR VESSEL NAVIGATOR TALKING TO LIMITED COAST STATION WPE ABOUT LIGHTNING STRIKE, AND WHETHER OPERATOR COULD HEAR HIS SIGNAL. WPE STANDING BYE AT 2126 UTC (JD)

12376: CIO2, Mossad, Israel, E10, hrd in USB at 1545, also on 10352, 14750kHz. On another day VLB2, Mossad, E10, hrd in USB at 2145, also on 13921 kHz. (TY)

12603: 12603.0 Lincolnshire Poacher nbrs, British MI6/SIS, E3, In USB at 2100, also on 7337, 9251kHz. (TY)

12747: Abnormal Mossad transmission. MIW2, Mossad, Israel, E10, repeated callsign only in USB for over 30 mins at 2215. (TY)

12903: 12903.0 The Cuban Cut CW nbrs, M8a, in progress at 1305. (TY)

12976: VLB2, Mossad, E10, Israel, hrd in USB at 2145. Unable to find out parallel freq. (TY)

12984: VNG, Sydney TS, New South Wales, Australia, with strong time pips, phone ID & UTC time in AM at 0732. Also on 8638, 16000 kHz. (TY)

13098: 5BA 62, Cyprus R, Nicosia, Cyprus, rptng "This is Cyprus Radio, Radiotelephone Monitoring Service" in EE, Hebrew and faint USB at 2222. (TY)

13152: WLO: Mobile Radio 1702 USB w/computerized voice announcements about contacting WLO. (MADX)

13161: HLS, Seoul R, South Korea, with short melody mirror of Beethoven's 9th Symphony "Ode to Joy" between PP in USB at 1153. (TY)

13264: Shannon Volmet, Ireland, with avian wx in faint USB at 1814. (TY)

13264: EIP: Shannon VOLMET 1914 USB w/aviation wx. (MADX)

13285: Beijing and Guangzhou Volmet, China, with flying wx at 0615, causing heavy QRM each other in accented EE and distorted USB. (TY)

13374: The Cuban "atencion" nbrs, V2, Cuban Intelligence, in progress and faint AM at 0705. (TY)

13444: The CIA Counting nbrs, E5, in AM at 1800, also on 9070 kHz. (TY)

13452: V05: The Spanish Counting Station 0126 AM w/5FGs (3/2) in SS. (MADX)

13475: GUASDUALITO: poss Venezuelan Army Guasualito 2125 ALE wkg MARACAY MAR: poss Venezuelan Army Maracay. At 2134, EXO: poss Venezuelan Army wkg MEGEIQ: poss Venezuelan Army. (MADX)

13510: CFH: CANFORCE Halifax 1437 RTTY 75/440 w/wx tfc. (MADX)

13528: SLHFB-F, Vladivostok, Russia, MXC, in CW at 0950. (TY)

13533: EZI2, Israeli Mossad, E10, in AM at 1400, also on 15980 kHz. (TY)

13555: The CIA Counting nbrs, E5, in powerful AM hrd at 1200, also on 15723 kHz. (TY)

13879: DG: Moroccan MOI 0255 ALE w/sounding call in LSB. (MADX)

13882.5: DDK6: Hamburg Meteo 2045 FAX 120/576 w/end of chart. Good signal. (MADX)

13950: NAR: USN Saddlebunch Key 1246 RTTY 70/850 w/wx broadcast. (MADX)

13969: HBD46: Swiss Embassy Havana 1158 ARQ w/end of transmission. Opchat in German. "aber das gepaeck nicht, hi, ueblich hier, caramba" followed by sign-off and id. (MADX)

14353.5: UNID: Swedish Diplo 1956 USB w/Swedish Diplo QPSK modem. At 2000, S84: Swedish Embassy Washington DC w/ALE sounding. (MADX)

14481.7: RFTJ: French Forces Dakar 0001 ARQ-E3 48/400 idle. (MADX)

14487: 14487 E03: Lincolnshire Poacher Numbers Station 1424 USB w/5FGs (x2). Already in progress. (MADX)

14577: The CIA Counting nbrs, E5, in AM at 1200, also on 16198 kHz. (TY)

14580: CYP: Unid Cyprus 0226 ALE w/sounding call. (MADX)

