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AUGUST 1998

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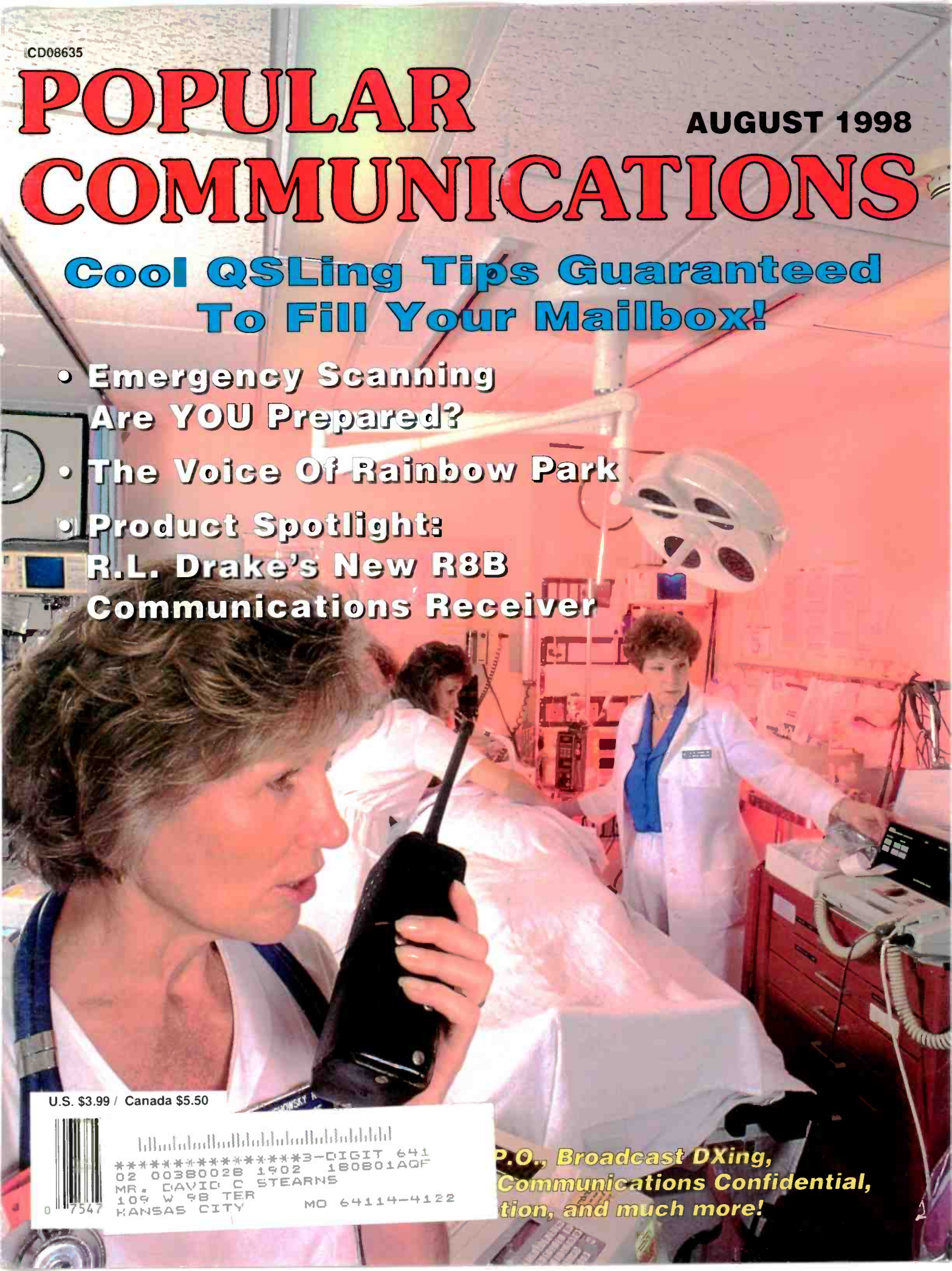

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ON THE COVER: *Will you be prepared when an emergency strikes? That's when seldom-used public safety and other VHF/UHF frequencies spring to life, like those in the emergency room at Mercy Community Hospital, Port Jervis, New York. Check out Chuck Gysi's "Scanning The Globe" on page 32 for emergency scanning tips. (Photo by Larry Mulvehill)*

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Tuning In

AN EDITORIAL

BY HAROLD ORT, N2RLL, SSB-596

For The Price Of A Pair Of Shoes . . .

What would you say if I told you that you had the power to survive a disaster merely by listening to the radio? We all know the value of being on top of the latest happenings in our world via shortwave radio and, closer to home, with our scanner and even amateur radio, but there's a medium far more potent and valuable than any of these: It's NOAA Weather Radio, but like most warnings we receive throughout our lives, they must be heeded. And therein lies the problem.

Scattered around the country, and well within earshot of most of us, these 450-plus small regional NOAA stations operate on seven frequencies in the 162 MHz band providing 24-hour weather forecasts, watches and warnings that include bulletins about threatening weather, from flash floods to developing tornadoes. Way back in 1975 under a White House policy statement, NOAA Weather Radio was designated the sole government-operated radio system to provide such warnings into private homes for both natural disasters and nuclear attack. The system is designed to supplement warnings by sirens and commercial radio and TV.

I've got an Oregon Scientific "All Hazards" receiver in my office, and another RadioShack unit at home. Both units, and many others, including built-in NOAA receivers on my mobile and base CB automatically sound an audible warning, followed by a voice message when particularly severe weather threatens. Personally, I wouldn't be without these lifesaving radios. You can't receive warnings from your radio or TV station if they've been knocked off the air, and if your town is like mine, there are sirens and horns blowing for everything from volunteer fire fighter call-ups to medical emergencies. So much for being informed about a funnel cloud bearing down on your county.

So in an effort to get every home, office, school, restaurant, grocery store, bus and train station, theater, retail store, office building, places of worship and sports stadium equipped with these simple receivers, NOAA and Vice President Al Gore are on a major campaign to educate the public about the benefits of receiving timely, accurate emergency weather and disaster warnings. They often compare the cost of a NOAA weather radio with a pair of shoes: The analogy is that for the price of an average pair of shoes you can get a real lifesaver. For once in my life, I'd say Uncle Sam is telling the truth!

But the news from NOAA recently got even better! Now NOAA has incorporated a new system that enhances the value of these small radios with a state-of-the-art technology known as "Specific Area Message Encoder." In addition to turning on automatically, alerting occupants or travelers with a loud series of tones followed by a voice message, the "SAME" system sends bulletins from the U.S. Emergency Alert System and Federal Emergency Management Agency for your county. You've got to initially "program" the radio with a couple of key presses in order for the system to work with these high-tech marvels, but once you've taken the two minutes to go through the motions, your new SAME receiver will only alert you to messages that affect you, not your in-laws 50 miles away. The broadcast warning could be about an approaching forest fire, toxic chemical spill, explosion, or flash flood. The lifesaving potential is obvious. And the radios aren't just for emergencies. As the NOAA system expands, the round-the-clock weather broadcasts and warnings will soon be supplemented by post-emergency broadcasts to help us after a tragedy.

RadioShack stores typically sell out of the receivers (Catalog No. 12-249) as quickly as the shelves are stocked, especially in areas recently stricken by disaster. After all, when seconds count, who wouldn't want an extra measure of protection from severe weather? I know I do. And frankly, if you don't, it's time you checked in with your shrink! It's certainly better to be awakened by the radio than by your roof peeling off the house. Just in the past year, the U.S. has been ravaged by killer tornadoes, floods, blizzards and thunderstorms with golfball-size hail, resulting in dozens of deaths and millions of dollars of property damage. While we can't always avoid prop-

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POPULAR COMMUNICATIONS

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Pop'Comm P.O.

LETTERS TO THE EDITOR

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>.

Getting Those QSLs

Dear Editor:

While I cannot speak for foreign stations, I suspect the reason *Pop'Comm* reader Ralph Larson and others are having difficulty getting returns on their reception reports is similar to the causes here in the States.

Due to improved equipment, many domestic stations no longer have a full-time engineer, let alone an engineering staff. Also, the FCC requirements have changed, and stations are no longer required to have fully-licensed personnel to maintain their equipment. Most stations use the services of a "contract" engineer who comes in when called. We will not get into a discussion of the wisdom of such policies, but this is the practice and fact of life.

When a reception report arrives at many stations today, no one in the outer office knows what they are, what to do with them, or often cares about them. I am the chief engineer for one LPTV, four FMs, and one AM station, and have not been given or received even one QSL request in the past two years. I can understand it in the case of the two low-powered, satellite-fed religious FM stations, and the TV station, but in the case of the two 100-kW FM stations and the 5-kW AM station, I have been surprised. I'm sure the office staff of these three would forward any such requests, as they put everything else that they don't know what to do with in my box!

It might help if your request was accompanied by an explanation of what it is along with a self-addressed, stamped envelope. Today, you are not dealing with an engineer who understands that you have invested time and equipment to pick up the station, but rather the receptionist who is going through today's mail and deciding who gets what.

Better luck on your QSL requests in the future. 73.

Don Patrick
<Oldestimer@aol.com>

Time To Change

Dear Editor:

Thanks for your excellent editorial and refreshing, logical perspective on the confused world of amateur radio today. It's true that many would-be hams avoid the hobby because of the "old, cranky, bureaucratic codgers" you mentioned, and their unreasonable rules that make it so unwelcoming and unenjoyable! Ham radio should be a fun and friendly hobby, especially for newcomers. It's a shame so many are insistent on preserving the requirement of Morse code. Given the amazing wireless technologies existing today, isn't it silly to cling to such an antiquated and clunky form of communication? And isn't it about time the "no-coder" hatred stops?

Steve Smith, KE4RKV, IN

Comment Deadline On RM-9242 Extended

The reply comment deadline on Low-Power FM proceeding RM-9242, which we exclusively brought you in July's *Pop'Comm*, has been extended from May 26 until July 24.

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DRAKE

QSLing Power: Tips And Techniques For Building Your Collection

The Rewards, Frustrations, And Fun Of QSLing Shortwave Stations

By Gerry L. Dexter

Verifying your loggings by sending reception reports and receiving QSLs from stations in return is, for many SWLs, one of the most traditional, satisfying, and enjoyable parts of the DX listening hobby. At the same time, though, it can be demanding, disappointing, aggravating, frustrating, and maddening. So just how do you become an accomplished QSL collector, and fill your mailbox with cards and letters from stations all around the world?

All too often we seem to encounter situations in which the initial reception report proves to be only the first of many you have to send before getting a reply. In fact, sometimes the effort to QSL a station can go on for years. Some stations are champs at ignoring the efforts of even the most determined listeners, no matter how well schooled they are in all the ins and outs of the QSLing game.

There seem to be more and more stations which don't reply with a QSL in response to the *first* reception report. Perhaps it's a sign of tougher economic times some stations are experiencing, or a sense some stations have that too many listener reports are of little value, or are rude or demanding. Whatever the reasons, there are things you can do to improve your chances of getting a reply. You won't score on the first try every time of course, but, by taking some precautions and following a few common sense guidelines, you can certainly increase your response percentage for both your initial report and follow-ups you send.

Let's look at a couple of dozen or so steps you can take that will bring more QSLs to your mailbox.

• **GET THE BASICS RIGHT** — If you are wrong about the fundamental reception information, chances are real good you won't get a QSL! Remember to use Coordinated Universal Time (UTC) or GMT (essentially the same thing), and not your local time. And write it correctly, using four numbers, not just two or three (0030, 1245, etc., not 030); don't insert any commas or colons; i.e. not 00:30 or 00,30.

Remember that the UTC date may not be the same as *your* local date. If you live in the Eastern time zone, it becomes the next day at 7 p.m. EST. Thus, at 7:30 p.m. EST (0030 UTC) September 4, it's actually September 5, UTC time. That change occurs at 6 p.m., 5 p.m., and 4 p.m. local standard time, respectively, for the Central, Mountain, and Pacific time zones.