14677.5: UNID: 1846 PICCOLO-12

unable to decode. (MADX)
14695: 4XZ, Haifa, Israeli Navy, M22, sending V-Mkr in CW at 2045. (TY)
14750: CIO2, Israeli Mossad, E10, in USB at 1245. (TY)
14812.5: S72: Swedish Embassy Kinshasa 0125 ALE wkg S25: Swedish Embassy Lisbon and in Swedish Diplo QPSK modem. (MADX)
14931: 8BY, French Intelligence, Saint Assise, near Paris, M16, sending "VVV 8BY followed by 3FG's separated by a slant bar" in CW at 5040. (TY)
15016: TINCAN 70: 1939 USB clg MAINSAIL. No joy. (MADX)
15016: COAST GUARD 1601: USCG HC-130H 1940 USB clg MAINSAIL. (MADX)
15034: CHR: Trenton Military CAN-FORCE VOLMET 2025 USB w/aviation wx. (MADX)
15388: New Star Radio, V13, Taiwan, CC/YL w/4FG's in powerful AM monitored at 1400 Ended with "Wishing your happiness and Thanks in Mandarin Chinese at 1442. (TY)
15682: Lincolnshire Poacher nbrs, British MI6, in USB at 1300, also on 14487, 16084 kHz. (TY)
15732: The CIA Counting nbrs, E5, in AM at 1400, also on 13555 kHz. (TY)
15781: poss NAR: USN Saddlebunch Key 1408 FAX 120/576 w/end of chart showing Caribbean region. No station listed on this frequency in the latest NOAA Fax Listing. (MADX)
15851: FAAAAL: Unid FAA Station 2354 ALE clg FAAANM: Unid FAA Station (MADX)
15980: EZI, Israeli Mossad, E10, in AM at 2200, also on 13533 kHz. (TY)
16000: VNG, Sydney TS, New South Wales, Australia, w/strong time pips and UTC time. (TY)
16081.7: UNID: unid Egyptian Diplo 1757 ARQ w/idle then typical signoff "yks yks". (MADX)
16084: Lincolnshire Poacher nbrs, British MI6, E3, in USB at 1200, also on 14487, 15682 kHz. (TY)
16105: S84: Swedish Embassy Washington DC 1242 ALE clg S12: Swedish Embassy Bogota. (MADX)
16105: S84: Swedish Embassy Washington DC 1720 ALE clg S93: Swedish Embassy Havana. (MADX)
16198: The CIA Counting nbrs, E5, in AM at 1200, also on 14577 kHz. (TY)
16217: prob M14 Numbers Station 1332 CW w/34wpm 5fgs (x2) for "359". Mixture of cut and full numbers. QRT at 1340 w/783 (x2) 64 (x2) 00000. (MADX)
16332: SLHFB-F, Vladivostok, Russia,

MXC, in CW at 0937. (TY)
17050: 4XZ, Haifa, Israeli Navy, M22, sending V-Mkr in CW at 1233. (TY)
17248: 5BA 62, Cyprus R, Nicosia, Cyprus, rptng "This is Cyprus Radio, Radiotelephone Monitoring Service" in EE, Hebrew and faint USB at 2200. (TY)
17341: HLS, Seoul Radio, South Korea, Rptng short melody mirror of Beethoven's 9th Symphony "Ode to joy" between phone patches in USB hrd at 1312. (TY)
17410: EZI, Israeli Mossad, E10, in AM at 1330, also on 15980 kHz. (TY)
18003: 500322: USAF KC-135R (#60-0322/72nd ARS/AFRC) 1312 ALE w/sounding call. (MADX)
18415: 8BY, French Intelligence, Saint Assise, near Paris, M16, sending "VVV 8BY followed by 3FG's separated by a slant bar" in CW at 1440. (TY)
18470: VKF: unid 1229 ALE clg VKC: unid on prob Australian Military ALE Network. At 1233, VKF: unid clg VKY: unid. At 1236, VKF: unid clg VKM: unid. (MADX)
18503.7: 18503.7 RFFA: MOD Paris 2039 ARQ-E3 192/400 on ckt id LFB (Paris to Fort de France) w/CdV. (MADX)
18686: S91: Swedish Embassy Lima 1308 ALE w/sounding call. (MADX)
19131: ATLAS: DEA-Contracted Comms Center Cedar Rapids 1504 USB wkg FLINT 25. (MADX)
19715: EZI, Israeli Mossad, E10, in AM at 1400, also on 21930, 23740 kHz. (TY)
20048: SLHFB-F, Vladivostok, Russia, MXC, in CW at 1155. (TY)
20602: ASI: Algerian Diplo 0046 ALE w/sounding call. (MADX)
20633.7: prob RFI: French Forces Le Port Reunion 1808 ARQ-E3 100/410 idle. (MADX)
23337: 280050: C-17A #98-0050 1813 USB wkg McClellan AFB w/ALE-initiated pp. (MADX)
23740: EZI, Israeli Mossad, E10, in AM at 1400, also on 19715, 21930 kHz. (TY)
24268: ASI: Algerian Diplo 0028-0042 ALE w/multiple sounding calls. (MADX)
27860: VMR360: Volunteer CG Melbourne, VIC Australia 2236 UTC AM OM with WX forecasts. (IJ)
27940: VMR466: Volunteer Marine Rescue Hervey Bay, QLD Australia 0135 UTC AM OM with WX forecasts. (IJ)