Get the frequency right. If you have a communications receiver with a digital readout, this part's no trick at all. But, if you're using an analog receiver, you need to listen for a frequency announcement, or estimate it as closely as you can, and then be sure to make it clear in your reception report that the frequency quoted is an approximation.

• **GIVE AN HONEST READING ON RECEPTION QUALITY** — Don't tell a station they had a good signal when it was actually only fair, or worse. Include an estimate on the station's signal

Most QSL collections contain cards from stations which are no more, such as this from KGEI — The Voice of Friendship. When it closed a few years back, it was one of the oldest in the U.S.

Some QSL cards show the station's facilities, such as this one, issued by the resident engineer at BBC Far East Relay Station, Singapore (Thanks: Mark Lussky, CA)

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DXers who've been around awhile have cards which date back decades, such as this 41 year-old card from Radio Denmark. They aired English on a regular basis back then.

strength, interference level, noise level (static), propagation (fading), and an overall quality report. Those five elements make up the SINPO reporting code. A rating of five is tops — a powerhouse signal, no interference, static or fading and, hence, an overall five rating. "Ones" across the board are the other extreme. Nearly all reports will be a mixed bag, such as 43343. It's generally accepted that you cannot have an overall rating that is higher than the lowest of the other four figures. Smaller domestic stations may not understand the SINPO rating system, so it's a good idea to in-clude a verbal description.

• **IDENTIFY THE INTERFERENCE** — This isn't always possible, but it's a real help to station engineers when you can tell them who or what is causing a problem with their signal. Perhaps another transmitter 5 kilohertz higher was causing a "splashing" effect, or a radioteletype station came on right on their frequency. There are books available listing "utility" stations which can help you in pinning down such interference sources. Of course, if you're equipped with an RTTY/CW decoder you can often "decode" the transmission and get an ID that way.

• **PROVIDE GOOD PROGRAM NOTES** — Be as detailed as possible when reporting items you heard in the broadcast. List the programming content in an itemized log-type format rather than in a paragraph form. Here's an example:

0012 - news of civil unrest in the south.
0014 - end of news, program preview about a show on health coming at 0100.
0015 - station ID "This is Radio Malaga, the voice of the coast."
0015 - music, "The Singing Oyster," Stan Kenton Orchestra.

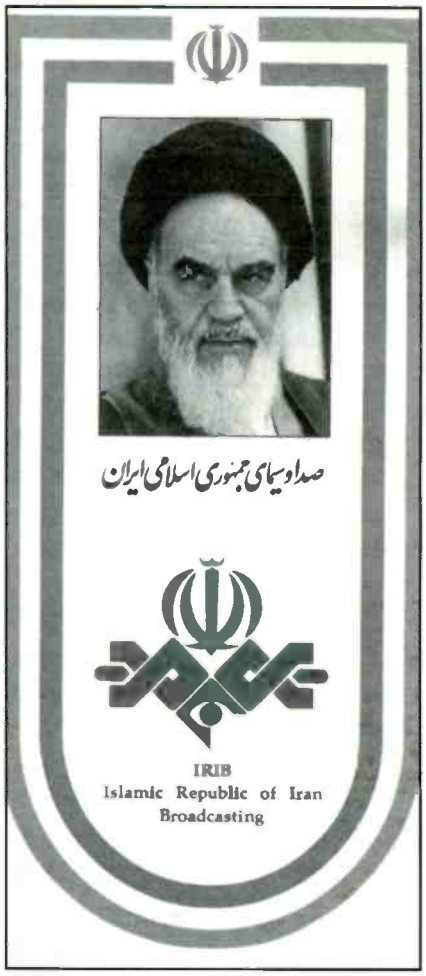
You should try to provide at least 30 minutes worth of program details whenever possible. Obviously you can't do this if you tune in 15 minutes before sign-off, or you catch a sign-on and then the station fades out 10 minutes later. Sign-on and sign-off procedures (with exact times) are particularly valuable as proof of reception, so you can usually get by with a period of under half an hour when a sign-on or sign-off is involved.

• **PROGRAM COMMENTS** — The international broadcasters are especially interested in your comments on their programs. Always put a little thought into this, giving them a considered opinion or some concrete suggestions. Saying something such as "I liked your music" doesn't tell them a whole lot. It's also important to let them know how often you tune in their broadcasts.

• **PERSONAL COMMENTS** — Let the people at the station know something about yourself; what you do for a living or what you are studying in school, your family, your town, and your other interests. If you or someone you know has a connection to the country involved, however tenuous, be sure to mention it. This will help you be seen as more than just another name.

• **YOUR EQUIPMENT** — The station will probably be interested in the type of receiver you used, as well as any associated equipment. Smaller outlets aren't as likely to know about receiver names and model numbers, and are even less likely to be familiar with accessories, so only give a brief description, such as "a table top communications receiver with digital readout," or "a large (or small) portable," etc. Add a note about the type, length and height of your antenna, too.

• **ASK FOR THE QSL** — Books on salesmanship always tell you to "ask for the order." Don't assume the station will know you want a QSL. Ask for one, but be polite! No station anywhere owes any listener anywhere any kind of a reply. QSLs are a favor to us — a way of thanking us for listening. Rude and demanding requests for replies have an opposite effect, and they damage everyone else's chance for a reply.

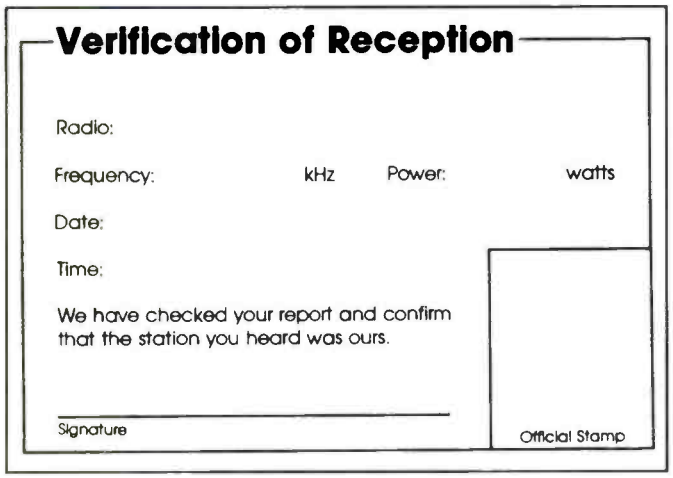


Some cards have not-so-nice images on them, such as our friend here, who graced a VOIRI card send to Anthony B. Santora.

• **SAY NO TO POSTCARDS** — Don't try sending your report on a postcard if you're reporting with the intent of getting a QSL. Among other negatives, you just can't get enough information on a postcard. Sending postcards are OK, only if you just want to give the station a signal report or make a comment, and are not seeking a QSL.

• **USE THE RIGHT ADDRESS** — You can't be very successful at QSLing if you don't have a workable address. Addresses of most stations can be found in the *World Radio TV Handbook* and *Passport to World Band Radio*. Both of these annual guidebooks are available in at most any SWL supplier. Check the dealer ads in *Pop'Comm*.

• **SEND IT AIRMAIL** — Sure, you can save a few cents if you send your report sea mail. But you'll also add several weeks to the delivery time, and sig-



Verification of Reception

Radio:

Frequency: kHz Power: watts

Date:

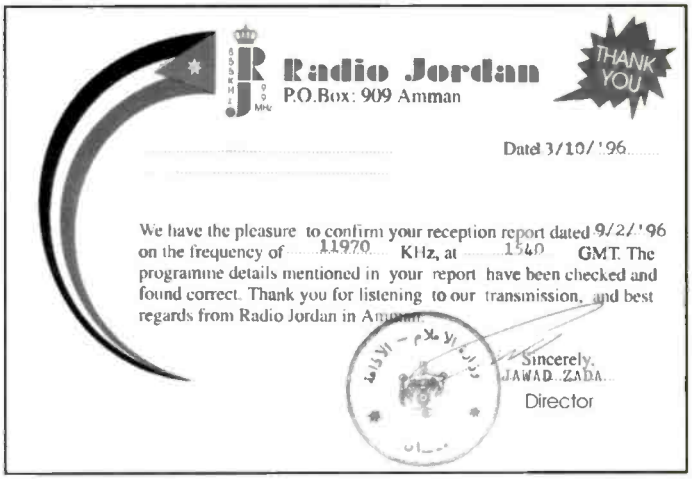
Time:

We have checked your report and confirm that the station you heard was ours.

Signature

Official Stamp

Here's an example of a self-prepared QSL, known as a "prepared card." If you're into DXing Central and South America, get a bunch printed in Spanish.



For a number of years Radio Jordan drove DXers mad by ignoring reports. Fortunately things seem to have changed at last. At least Steven Throw of Quebec got one.

nificantly increase the odds that your report will never reach the station.

• **E-MAIL** — If a station is on the Internet, then E-mail has to be an extremely strong temptation. It's delivered practically instantaneously, after all. Some DXers have experimented with this method of reporting, but the results have been a bit mixed. Some stations have replied with a QSL via E-mail which, for most, is a possibility one might describe as unappealing, to put it mildly. Others have sent reports via E-mail, and asked for, and received the station's regular QSL via the postal system. Of course, the station has to bear the burden of postal expenses, but otherwise, the "E-mail to and regular mail from" approach will be more and more attractive to DXers. (Wait until the day we can feed a station's real-time signal right back to it over a computer line so they can hear it live!)

• **LANGUAGE** — If you're sending a report to local or regional stations in Latin America, Indonesia, or countries formerly controlled by France, make every effort to write your report in the applicable language. Some clubs have issued brief reporting guides for one or more language. Ultimately, you may have to ask a language teacher at the local high school or nearby college to translate a basic (stock) letter with a couple of follow-up letters which you can use over and over.

• **FOLLOW-UPS** — After three or four months go by without a reply, you can send your first follow-up report. This amounts to a copy of your original (or another printout from your word processor), along with a cover letter stating that you haven't received a reply to the first letter which you sent on such and such a date. Pretend the letter probably got lost in the mail. Express your hope that this one will be received, and that it will be answered. Again, be polite.

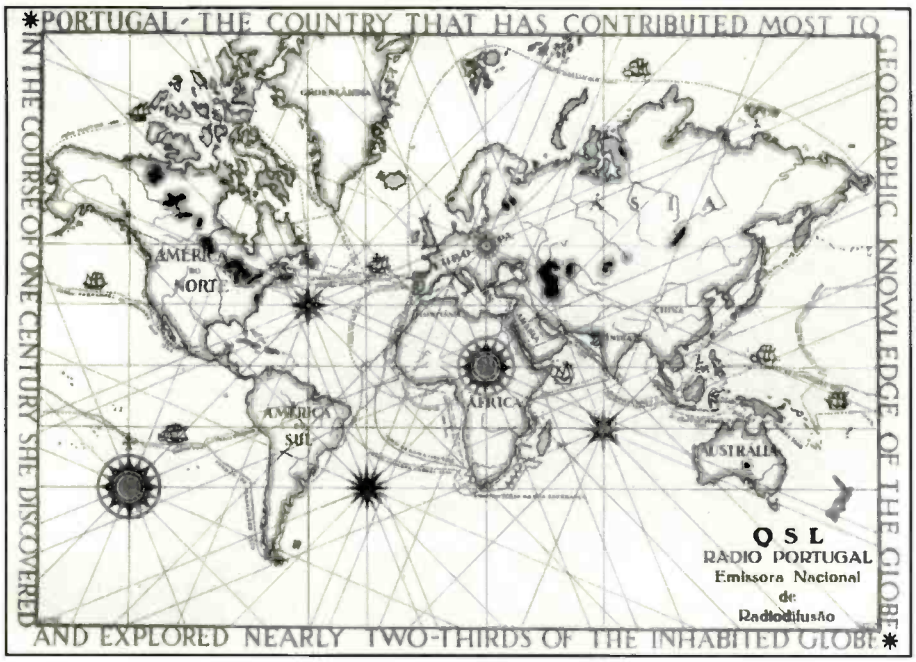
• **RETURN POSTAGE** — Some stations reply without your having to send along something to cover their return postage costs. But including return postage will significantly increase your chance for a reply 70 to 80 percent of the time. International Reply Coupons (IRCs) at your post office are normally good for one unit of airmail return postage in most countries. Be sure the clerk stamps the coupon in the coupon's left hand circle, otherwise the IRC will be useless.