Contributors:

(ALS) - AL STERN Satellite Beach FL

(IJ) - Ian Julian ZL1TBM Hamilton New Zealand
(JD) - James Deardoff -Dayton Ohio
(MADX) - MidAtlantic Dxr Maryland, USA
(TY) Takashi Yamaguchi MD of Nagasaki, Japan

A Last Word

As you can see the number of logs has increased, and this has been for a simple reason no people are sending them in! I can't publish what I don't have.

I'm also interested in publishing samples of logs from club newsletters or webpages (with people's permission of course). If you are a member of a monitoring club that is actively collecting loggings of ute stations, please send them along. I'd be more than happy to profile your group and its activities in the URR column.

Likewise I am still looking for pictures of people at their monitoring stations, along with some background on their interests. Please don't be shy. If you don't have a digital version of your picture, you can forward the original to me, and I will scan it for you (though I can't be responsible for the safety of your picture in the mail, either coming or going).

I'm also interested in posting events that may be of monitoring interest in the column. Space shuttle launches are always popular, and there may be some military exercises that would be worth while knowing about.

Remember that publication times are delayed by several months due to our printing schedule. In general, if you can get the information to me at least three months before it happens I can get it in front of the readers in a reasonable time.

And don't forget that I have a web page setup for the column, as well as an on-line discussion group to boot. Both can be found at <http://www.provcomm.net/pages/joe>. Likewise I have an E-mail address for the column at ur-review@provcomm.net - I welcome correspondence, questions (not all of which I claim to be able to answer) and contributions.

Next month's column will be on radio equipment. What do you really need, and what is worthwhile using today? I will provide some interesting scenarios based on different levels of types of budgets ranging from economy to luxury.

Until next time, may your monitoring sessions be a great pleasure and success for you!

Tuning In (from page 4)

be distracting. The Marlboro law goes on to define "use" as "to use a mobile telephone in (a) dialing; (b) answering; (c) talking; (d) listening. I'd say that's pretty all-encompassing, wouldn't you? If your cell phone is on and you take that incoming call, you're guilty. Interestingly, with the proliferation of GPS devices — which in my opinion are equally distracting — there's no hint of wording about programming a mobile device (or *phone* for that matter), or scrolling through several electronic map pages while mobile. If you don't pull over to fool around with a mobile GPS device, believe me, you're flirting with major danger, regardless of how many highway miles you've got under your belt!

Marlboro's new ordinance goes on to say under section (A) Permitted Uses, "Notwithstanding anything contained in this chapter to the contrary, this ordinance shall not be construed to prohibit the use of mobile telephones by: . . . law enforcement . . . 2. a person who is using the mobile telephone to contact public safety forces; or 3. That while maintaining the vehicle in the parked position either on public or private property, or with a 'hands-free' device which allows the operator to maintain both hands on the

vehicle applicable steering device while using the mobile telephone." It goes on to say, "No person shall operate a motor vehicle on any street or highway while engaging in any conduct defined as the 'use' of a mobile telephone unless the operator is using a mobile telephone with 'hands-free' technology for dialing, answering, talking, and listening."

I see this is flawed because in one breath they make it illegal to use the phone while mobile — specifically addressing "talking" (which even in this day and age I hope doesn't need a definition) — then they say it's OK if you're using a "hands-free" device. Agreed, folks speed, weave, change lanes and do all kinds of strange, dangerous maneuvers while "using" that all-important mobile cell phone, but all "official" studies aside, as a driver with more miles behind me than I care to (or can) remember, I'll wager that many of the road antics I've observed have as much to do with *having a phone conversation* as they do with dialing.

Why not try my little test for yourself with your mobile radio: With a friend sitting in the front seat next to you, initiate a contact on your mobile ham or CB radio before starting the vehicle — using *either* the hands-free function or the push-to-

talk microphone. Then go for a ride. Chances are your co-pilot friend will tell you later — like you already didn't know it — that there were several times when you narrowly missed another moving vehicle, exceeded the speed limit, or came too close to that parked car.

Frankly, this is one hot-button topic for which I don't have a ready-made solution. While driving, why not wait to make or take the call — use the phone only in an emergency — not the Yuppie or harried homemaker definition of an emergency — but for a real life and death situation. Of course, you and I know that'll never happen, and so it is today in our over-burdened legal mumbo-jumbo wordsmithing society that perhaps there should just be a single *federal* law requiring everyone to pull to the side of the road when talking, changing the channels on the car radio, drinking coffee, eating a donut, lighting a cigarette, reading a map, finding a map, putting on lipstick or makeup, finding lipstick or makeup, combing hair, or any of a dozen more inattentive, reckless things we all do behind the wheel.

Sorry. I forgot to add fishing around for money and paying a highway or bridge toll. Anyone keeping stats on accidents *caused* by states and municipalities? ■

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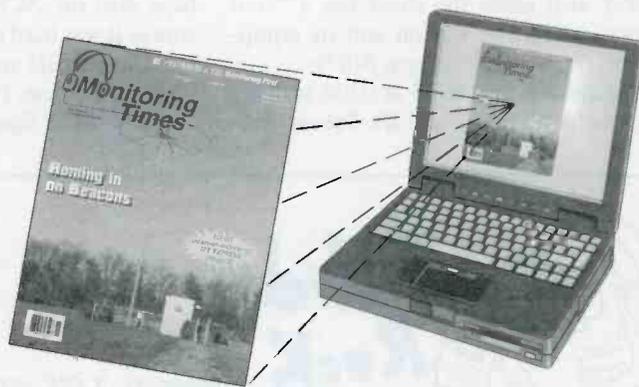
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THE PIRATE'S DEN

Focus On Free Radio Broadcasting

Activity Is Down, But Weird Is Definitely Up

Pirate sightings continue to be decidedly hard to come by these days. I'm not finding much in the way of pirate logs showing up in my mailbox, nor am I seeing much activity showing up in other sources. I've checked the common pirate frequency — 6955 — on a number of occasions but I don't notice much activity. But that isn't necessarily proof that things are "down" because my location isn't the best for this kind of listening. Anyway, here's what there is this month.

WFMQ, 6955 from 0133 to 0152 with music, usual IDs, and a cameo ID. (Lee Silvi, OH) (*What's a "cameo" ID, Lee?*)

Syc Radio, 6953 USB at around 0415, mentioning "enough formaldehyde to choke a horse," some kind of skit, mention of "non-stop rock and roll." A live broadcast brought to you by the "Three Fingers Fireworks Factory." The operator "grew a tumor right on the air." Smoking cigars, mention of Ayc Grenadier cigars. (Bill Finn, PA)

Alfa Lima — Bill Finn reports a QSL from this one — a jpg. file over the Internet after Bill sent an MP3 audio file of his reception. Later he got a snail mail QSL with a thank-you and a full data info sheet. Bill notes the sheet has a "cool story" about the station and its equipment. (*How about a copy, Bill?*)

Radio Azteca, 6955 at 0306 to 0327 sign-off with music and ID. Special pro-

gram number 3. (Silvi, OH) **6950 USB** at 0230–03254 with a tune for baseball fans, Hawaiian music, Spike Jones number, Tom Lehrer song "Masochism Tango" and mention that this was special number 3. QSL via Box 1, Belfast. 6950.5 LSB at 0140 the next day with a rerun of the previous days broadcast. (William T. Hassig, IL)

Ground Zero Radio, 6955 at 0157 to 0214 tune out, with music and many IDs. (Silvi, OH)

Psycho Radio, 6955 at 0241 to 0255 with a live test broadcast. (Silvi, OH)

6953 LSB at 0500–0617 with rock music, commercial for "crap and go" and mention that "I am (the) nemesis of broadcasting" and rambling talk. (Hassig, IL)

Zappa Radio, 6955 at 0259 to 0310 or so. Test broadcast with announcer saying he wanted to see his name in *Pop Comm*. (Silvi, OH) (*Well, friend, there you go!*)

WHYP, 6950 at 0120–0130 plus, "livin' la vida lula" and James Brownyard IDing. (Finn, PA) 0342 with loud, distorted rock guitar at almost equal level with an announcer on tape repeating a bit downing someone named John and perhaps also the ACE organization — not sure as it was hard to tell what he was saying. Later an ID and "livin' la vida lula." (George Benson, PA)

Radio Free Speech, 6950.5 at 0100–

0130 with funny commercials, spoof songs, talk of "President Clinton and her husband, Bill." (Hassig, IL)

Hippy Dippy Radio QSL'd for Bill Finn in PA with a partial data statement on the back of Cannabis 2000.com — world march for freedom May 6 sticker.