Mint (uncanceled) stamps of the country you're sending your report to are the best form of return postage. One firm which supplies these to radio hobbyists is William J. Plum, 12 Glen Road, Flemington NJ 08822. Send a self-addressed, stamped envelope for prices.

Dollar bills are also a popular way of supplying return postage. They are about as expensive as the IRCs, and are sometimes cheaper than a set of mint stamps. Many countries have laws against foreign currency being sent through their mails, but it is a common practice among both SWLs and hams, and there have been few, if any, problems as a result.

• **GOODIES** — Sweeten the pot. There's a limitless variety of lightweight

Here's another nasty. This guy and his gang were responsible for the gas attack in a Tokyo subway. Aum Shinrikyo had a regular program on shortwave for a year or two, and sent QSLs to all who wrote.



A look back at more history. This attractive Radio Portugal map card is from 1966 when Portugal was governed by right-wing dictator Antonio Salazar and used the slogan "Voice of the West" and reminded us at sign-on and sign-off that "the West can — and will — win!"

"extras" you can slip inside the envelope as a little gift for the station. These include picture postcards, radio station bumper stickers, radio station playlists, baseball cards, photos of yourself, your family, your radio shack, tourist brochures, badges, buttons, patches, and trinkets of every description.

• **TRACKING** — Don't just mail your report and hope that, five months later, you'll remember when you sent it, or even that you sent it! Keep a log of the reports you have outstanding, and the replies received. This aid will work best if you set it up by station, rather than by the date sent. Leave a space for notes, too. Tracking by station makes it much easier to check back and see when your last report went out to a particular station, whether you sent return postage, what kind of goodie was included, what type of report it was (third follow-up, etc.) and so on.

• **MOST WANTED LIST** — One of the simplest, yet most effective, QSLing techniques I've ever used is to set up a list of the 10 or 12 stations you most want to QSL, and post it near your receiver. You'll look at the list every time you're at the radio, which will get you thinking about the stations on it more often than your other unverifieds. As a result, you are likely to make a greater push on these stations, and will probably come up with new techniques to snag the station. Wait until the number of "most wanteds" have been cut about in half before you replenish the list. That way you have a sense that you're making progress, and you aren't always faced with a full list of your terrible 10 or dirty dozen.

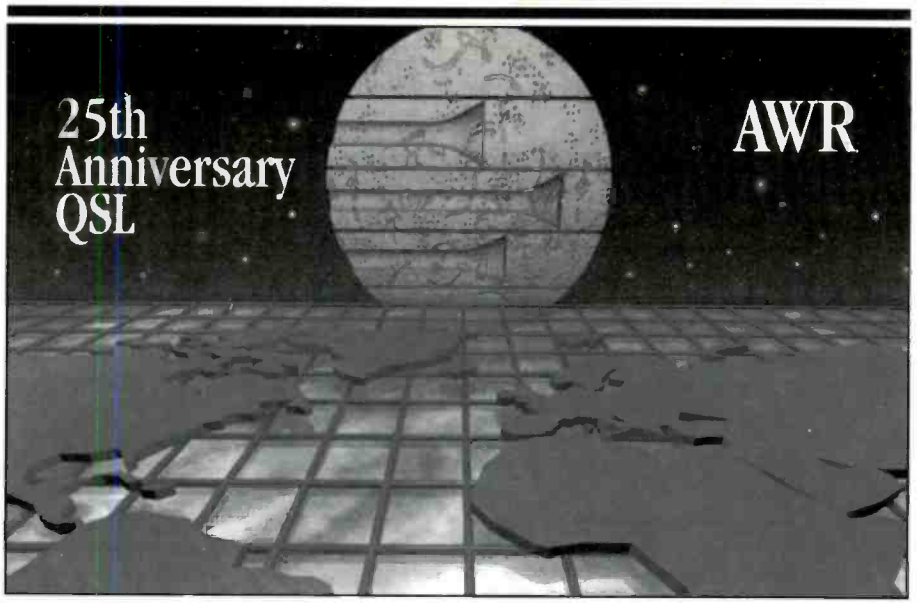
• **VERIFICATION SIGNERS** — These are the folks who handle reports, and prepare (or at least sign) the replies. If you send your report to the specific individual in charge, your chances for a reply are much improved. The QSL column in the North American Shortwave Association's monthly bulletin contains the names of many currently active verie signers each month. (For a sample issue send $3 to NASWA, 45 Wildflower Rd., Levittown, PA 19057. Both *Passport to World Band Radio* and the *World Radio TV Handbook* list station personnel, so if you don't have a specific name, you can usually find a likely prospect in these books.

• **REGISTRATION** — If you feel mail service to the station isn't getting your report through, you might opt to have your report registered at your post office. This is a fairly expensive service running to several times the cost of air mail postage, so you probably won't want to do it too often. Once in awhile, though, it can prove to be just what the doctor ordered.

• **PREPARED CARDS** — Some stations don't want to have the expense of printing their own QSL cards, and often they don't want to spend the time and other costs involved in writing letters or even filling out cards. A prepared card is a "roll-you-own" QSL which you fill out with the reception details, with your own name and address on the face, and send to the station for signature and/or authentication with their rubber stamp. Often it's a good idea to put mint stamps of the country right on the card, although in some cases there are more stamps to stick on than there is room on the card. In those situations, place the mint stamps on a self-addressed airmail envelope. Using prepared cards cuts the station's time and expense to the absolute minimum. The drawback, of course, is that you get your own work back, and not a station card or letter. But it IS a verification!

• **TAILOR YOUR REPORT** — Try to keep in mind the sensitivities of the

Stations occasionally issue a series of "collectable" cards. This Trans World Radio - Bonaire card was one of a series on the island's historic buildings.



Stations also sometimes issue QSLs which commemorate important events in the life of the station or country. Thanks to Andy Johns, TX, for this special card he received from Adventist World Radio on their 25th Anniversary.

people or politics of the area to which you are writing. QSL experts were into this long before the politically correct crowd took over the world. You may not agree with the religion or politics of the country, or that country's view of your country, but it's wiser to bite your tongue and be as cordial as you can. In general, if you're in doubt about whether a particular remark may be prudent, it's better to talk about something else or say nothing.

• **PERIOD REPORTS** — If your report is being ignored, try building a report based on multiple loggings taken over a couple of weeks or a month. One of the reports can be a standard type complete with program details, while the rest can be just date, time, frequency, and SINPO loggings, since you don't need to offer any proof for these additional readings. These bare bones logs can be written or typed on plain paper, or on one of the commercially available SWL log forms, or a form you create for this purpose.

• **BE PERSISTENT** — The more stations you hear and send reports to, the more will fall into the "tough nut" category. There's just no way around the fact that, in some cases, you need to be psychologically prepared to send many, many follow-ups over a period of years. Some DXers have kept after a station for 10 or 15 years before they got their reply! You'll need to develop the will and the ability to hang in there and not get discouraged, regardless of how long it may take. You need to develop the attitude that somehow, someday you will QSL this station!

• **WORD PROCESSING** — If you own a computer, you're equipped with an extremely powerful tool for writing better and more attractive reception reports, writing follow-ups, cover letters, designing and changing report forms, designing various logs, and even designing and printing your own prepared cards. Con-sider the various ways you might be using your computer to make the entire reception reporting process easier a snap. You should be able to cut the time you spend writing letters and filling out forms by at least two-thirds! Folding paper, licking and stamping envelopes will be the most time consuming part of the job!

• **CREATIVITY** — Be creative. Every report a station receives is saying the same thing: "Here I am!" "Notice me! Open me up!" Make your report different. Find ways to make it more attractive, more useful, more interesting. Make it stand out from all the others, and you're more likely to get a reply.

QSLs have a wonderful habit of turning into nostalgia a couple of years after they're received and have found their way into your verification album. Nothing beats spending a rainy Sunday afternoon browsing through your collection — especially if you're showing it off to a fellow SWL who turns green with envy over the rare ones. Well, nothing, that is, except the next QSL! Hey, maybe there'll be one in the mail today! Good listening, and good QSLing! ■

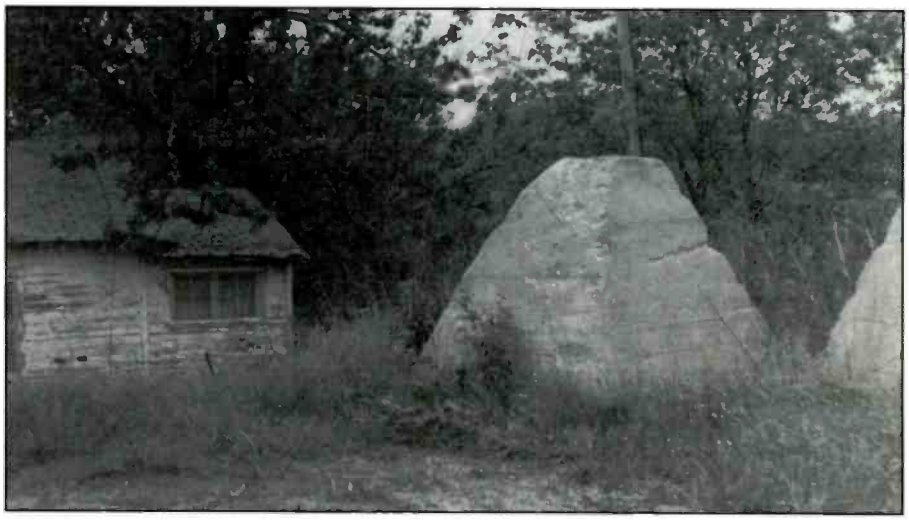
The Voice Of Rainbow Park

In 1930, KGIZ Started Life In A Wooden Cabin With 50 Watts

By Alice Brannigan

In February of 1930, during the Great Depression, the Federal Radio Commission (FRC) issued broadcast license KGIZ to the Grant City Park Corp., Grant City, Missouri. This station was authorized to operate with 50 watts on 1500 kHz. One studio was located in the Grant City Trading Post, while another was at Rainbow Park, a half-mile west at the transmitter site. Ed Kelso's Rainbow Park was a health resort consisting of a large main hall facing a gigantic swimming pool. A number of small wooden cabins surrounded the site in a wooded setting on the main highway west of town. Two large steel lattice towers were erected on the property to support the station's flat-top antenna system.

KGIZ took to the airwaves in June of 1930, operating full time. Six months later, the station doubled its power to 100 watts and was broadcasting entertainment, market, and weather reports, agricultural information, and educational features. It called itself "The Voice of Rainbow Park."



To the casual observer, this concrete pyramid next to a tumble-down wooden shack doesn't look like much. To an astute radio archaeologist exploring in 1985, it was observed to be the abandoned 1930 broadcasting site and tower base of 50-watt KGIZ, Grant City, Missouri. (Photo by Jan D. Lowry, Broadcast Pro-File, California)

Gone To The Big City

In July of 1933, the license was sold to KGBX, Inc., a station that had recently relocated to Springfield, Missouri. The FRC granted KGIZ authorization to also relocate to Springfield, up its power to 500 watts, and switch to daytime-only operation on 560 kHz. KGIZ had been purchased primarily for its license, so most of the equipment used at Grant City was to be abandoned. On December 22, 1933, operations at Grant City ended, and the station was switched to Springfield. In January of 1934, the KGIZ call letters were dropped, and the station became KWTO, representing the new slogan "Keep Watching The Ozarks."

KWTO operated from the existing KGBX locale in the Springfield Chamber of Commerce Bldg., 508 St. Louis Ave. In March, KWTO was permitted to increase its power to 1 kW. New investors began participating in both stations in late 1935, and the licensee's name was changed. A year later, each of the stations became affiliated with one of the two NBC networks. At that time, KWTO increased its power to 5 kW as it established a new transmitter site on rural Bolivar Road (Highway 13), where a 429-foot, self-supported Blaw-Knox tower was erected. This was close to the KGBX site, also on Bolivar Road.

The NBC affiliation ended for KWTO in 1937 as the station became an inde-

The KWTO digs on South Glenstone, in Springfield, as they appeared in 1970. (Photo by Jan D. Lowry, Broadcast Pro-File, California.)

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- 100 memories that store frequency, mode, AGC time constant, ATT on/off, VFO, IF filter bandwidth, and NB status.
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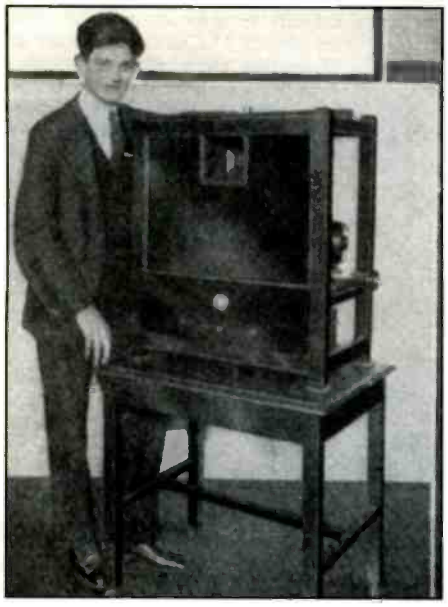
CIRCLE 174 ON READER SERVICE CARD



TV engineer John Geloso poses with a vintage 1928 mechanical scanning disc receiver. The tiny screen is at the center of the upper panel. The lower panel houses the receiver portion.

pendent. In 1941, the FCC gave the station authority to add night service with 1 kW, though the station was not able to put this into effect for a few more years due to delays caused by wartime conditions.

In 1943, KWTO assumed the NBC Blue Network (which was to become the ABC Network in 1945) from sister station KGBX. In early 1944, the licensee of both stations was forced to sell one station or the other in order to comply with the FCC's newly implemented Duopoly ruling. A group of new owners paid $100,000 to take over ownership of KWTO. At that time, night service with 1 kW was finally commenced from the station's new multi-tower transmitting site on James River Road, south of the city.

In 1947, KWTO moved out of its shared KGBX studios and into new studio facilities at 606 St. Louis Ave. In 1949, the KWTO transmitter facilities were listed as South Fremont Road, south of Springfield. This was a year before FCC permission was granted to operate with 5 kW at night (matching its daytime power level).

Hot Stuff

On February 21, 1952, a fire totally gutted KWTO's transmitter building. New facilities, including 5 kW transmitter, was quickly constructed. When the new facilities were completed, the night power was boosted to 5 kW, directional pattern.

The year 1954 saw the start of a famous KWTO feature, the locally produced, but nationally known "Ozark Jubilee" program. It originated live in front of an enthusiastic audience from the stage of the Jewell Theater, and featured country and western music performers. By 1955, KWTO was running three hours daily of country music programming. Late in 1955, it introduced the new "Listen" format which combined country and pop music plus NBC program offerings, including NBC's "Monitor."

In 1956, the KWTO studios were relocated to a three-story stone mansion at 1121 South Glenstone, formerly a private estate. In early 1968, when the station was airing 20 hours of country music each week, KWTO joined ABC's American Information Radio Network. In 1972, the station went into a full-time country music format.

Big Sales/Big Bargains

In 1974, KWTO was sold to Salina Broadcasting, Inc. for $1,250,000. The station moved into new quarters at 2750 South Campbell in 1982. In 1985, KWTO and its sister FM station were again sold, this time to DKM Broadcasting Corporation Midwest. In 1988, KWTO's licensee's parent corporation was acquired by North Carolina-based Summit Communications, Inc. for $200-million. The sale included not only KWTO (AM/FM), but also stations in six other major markets.

In 1988, authorization was granted to move KWTO's antenna to U.S. Route 65 and County Route EE, near Selmore, Missouri, and to reduce night power. By late 1988, the station was a full-time "Modern Country Music" outlet. A year later, Summit sold KWTO (AM/FM) to Cole Media for $4,250,000. Two years later, the new owners changed it to a talk radio format. Offices were soon relocated to Suite 401, Four Corporate Center, 1949 East Sunshine.

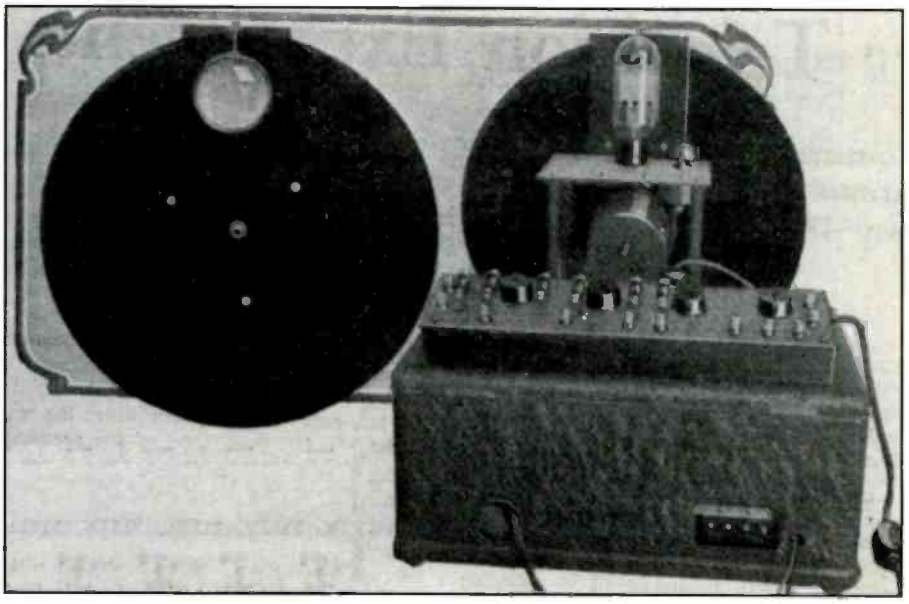
In 1995, Cole Media sold KWTO (AM/FM) for $1,882,000, representing more than a $2.3-million loss in Cole's six-year investment. The new owner was Meyer Communications, Inc.

Today, KWTO is Missouri's 16th oldest continually licensed AM station. It operates on 560 kHz with 5 kW (night directional) from 1949 East Sunshine (Suite 401). It continues as an ABC News/Talk outlet, and presents 20 hours of farm programming each week

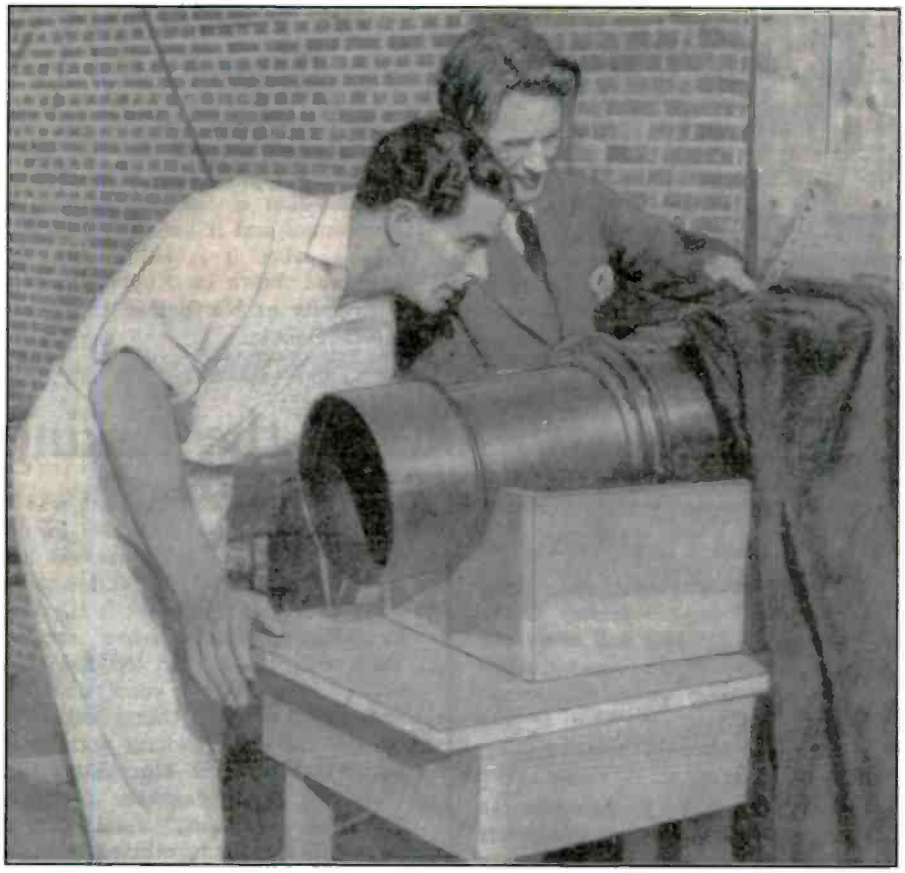
Thanks to Broadcast Pro-File, 28243 Royal Road, Castaic, California 91384-3028, for permitting us to excerpt from their lengthy and highly detailed report on KWTO. BP-F is a professional research service that can, for a reasonable fee, provide historic profiles on any U.S. AM and FM broadcaster, past or present. Send them $1 for a complete catalog of their available services.

Television Revisited

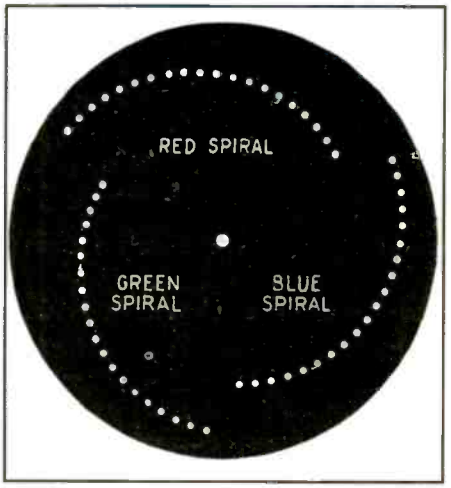
Our excursion last April into the very early days of television broadcasting



Here's the bakelite disc. Its motor assembly and lamp comprise the scanning apparatus. The three-stage amplifier, sitting on top of the broadcast receiver (right of photo), had a push-pull stage to improve results.



British inventor John Logie Baird (right) shows his television camera to musical comedy star Jack Buchanan in 1928. The lens is inside the tube while the scanning mechanism is covered (far right). Natural light was used for Baird's TV operations, hence the rooftop setting of the photo. Black and white broadcasting in England began later that year.



Arrangement of the spirals in the multiple-color television disc Baird successfully demonstrated for the press and scientists on July 3, 1928.

brought in a very enthusiastic response from readers, including Ben Nye, Jr., of Inwood, New York, who wonders what mechanical spinning disc TV receivers looked like.

Well, Ben, let's say they weren't things of beauty. From the exterior, they were large and bulky, with the puny 1.5-inch viewing screen being about the size of a postage stamp. Inside the cabinet was the receiving apparatus, plus an electric motor supporting a vertically mounted 20-inch bakelite disc. The bakelite disc was punched with 48 holes, each at a different distance spiraled from the disc's center. The disc had to be spun at around 900 rpm in order for the images to be visualized on the screen. A neon tube behind the disc produced the light that shone through the punched holes, flickering in synchronization with the broadcast signals.

An inquiry from R. Sokolowsky of Seattle, Washington, points out that he remembers when color TV came in around the 1950s, and asks if we can provide any specifics on its first appearance. Again, let's forget electronic television and go back to the early days of mechanical disc television.

England's great TV inventor, John Logie Baird, first demonstrated color television to the press and scientists in London on July 3, 1928. This was a three-color (red, green, blue) process using a mechanical disc. Instead of the usual single set of punched holes, there were three sets of 20 holes, each set being covered with a filter to pass only one of the colors. The receiver required a neon lamp to give off the red light, and a lamp containing a combination of helium and mercury vapor to provide the blue and green.