Well, there's even room to include some unidentifieds:

6945.25 USB, 0235–0245 with the song "99 Red Balloons" and dance music. (Finn, PA)

6955 AM at 0217–0240 with an old-time radio show, maybe Jack Benny or something similar. (Silvi, OH)

6955 at 2325 with '50s or similar music. (Silvi, OH)

6955 at 0131–0132 sending Morse code. (Silvi, OH)

OK. Now, you know what's coming next, don't you? An anguished cry for logs, logs, logs — yours, in particular. There is action on the bands, after all. And while I'm in a plea mode, let me also ask you for copies of QSLs you've received from pirate stations. And maybe you operators (I know many of you read this column) could send sample cards for use in the column, or maybe get really crazy and send a photo of the equipment you use. Let's also start mentioning the E-mail and/or web site addresses, where available.

That's it for now. See you again right here next month!



Solid Rock RADIO

Date: 9-25-94
Time: 20:56 UTC
Frequency: 7,385 USB
Reporter: M. WELSH
DB LOVE

We're Glad You Caught Our Signal
And Not Us!!

This is the Official QSL Card of:
The Voice of Shortwave Radio
Broadcast # 2

Thank you, William K. Fligel, for your recent reception report of our station. You did indeed hear us on July 21 1997 from 0200 to 0230 UTC on 6955.4 kHz. We hoped you enjoyed the program and hope you can catch us next time around!

Sincerely,

Bubba
Bubba, Owner and Operator of "The Voice of Shortwave Radio"

The Voice of Shortwave Radio
P.O. Box 109
Blue Ridge Summit, PA 17214

Here is a couple of old-timers — as pirates go. Voice of Shortwave Radio (1997) and Solid Rock Radio (1994).

BY EDWARD TEACH

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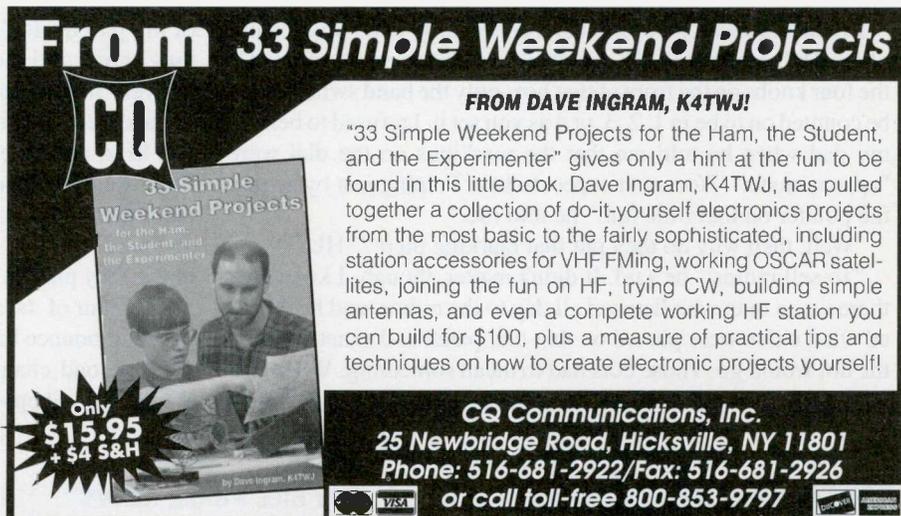
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THE LOOSE CONNECTION

Radio Communications Humor

Bill Remembers Some AM Nostalgia, And The Man Who Wrote "You'll Shoot Your Eye Out, Kid!"

It was a dark and stormy night. The year was 1958 and I had just come home with my first ever copy of "White's Radio Log," which, if I remember correctly, claimed to list every radio station in North America by location, call sign, and frequency. Even though the "log" was published in a magazine, available to the general public for about 35 cents, I felt as if I'd stumbled on to secret information, completely contained in the specially colored pages amid strange-looking schematics, ads for test equipment kits and hi-fi equipment. I remember standing in the store where I bought the magazine, looking at it, then looking at other people in the store to see if they knew what I was holding. It was pretty distressing to know that the entire adult population of Ambler, PA was unaware that they too could have the complete list of North American radio stations for just 35 cents and they didn't even care!