At the transmitter, three spirals were also used. With each spin of the disc, the image was scanned in a single color, and transmitted that way. At the receiving end, the synchronized disc gave the illusion of the object being in color.

In the demonstration, an image of a bowl of flowers was transmitted and displayed the vivid blue and red buds. A person's face was transmitted with natural looking skin tone, even a red tongue. A police helmet shone bright blue. A basket of strawberries was dazzling red against the white basket. A moving image of a man tying a red and blue handkerchief around his head was sent.

Baird gave the first public black and white TV demonstrations in London on September 22 and 29, 1928, at the Radio Exhibition. Black and white broadcasting in England began later that year over London's 2TV, with 4 kW on 1600 kHz.

C.J., of East St. Louis, Illinois, asks if there were any African-American TV pioneers. I'm sure there were quite a number, but the one that immediately comes to mind is John Thomas, owner of Jamaica Television and Radio, Jamaica, New York. About 1945–'46, his company held experimental TV license W2XJT for operation on frequencies that were later to become TV Channel 13.

Here's a Website that I've found quite fascinating. It's Chuck Pharis' page and it's totally devoted to old-time TV and radio, with photographs, station histories, and more. Chuck is an old-time TV cameraman and a major collector of historic broadcast TV equipment. Check out his Web page at: <www.wavenet.com/~pharisc>.

We're always interested in hearing from readers with old-time radio and wireless memories, photos, picture postcards, QSLs, station directories, memories, anecdotes, news clippings, and what-have-you. Our E-mail address is <Radioville@juno.com>, and you can also get to us by snail-mail in care of *Popular Communications*. Hope you'll join us next time! ■

The Radio Connection

A LOOK BEHIND THE DIALS

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

Summer Solstice

It's been a busy few months here at the "Radio Connection," with the summer weather finally arriving and tag sales in full swing each weekend. You just never know what treasures await on the next street, block, or town. As luck would have it, two of my neighbors held tag sales on the same Saturday last week. Not too shabby, considering I live on a dead street with 13 houses — and in 30 years no one ever held a tag sale before!

One sale yielded a rather common Crosley wood table radio; the other a German radio, something we have been searching for as fodder for future columns! Even better was the discovery of two still-in-the-box Heathkits: a VTVM and a microprocessor trainer! Heck, it's nothing rare, but every year it seems a bit harder to find those real antique radio treasures. How about some photos of treasures you folks have uncovered in old barns and cellars?

We'll try to get around to the German set sometime next year, *if* I can ever find a source for schematics for foreign sets. Reader James Ashworth faces a similar dilemma. He's seeking help finding a model number and schematic for the AM/FM Telefunken shown below. Date codes place the set in the early 1970s, and it uses five tubes. Alas, most of the tubes are missing; only an EL95 and ECH81 remain. The model number was probably on the back cover, which was also missing when Jim acquired the set. Can anyone help him? If so, drop me a line at my E-mail address, and I'll relay the information to Jim.

We were extremely pleased to receive a nice letter from Sarah Wanamaker of California. She also enclosed a photo of her extensive collection of early transistor radios! Transistor radios are a "hot" collectable these days, especially the early 1950 and 1960 models. Here's Sarah's letter:

I'm often asked why I collect transistor radios; most folks think it's a strange hobby. Why not those beautiful old wooden ones? While I do love the old tube sets, transistor radios occupy a special place in my heart. I've always been fascinated by miniaturization.

Jim's Telefunken is an FM/AM-only model, and appears to have been made in 1971. Can you help identify this radio?

Even as a child, I held transistor radios in awe. One of my fondest memories is that of going camping with my family in the desert. We always took along our 8-transistor Airline portable, a model GEN-1227. It was nothing special, but I would tune to KNX out of Los Angeles at 9 p.m. for "CBS Mystery Theater," hosted by E.G. Marshall. Surrounded by the quiet noises of the desert, I would listen as Mr. Marshall opened the creaky door and welcomed his listeners to another hour of eerie mysteries. Of course, sometimes I had difficulty getting to sleep afterwards!

I began playing with radios and electronics early on, with the help of my parents. I read that one could build a radio using only an antenna, ground diode, and high-impedance headphones. I found that hard to believe, until

Part of Sarah's extensive collection of transistor radios. And, of course, there is Sarah!

I put one together for myself. I was surprised to hear the local radio station coming in so clearly on such a simple device. I soon graduated to constructing a one-transistor radio kit, and later to a full-scale multi-transistor radio, among other things.

I always had transistor radios around as a child, the first radio was a mustard-yellow set from Woolworths; it cost a grand total of $3.97. Unfortunately, the temptation to take it apart and examine how it was made was too great. My next radio, an AM/FM Panasonic "Rolling Toon" fared better, and is in my collection today.

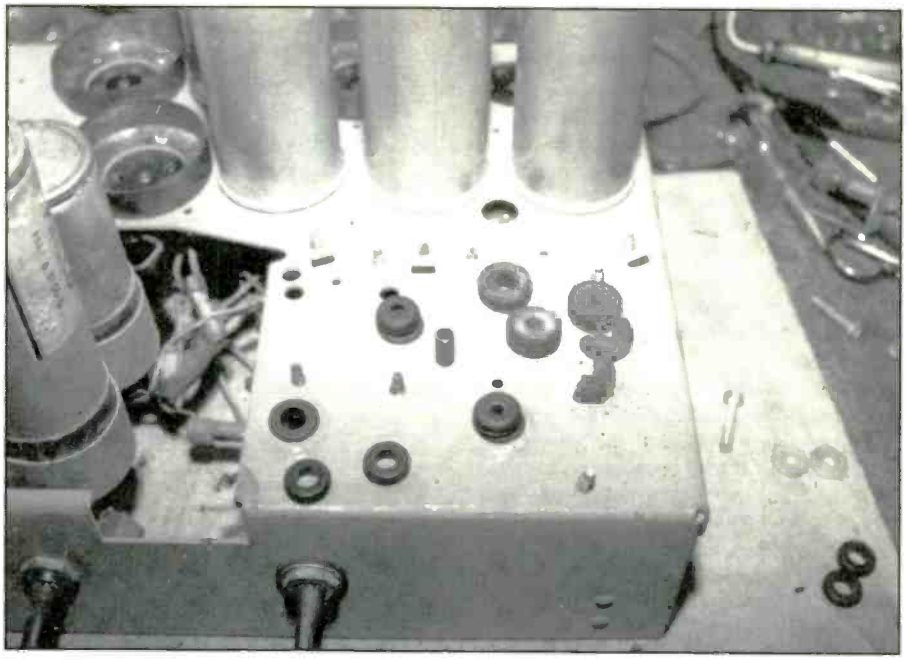
It was about four years ago that I actively started collecting radios. I started with tube sets. I ended up with several, including a 1937 Philco console. It soon became very clear that I was not going to be able to collect very many tube sets and still have room to move in a small house! So, I decided to concentrate on transistor sets, and now have over 200 radios in my collection. My main interest is in the design of transistor radios rather than their performance. I find transistor radios produced in the first decade of the transistor era (*mid '50s to mid '60s — Ed.*) to be the most interesting, especially the fantastic reverse-painted Japanese ones. After viewing some exquisite Web sites focusing on tube radios, I decided to build a site for my radios. It now has over 100 radios on display, and is at <http://www.sonic.net/~sarah/radios.html.>

Sarah, thank you for sharing with us your interests in vintage radios. I'm sure many of our readers will be delighted to view your Web page. Some of those transistor sets bring back some fond memories of the '50s and '60s! Most folks think of antique radios as a "guy" thing. Not so. There's something for everyone in this hobby. Sarah is also an active participant in the antique radio newsgroup at <rec.antique.radio+phono> and is extremely knowledgeable about radio history and electronics. (Before someone asks, a reverse-painted transistor has a clear plastic case, and is painted on the *inside*. They're quite stunning in appearance.)

The Philco 89 Saga Continues

I have to admit that the Philco restorations have been going a bit slowly. Summers are best spent outdoors, and radio restoration seems best suited for those long, long winter nights when there is little else to do. They seem to be coming all to soon!

One problem you'll run into in almost any vintage tube radio is deteriorating gum rubber shock mounts under the tuning capacitors. For no apparent rhyme or reason, some mounts survive the ages, others

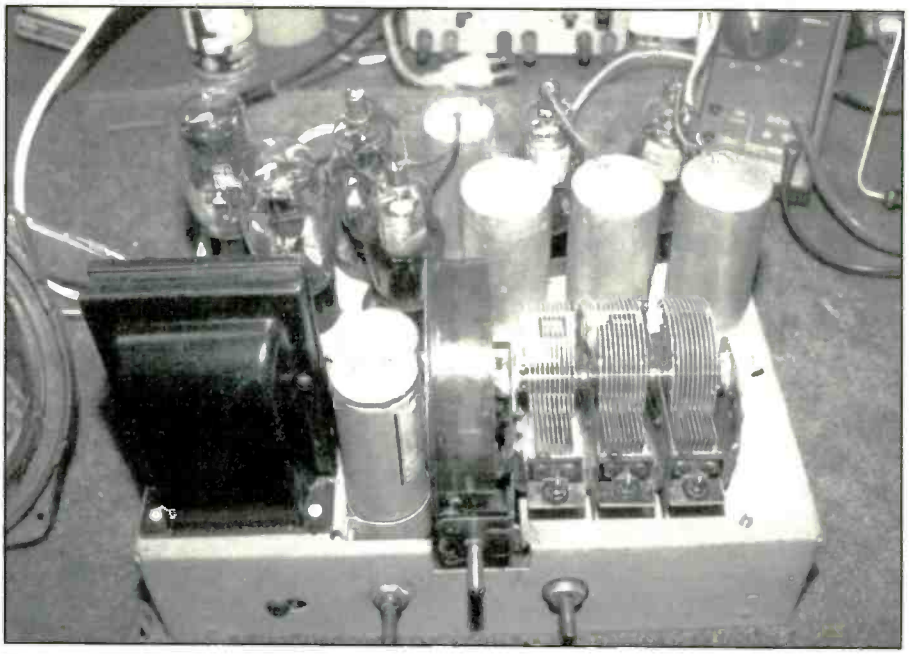


The old gum rubber grommets were dried out, and they crumbled when handled. New rubber grommets are being sized to fit the metal spacers.

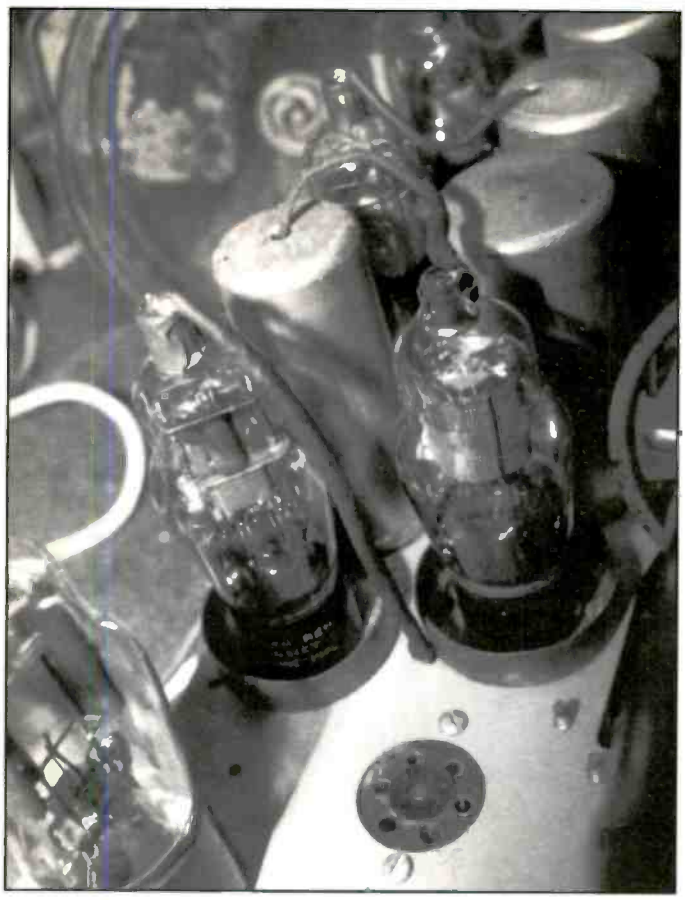
harden and shrink, becoming unsuited to the task assigned them.

So it was with my Philco 89 chassis. The old rubber mounts had dried out, and crumbled when removed. This is not as serious a problem in the design of the 89. The tuning shaft and tuning reduction system is an integral part of the capacitor assembly. In other designs where the tuning capacitor sits alone, with a dial string coupling to the tuning shaft pulley, the capacitor will wobble as the tuning direction is changed, resulting in considerable backlash when trying to tune in a station.

As shown in the photo, the old rubber mounts are replaced with new rubber grommets. Often two or three grommets are needed for each mounting screw. The grommets can be cut in half and stacked to achieve the proper thickness needed for a firm mount. The standard hardware used to mount tuning capacitors usually



The new grommets are in place, and the tuning capacitor is back where it belongs! This is the chassis that underwent the extensive restoration over the past several columns. The power transformer has also been repainted.



The 42 audio PA has been removed to show the new shielded grid lead assembly. Note how those tubes shine after being cleaned!

The shielded braid is snaked over the grid wire, and will be grounded below chassis. The heatshrink tubing has yet to be applied to hide the shielding.

consists of the mounting screws, grommets, and metal spacers. The metal spacers are inserted inside the grommet opening and define the mounting height of the capacitor above the chassis. Too little grommet material will allow the capacitor to flop; too much and you end up over compressing the material until the spacers prevent further tightening.

Sometimes the original mounting screws are rusted or missing. When replacing these screws be very, very careful that the replacements are not too long! If the screws are too long, they'll run into the capacitor stator plates and damage the capacitor beyond reasonable repair.

Another problem I ran into was that all four of the tube shields were missing. I've been searching for replacements for several months, and only have turned up a handful of other collectors in the same boat I'm in! Those tubes look mighty pretty when washed and shined up, and it seems a shame to cover them with a metal cover hiding their beauty! Besides, it also hides the warm glow of the filaments at night! Alas, the shields are there for a purpose! Most sets will oscillate badly if the shields are missing. You'll have unwanted stray coupling between IF, RF, and audio stages. Look at the flying grid leads in the photos. With shields missing, the tube plates can easily couple back to the grid lead wires causing all sorts of feedback problems. If there are two in-line IF amplifiers, the coupling between the plates is the same as grid-to-plate coupling, again causing oscillation problems.

This is something you should always evaluate before buying a set. Missing tubes are easy to replace, and I suspect I will find replacement tube shields for the 89 in short order, as there were thousands of Philcos made and many models used the same tube shield style. But finding tube shields for less common sets may be more of a hassle than it's worth.

I decided I wanted to enjoy the set and get it running despite the missing tube shields. I'll find a set sooner or later. Fortunately, thanks to the layout of the set, the only problem was feedback between the grid lead going to the grid cap of the triode detector/first audio stage, and the 42 tetrode audio power amplifier stage.

When I first powered up the radio, it howled like a Banshee! With the shield in place on the triode first audio, the grid lead is normally brought down *inside* of the tube shield, and through a rivet hole into the bottom of the chassis. There were two problems. I didn't have a tube shield, and the rivet was replaced with a screw when the socket was remounted. Lucky for me, there was a nearby unused chassis hole where I could sneak the grid wire through. I could fuss around with the grid lead dress and get things somewhat stable, but I wanted something more permanent and that looked original.

The solution was to shield the grid lead. I had replaced the old grid wire with some new black cloth wire from Antique Electronic Supply. The next step was to find a length of woven shield, like the braid used in miniature RG-174 coax cable. The grid lead wire was carefully snaked through the braid, and the braid attached to a ground point below the chassis. The next step was to hide the braid with a section of black heatshrink tubing. As you can see, the "cure" doesn't look too bad!

Well, we've got lots of good photos this month, so I had better shut up until next time or poor Harold will have kittens as I run over my allotted space! See you in September! ■

BY GORDON WEST, WB6NOA

Radio Resources

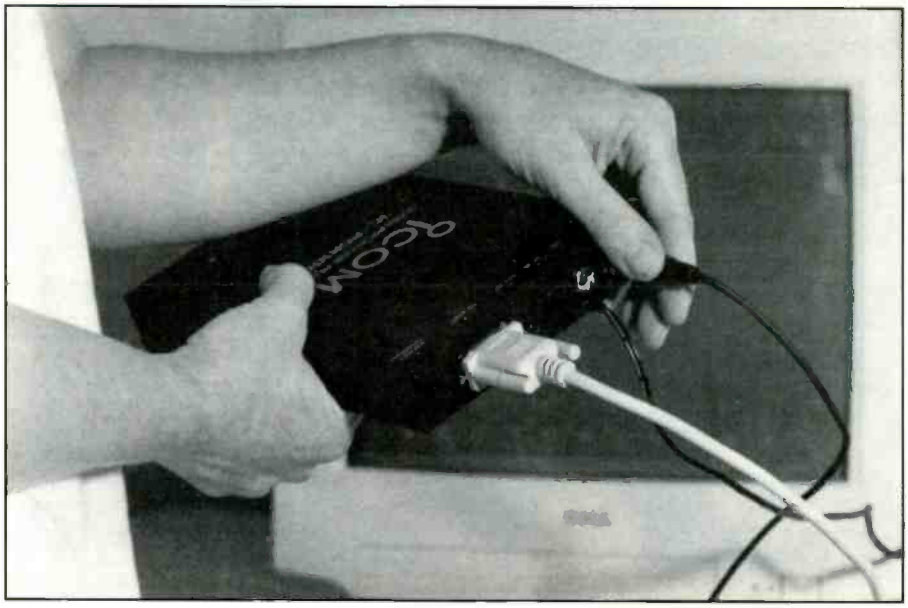
INTERESTING THOUGHTS AND IDEAS FOR ENJOYING THE HOBBY

Improving Your Computer Radio Performance

Your home or laptop computer might make an exceptional radio system. ICOM offers the PCR-1000 computer radio that is 100 percent PC external, and tunes from 500 kHz to 1300 MHz, all modes.

WiNRADiO offers their Digital Suite with digital signal processing that is just about 100 percent INSIDE your home computer. And Kachina 505DSP radio system also incorporates a powerful amateur transceiver that goes external to your computer, with optional cables so the "radio" may be remotely located up to 75 feet away from your PC.

Soon there will be more receivers and transceivers taking advantage of fixed and portable computer power. Most will give you broadband radio reception from 500 kHz to 1500 MHz, and some will also give you two-way transmit capabilities, like the Kachina system.



Adding the coax to the ICOM radio unit. (Photo by N3JF)

Noisy Computers

But laptop and home computers are noisy. There was a time a few years ago that the Federal Communications Commission vigorously enforced the broadband noise coming out of home and office computer systems. Office computers actually had *lower* noise emission requirements than home computers. Home computers should have additional shielding to minimize the interference to nearby televisions or cordless phone systems.

But since all computers radiate broadband noise, when you tie your new ICOM receiver, WiNRADiO receiver, or Kachina transceiver up to your computer system, you will need to do some serious noise elimination.

Where do you think the noise gets in? If you answered, "Out of the computer and directly into the RF section of the radio," you might be wrong. When you consider that the WiNRADiO setup is a radio receiver actually *inside* the computer, you know that they have gone to extraordinary measures to shield the board from all of the broadband RF noise floating around on the inside.

With Kachina and ICOM on the outside, both manufacturers have gone to great lengths to bypass as much noise as possible coming in from the interface cables that hook into the radio receiver and your running computer. "At Kachina, we are extremely proud of the engineering that went into our system to minimize computer noise getting into the sensitive radio receiver," commented Kachina's Aubrey Stewart, W6ODG, at the recent Amateur Electronics Supply Superfest. "We have gone to great lengths to shield all of our radio sections to insure there is no direct noise pick-up," adds Kachina.

ICOM America reveals, in its computer radio installation manual, exactly where the major ingress of noise will come from — directly out of the computer and into a nearby antenna. "Antennas play a very important role in receiver operation. Connecting a poor quality antenna to the ICOM PCR1000 will result in less than optimum performance."

"Select an antenna, such as a well-matched 50-ohm antenna and feedline. A voltage standing wave ratio (VSWR) of 1.5:1 is recommended for a desired band." OK, I can go along with this, but in the real world of scanning from 500 kHz to 1500 MHz, there is zip opportunity to have low VSWR throughout the entire spectrum unless you have a 50-ohm non-inductive resistor on the end of the coax.

So the BIG determination for how good you're going to get your new computer radio system to work is not necessarily the precise type of antenna you are using, but rather the capabilities of getting that antenna *as far away from your computer as possible!*

The ICOM PCR1000 computer radio includes a small telescopic antenna tied into 12 feet of RG-174 type coax. The coax is smaller than RG58, but slightly larger than RG174. I assume it's coax because of ICOM's statement of a 50-ohm antenna line. The antenna is designed to stick on a window — you pull up the whip to obtain reception. I doubt that there is any loading within the base section of the whip, so I would estimate its resonant frequency as 150 MHz and higher. It also appears the braid of the supplied coaxial-type cable will serve as the counterpoise for the antenna. The little black box has its own connection point for earth ground.

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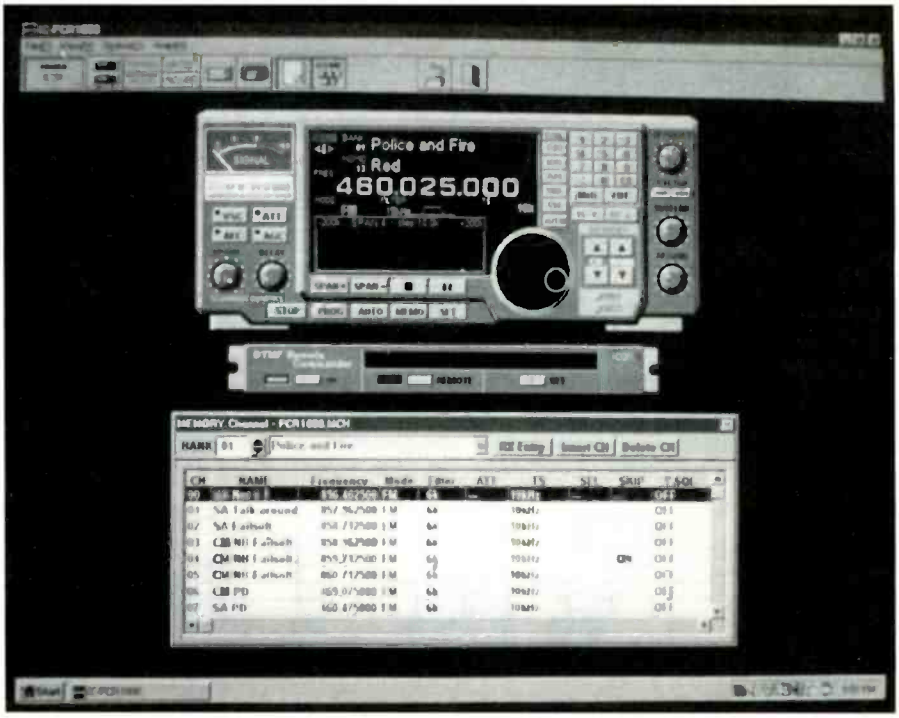
The Kachina radio system demonstrated at the Amateur Electronics Supply Superfest.



One of the ICOM IC PCR1000's screens.

During tests of the ICOM PCR1000, we found that all of our computers put out enough noise that the whip could easily intercept this noise and display it as spikes on the pan scope setting. It was like looking at a forest, and with only 12 feet of interconnection cable to the telescopic whip, there was no way of getting away from the noise. And while strong ham radio and commercial radio signals were able to overcome the forest of noise being radiated by the computer, and picked up by the nearby antenna, weak signals simply disappeared into the background noise forest.