It was indeed stormy that night, though no lightning flashed - for if it had, my mother would have kept me from my chosen task of listening to, and requesting a QSL card from every radio station in North America - one by one - a task that I thought I could knock off in about a week of evenings. (My system, in case you'd like to try to log every North American AM station in seven days is quite simple: You go to the first frequency listed, which I believe then was 550 Kc, note the strongest station, write down all the necessary information about it, then use your radio's bandspread control until you find the second-strongest station, and so on. Lather, rinse, repeat.)

"I've talked about it before, but a particularly annoying feature of the Hallicrafters S-38E receiver was its tuning accuracy."

I've talked about it before, but a particularly annoying feature of the Hallicrafters S-38E receiver was its tuning accuracy. Of the four knobs on the front of that box, only the band switch could be counted on to be in 1, 2, 3, or 4 as you set it. I refused to believe my dad when he told me that the markings on the dial were "approximate." "You can't expect to hear Peiping just by setting the pointer on that little dot!" he told me.

"Well, then why do they put that marking there?" HUH?"

"To sell radios," he said. It didn't matter, though. I knew that there was a man who listened all day to the radios, and he decided what cities were placed on that dial panel and exactly where the dot would go. Those dots had to mean something. When dad challenged me to tune to one of the dots and listen for someone

speaking Chinese, I did. "Conditions aren't right," I said. Wait a few hours. I'll call you when the Chinese station comes on."

My (mis)understanding of the bandspread control and the 0-100 indicator on the bottom of the front panel led me to believe that it was precise, and that the settings would be repeatable. Entry after entry in my "log" tablet showed call sign, location, time, strength, dial position, and bandspread setting.

That night I had identified several Philadelphia stations, WNAR-AM in Norristown, and "Wheat-Swazante, Radio Canadaaa," strangely located at 860 on the AMERICAN AM dial, while broadcasting IN FRENCH! That one sent me running to get my dad and tell him that there was a foreign radio station on the AM band. "Isn't that for American Stations only?" I asked. He assured me that Canadians, Mexicans, and for all he knew Europeans and Asians used the very same band.

I was beside myself. Now I needed an international edition of White's Radio Log. I fell asleep that night listening to foreign broadcasts on the AM band, probably in Spanish and French, but to me they were in many strange and unique languages.

In 1958 I expected the man at the magazine store (actually a cigar store) to know when the "international version" of White's Radio Log would be published. When he didn't, I asked him to please find out and let me know - here's our phone number, OK, mister? Sure, kid-you wait by the phone. The call never came, but I never stopped looking for White's "international edition." Even to this day, I still listen for AM-DX on the broadcast band. In 1958, though, hearing stations from states I'd never been to was nothing short of magic. Tennessee - a word I still love to "swing" in Morse code - Charlotte, North Carolina - Wheeling, West Virginia - Pittsburgh, in my home state, and Chicago, Buffalo, and Rochester, New York. As soon as I had verified what I was listening to, I forced at least one of my parents to "come hear it - it's from West Virginia!" and they came, and they listened.

Every so often now, I get out my favorite receiver, with its digital accuracy, and start through the AM band, beginning now at 530 kHz, and tune-one 10 kHz step at a time until I get bored. That usually happens at about 1130. KiloHertz, not hours. It's there that I find no more William B. Williams, no LaRosa and no more WNEW jingles that sometimes outshined the great music they played. Somehow, fate had me tune to that station on its last hour of its last night on the air. Maybe some of those signals will bounce back from a metallic planet somewhere and I'll get a second chance to hear Jean Shepherd tell his stories on WOR. Hey, Shep - we miss you down here. Hope you're OK.

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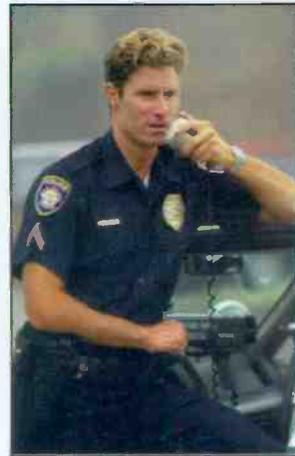
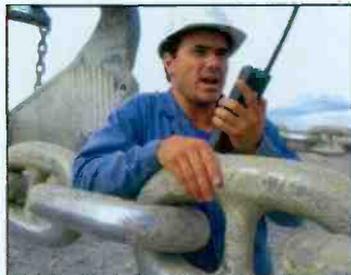
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US Patent # 5,471,402

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