So the solution to good reception with any one of the three radio/computer systems is an *external antenna system*. Also, good grounding techniques will help minimize noise pick-up. Coming up with an external antenna system that has the approximate resonance of the selected band you wish to receive will also make a big difference on what you see on your computer's radio screen.

All three manufacturers offer a ground connection point to their system. On the WiNRADiO system, where the card is on the inside of the computer, your ground is the computer's metal body.

We use ground foil to obtain a good radio frequency ground because it has low inductive reactance. Wires coming from your computer radio's black box just won't work. In fact, using wire as ground will actually *increase* the reception of computer-radiated noise. You want to channel that noise down to earth ground.

How It's Done

Two-inch wide or three-inch wide copper foil is the very best for a low-inductance ground. Copper foil is available from most hobby and ham radio stores. Copper plumber's tape also works quite nicely as a good ground conductor.

Grounding to the earth is good, but not necessarily the best. What you're looking for is a good surface area ground that has plenty of conductivity such as copper water pipes, metal window frames, or iron pipes.

You would not want to rely on your AC outlet for a good ground. For these radio computer systems to work best, the copper foil needs to go to something that's going to make a beeline down to wet soil. Many times you can use an aluminum rain down-spout as a great way to get down to earth ground.

I run the ground foil to both the external radio box, as well as to a metal connection on the back of the computer. I will sometimes unscrew a sheet metal screw, put a washer on it, and poke it through the ground foil, and then reattach it to the computer. On the radio box, there generally is a connection point where you will need to fold your ground foil over in order to get everything squeezed onto that chassis ground port.

Once you have achieved a good ground for both the computer and the radio box, your next step is to choose good coaxial cable. If you plan to monitor just the low bands below 30 MHz with your computer radio setup, 50 feet of RG58AU coax cable is OK, although RG8X cable is preferred. But below 30 MHz, you don't need to use garden hose-sized RG8 cable. Choose about 50 feet of cable because you don't want your antenna closer than 50 feet to any computer. And this includes your neighbor's computer, too!

If you plan to scan the VHF and UHF bands, then choose top quality RG8U coax cable, such as low-loss land-mobile radio (LMR) cable or Belden 9913. These cables can terminate with a regular PL-259. The better the cable, the better the outside braid and foil wrap. This minimizes the intrusion of noise from the computer that is sitting within a foot of where the cable terminates to your radio box.

If you're planning on running your system on UHF or listening up at 860 MHz, don't even consider running RG58 or RG8X cable. This pencil-sized cable is

simply inadequate for VHF and UHF reception. By the time a UHF signal makes it down 50 feet of the small cable, it's just about had it. Go with the big cable, and struggle like we all do to get it routed so it ultimately goes to an antenna system way up, and in the clear.

You can buy adapters that will convert the PL-259 down to a BNC connector for the ICOM PCR1000 black box. On the Kachina, you're going into a regular SO-239 receptacle, so no special plug is needed; but check to make sure you've got the right adapters to fit your particular black box, whether it's internal or external.

Route the antenna coax cable as far away from the back of your computer as possible. Up at the other end of the coax, terminate to a suitable connector — probably a PL-259 — for the attachment to your antenna system. If you're just going to be scanning the VHF and UHF bands, go with a triple-band antenna from some of the ham antenna manufacturers like Comet, Valor, Diamond, Cushcraft, Larsen, HyGain, and the like. Although the ham antenna might be resonant on 146 MHz, 440 MHz, and 1270 MHz, it will generally work well from 100 MHz through 1500 MHz. If you plan to scan from 30 MHz on up, choose a ham antenna that may include the 6-meter, 50 to 54-MHz, band, which gets you down to the VHF low-band range.

Other Antenna Ideas

There are also some terrific scanner antennas available which are multi-resonant on many different popular scanner frequencies on VHF and UHF. Check out our advertisers throughout *Pop'Comm* for ideas.

The best part of these resonant antenna systems is their isolation capabilities to keep the coax cable "cold." In other words, the braid is not part of the active antenna, and generally won't pick up the noise from the computer down below.

On high frequency, a dipole is a terrific way to pull in long-range skywave signals, but the dipole must be run in an area where it is clear of your computer and any other nearby computers. Keep in mind that the average home computer will radiate noise approximately 25 feet away down on high frequencies. Laptops are a little better, but still you need to keep your distance from the antenna to that turned-on laptop. The further that you can get your high-frequency or VHF/UHF antenna away from any computer, the better!

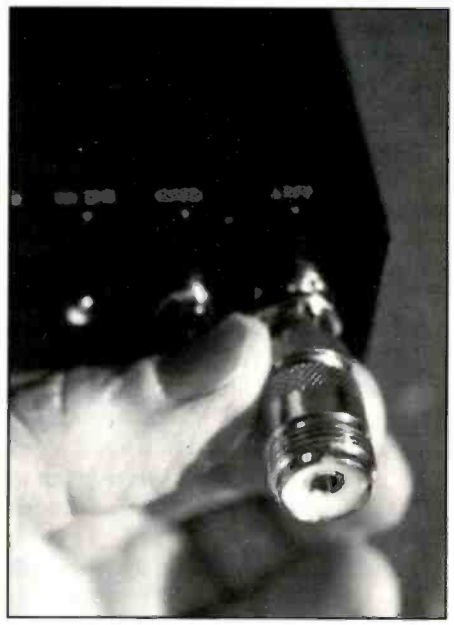
I recently tested dipoles from Alpha Delta Communications, and they were terrific on shortwave frequencies. In fact, the Alpha Delta DX-Ultra dipole worked very well with our ICOM from the AM broadcast band through 30 MHz. It also worked on VHF and UHF, but not as well as our Comet and Diamond white fiberglass, triple-band collinear antennas.

Alpha Delta also manufactures low-band dipoles with high impedance traps to peak performance on specific shortwave bands. They also have an extremely compact dipole to help pull in shortwave signals without being so long that it begins to pull in noise from neighbor's computers. Call Alpha Delta at 606-598-2029 for their communications catalog of antennas specifically designed for the new generation receivers that may be tied into computers.

When comparing an external dipole antenna to the supplied ICOM whip, it was like night and day. On a scale of 1 to 10, I would rate worldwide reception capabilities with a little tiny telescopic whip as a 1. Up on VHF and UHF frequencies, the performance is marginally better, but we saw a lot of noise pick-up from the supplied cable to the whip.

When we switched over from the supplied little ICOM whip to an outside Alpha Delta shortwave receiving antenna, performance was incredible. Our computer, aged and slow as it was, popped to life, and I was fascinated with all of the things it could do with any mode on the high-frequency band.

I then switched the ICOM 1000 up to VHF and UHF, plus I switched from the dipole, over to some triple-band Comet and Diamond roof-mounted whips. Immediately our VHF and UHF reception boomed in. There was no sign of intermodulation, and the signal quality on distant repeaters was just as clear as a dedicated base station ham transceiver. And you really *could* see and hear the difference when you removed the ground foil from the tail of the radio box and computer. Grounding works!



The BNC to SO-239 connection on the ICOM unit.

So if you're considering an ICOM, WiNRADiO, or Kachina computer radio system, plan your antenna and grounding method carefully. Just think of your computer as a little RF noise generating source that radiates out to about 25 feet, use a more distant antenna system with top-quality coaxial cable, and you'll get outstanding reception! ■

ScanTech

TRUNKING, TIPS, TECHNIQUES, AND MODS

BY KEN REISS
<armadillo1@aol.com>

Take Advantage Of The PRO-64 And 2041

Once in a while a gem slips by, and you just don't notice it right away, and so nobody thinks you're interested. Those of us with busy schedules probably know this feeling all too well. That's the feeling I have about the RadioShack PRO-64 and its base cousin, the PRO-2041.

RadioShack introduced these scanners without much fanfare. When they were first released, there was some enthusiasm based on the fact that the manual mentioned a computer interface, but there were no details. Even though my local manager spent over an hour on the phone, no details could be found regarding the computer interface.

Slowly, third parties added support for the radio. The computer interface allowed upload only. You could transfer data from the computer to the radio, but not the other way around. Still, it does make programming a much less daunting task.

But, in the meantime, what a radio! As I've started using the 64 in my car, and to some extent the 2041 in the house, they really perform quite well for themselves. It's a 400-channel, triple-conversion design that really stands up. Yes, it would be nice to have CTCSS or DCS as an option, but they're not available on many other radios either. However, as a handheld scanner in particular, the 64 performs quite well in a variety of circumstances.

And the priority function is like none I've ever seen. Instead of a channel in each bank designated a priority channel, there is a separate bank of 10 channels for priority, which means that *they are completely independent of the regular scan* contents as you turn banks on and off. I've loaded the fire department channels into priority and can let them run all the time, regardless of which public safety banks I have turned on. It really is a nice feature.

One slight disadvantage to this system is that the radio only checks one of the priority channels every 1.5 to 2 seconds, which means that it can take 15 to 20 seconds for the priority bank to cycle through if it's full, and you can miss a few things in that time span. However, it's not a serious limitation if you keep that in mind and program channels accordingly.

Making The Connection

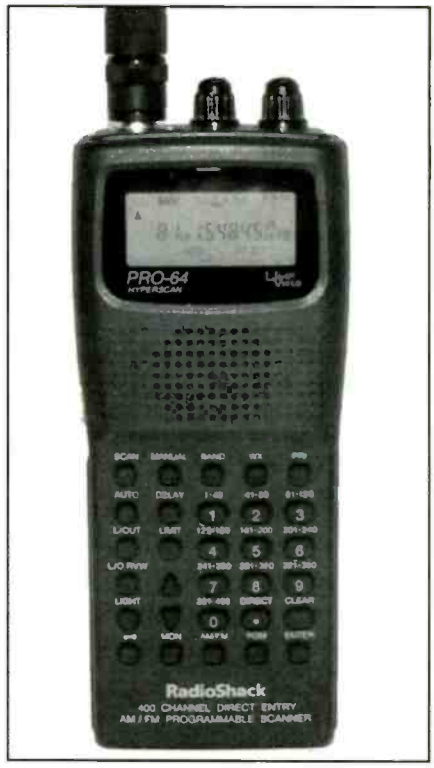
To make the computer-to-radio connection you'll need two things: an unused serial port and a cable. Radio Manager for Windows, available as shareware at <http://www.interplaza.com/bensware>, includes plans in the help screen for building a cable from parts easily available at RadioShack. It's not difficult, but it does take a few minutes to wire together. Other manufacturers also provide ready made cables if you don't care to make your own.

Currently, there are several good programs available that support the download function on the 64 and 2041. (The radios are functionally identical, so if software supports one, it will support the other as well.) Radio Manager and John Montalbano's Programmit software are the cheapest, available as shareware from the Internet. John's is available from <http:/www.qsl.net/ka2pyj>.

RadioShack sells an interface kit for the PRO-64/2041 for $129. This item is still available from two sources. One is the RadioShack special order service, RSU. The other is Computer Aided Technologies (phone: 318-687-4444).

The RadioShack interface is really ScanCat Gold for Windows with an appropriate cable already built. It's a nice way to get the software and hardware all at once. The version of ScanCat that ships in the RadioShack package is a complete version of ScanCat that will also control a number of other radios, including Optoscan units for RadioShack scanners, many ICOM radios, most AOR products, some Yaesu products, and a few others.

For ease of use, ScanCat does fairly well for the PRO-64/2041. The fact of the matter is that with these radios, since they only support upload of the frequencies from the computer to the radio, you'll be using very little of ScanCat's capabilities. On the other hand, because it's the full version of ScanCat, it comes with a lot of utility functions for importing data



The handheld PRO-64 is the first RadioShack scanner offered with a computer interface, although it was a well-kept secret. The interface only supports downloading frequencies, but that function alone is a real timesaver!

The unique priority system on the PRO-64 and 2041 allocates a special priority bank of 10 channels. This allows for priority channels in use to be consistent, no matter what banks you're scanning, but also takes some time to cycle through the entire bank.

What Are These Groups Used For?

9232 Mode 1
9264 Mode 2
9296 Mode 3
9328 Mode 4
9360 Mode 5
9392 Mode 6
9424 Mode 7
9456 Mode 8
9488 Mode 9
9520 Mode 10
9552 Mode 11
9584 Mode 12
9616 Mode 13
9648 Mode 14
9680 Mode 15
9712 Mode 16 Records

9744 ?
9776 ?
9872 ?
9904 ?
12336 Folsom PD Main Dispatch
12368 Folsom PD Records
12400 Folsom PD Tac 1 Car to car
12432 Folsom PD Tac 2 Car to car
12464 Use unknown
12496 Folsom Fire
12528 Folsom Fire Tac 1
17456 Park Rangers
17488 Park Rangers Main
17552 Park Rangers Tac 2
17583 Park Rangers Tac 3

Somewhere out there is Citrus Heights PD, DOJ and Galt PD. If you can add new insight please feel free to contact Gary at <shepcrest@aol.com>.

Table 1

from almost anywhere, and you can trade files with other ScanCat users. Further information is available at <http://www.scancat.com>.

Once you have a computer/radio connection, it only provides one function: downloading frequencies to the radio. There isn't a facility to upload the data from the radio. However, once you've gotten used to being able to reprogram the radio in a matter of a few minutes, you won't want to go back to punching frequencies into a scanner keyboard. It makes reprogramming very quick and easy — easy enough that you won't mind doing it for special events or other opportunities that come up.

RadioShack has discontinued these radios as of this writing, but they can still be found in limited quantities at particular stores, but you'll have to look hard. I think you'll find it worth the search if you can find one, even without the computer connection, they make triple-conversion, 400-channel radio, and the sale prices are excellent. One can only hope that something equal or better is in the wings!

Letters

John Clark from Arkansas writes in with these thoughts after reading our review of the PCR-1000. He says, "I have an ICOM PCR-1000 coming in the mail. To run it, I've ordered a new computer — 300-MHz Pentium II MMX, 128 Mbytes of RAM, 24x CD ROM, 2x CD rewriter, two 5.1-Gb hard drives, and a bunch of other goodies just to keep up with the radio. Reading your articles is getting expensive."

Sounds like a nice system, John. I'm sure you'll enjoy the PCR-1000. I can't feel too bad for you regarding reading the articles. My wife says that writing them is fairly costly, too.

From Gary Webbenhurst comes this information on Sacramento County's (California) trunked system (see Tables 1 and 2). Can anyone help Gary fill in some of the missing IDs or agencies?

The city and county fire departments are all on the new 800-MHz system. Each has 16 talkgroups (channels). All handheld and mobile radios are therefore 16-channel. The county fire departments use A1-A16 in Mode A and Sacramento city fire uses B1-B16 in Mode B.

Your Input Needed

We're always looking for info on the trunked system near you. If you've got insight, questions, comments or wisdom, please feel free to drop me a line at 9051 Watson Road #309, St. Louis, MO 63126, or E-mail at <armadillo1@aol.com>. ■

The PRO-64/2041 Cable

The cable required to connect your PRO-64 or 2041 to the computer is relatively simple to build. In fact, it can be done without soldering anything if you are so inclined, and don't mind sacrificing a couple of other cables in the process.

What's needed is a stereo mini plug at one end (that goes into the radio's earphone jack) and a serial connector at the other end for the computer. Most folks have a DB-9 connector here, so that's the one we'll use. You can't purchase the exact cable you need pre-configured, but you can buy cables with those connections at each end. Simply cut them in half and make the appropriate cross connections. Be sure not to cross the wires. You'll need an ohm meter or continuity tester of some sort to see which wire goes to what connection at the other end. Of course a cleaner job can be done with a little solder if you aren't afraid of that process.

The Connections

DB-9 Mini Plug
Pin 2 Tip
Pin 3 Ring
Pin 5 Sleeve

In addition, the actual spec calls for a 1000-ohm resistor between pins 2 and 3, but I have not found this necessary for operation. Several manufacturers, including RadioShack, offer a complete cable already built if you prefer not to roll your own.

The PRO-2041 base unit is functionally identical to the handheld. Both receivers are triple conversion design and are relatively free of unwanted signals. The 2041 front panel is almost identical in size to the older 2006, although the cabinet is not quite as deep.

Sacramento County (California) Trunked System

2608	A1	Fire Dispatching for Sacramento County
2640	A2	Responding unit checkback and more info
2672	A3	Additional dispatch (rarely used)
2704	A4	Additional dispatch (rarely used)
2736	A5	Additional dispatch (rarely used)
2768	A6	Tac 6 (first tactical channel assigned)
2800	A7	Tac 7 (second tactical channel assigned)
2832	A8	Tac 8
2864	A9	Tac 9
2896	A10	Tac 10
2928	A11	Tac 11
2960	A12	Tac 12
2992	A13	County Fire Administration
3024	A14	County Fire Prevention
3056	A15	County Arson Investigators (scrambled?)
3088	A16	General Alarm All Mode A radios A1-A16

Note: All "A" Group radios will receive alerts

3120	B1	Fire Dispatching for the City of Sacramento
3152	B2	Units responding, check back & more info
3184	B3	Additional dispatch channel rarely used at this point
3216	B4	Additional Dispatch
3248	B5	Additional Dispatch
3280	B6	City Fire Tac 6 (first channel assigned)
3312	B7	City Fire Tac 7 (second tactical assigned)
3344	B8	City Fire Tac 8
3376	B9	City Fire Tac 9
3408	B10	City Fire Tac 10
3440	B11	Administrative matters
3472	B12	City Fire Reserves & Volunteers
3504	B13	
3536	B14	City Fire Prevention
3568	B15	City Arson Investigators
3600	B16	All call B1-B16 Mode "B" Announce Group

Hospital/Paramedic System

5168	Hospital Command Net
5200	Hospital Tactical Net?
5232	Paramedics to Kaiser North
5264	Paramedics to Kaiser Roseville
5296	Paramedics to Kaiser South
5328	Paramedics to American River Hosp
5360	Paramedics to Mercy General
5392	Paramedics to Mercy Folsom
5424	Paramedics to Methodist
5456	Paramedics to Mercy San Juan
5488	Paramedics to Roseville Community
5520	Paramedics to Sutter General
5552	Paramedics to Sutter Memorial
5584	Paramedics to hospital UCDMC ALS
5616	Paramedics to UCDMC BLS
5648	Paramedic Car to car? Tactical?

Note: The Sacramento Sheriff's Department also uses an A & B configuration. Most action is on A with the 16 channel alignment as follows:

8208	Mode 1 Dispatch for districts 1 & 4
8240	Mode 2 Dispatch for districts 3 & -2
8272	Mode 3 Dispatch for districts 5, 6, and 7
8304	Mode 4 "Central"
8336	Mode 5 Sheriffs working at Sac Int'l Airport
8368	Mode 6
8400	Mode 7
8432	Mode 8
8464	Mode 9
8496	Mode 10
8528	Mode 11
8560	Mode 12
8592	Mode 13
8624	Mode 14
8656	Mode 15
8688	Mode 16

The second Mode B is not so simple

8720	Mode 1
8752	Mode 2
8784	Mode 3
8816	Mode 4
8848	Mode 5 Detectives and bomb squad
8880	Mode 6
8912	Mode 7
8944	Mode 8
8976	Mode 9 Detectives
9008	Mode 10 Ops South
9040	Mode 11
9072	Mode 12 Detectives
9104	Mode 13
9136	Mode 14 SHARP Ops
9168	Mode 15
9200	Mode 16

Note: Some talkgroups are simplex and not area repeater pairs. Your Bearcat Trunktracker™ will still follow them according to their talk group IDs, but you probably won't hear them unless you are close to the officers using simplex talkgroups.

What are these other talkgroups used for? Keep in mind that some of these talkgroups are to be used for training, or by special operations that rarely use the radio. Undoubtedly many talk group assignments are for "future expansion." To further complicate everything, some radios can be programmed with unique combinations, Any ideas or new info?

Table 2

How I Got Started

Congratulations To Boris Chuistov Of The Ukraine!

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.

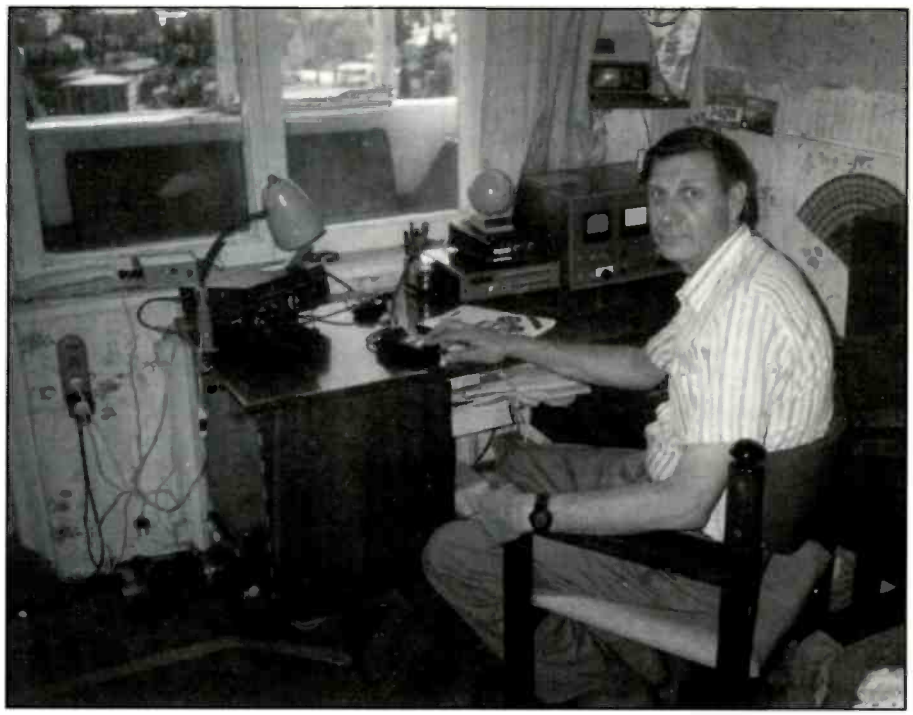
Each month, we'll select one entry and publish it here. Submit your entry only once; we'll keep it on file. All submissions become the property of *Popular Communications*, and none will be acknowledged or returned. Entries will be selected taking into consideration the story they relate, and if it is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

Our August Winner

Pop'Comm reader Boris Chuistov, UU5JK, of Yalta, Crimea, Ukraine, says he discovered *Pop'Comm* when an American friend gave him a copy of our magazine. He writes, "I heard 'miracles' at 14 years old when my grandmother — my father was lost in Stalin's camp — presented me with a LW/MW tube-type receiver. We lived in South Russia, and I could listen to Turkey and the Middle East. The country was destroyed by Germans after World War II, and then surrounded by the Iron Curtain. So it was really a 'miracle' for me to listen to the voices from abroad.

It became my grand hobby for my entire life! My second receiver was an American BC 312 at our Radio Club station. It was a wonderful HF receiver. Now I listen to the world with a Sony ICF-2001, and an ICOM 726 transceiver. I'm chief of the Yalta Radio Club, and have amateur license UU5JK. I'd like to contact any American amateur; all letters will be answered. My address is Boris Chuistov, P.O. Box 20, Yalta, Crimea, 334200, Ukraine." ■



Here's Pop'Comm *reader Boris Chuistov, UU5JK at his monitoring post in the Ukraine, and his unique QSL card.*

Scanning The Globe

BY CHUCK GYSI, N2DUP
<SCAN911@aol.com>

MONITORING THE 30- TO 900-MHz "ACTION" BANDS

Summer Scanning Tips, Plus Emergency Scanning

In case the temperature hasn't been enough of a clue for you, we're right in the thick of a hot prime scanning season. The summer is probably the best time for scanning action. There's nothing like listening to urban police departments on a hot summer night as officers hop from one call to another.

Not only do routine police channels become active, but those frequencies associated with summertime activities also come to life. For instance, if you live near an amusement or theme park, you can hear all the action as park patrons crowd through the admission gates during nice summer days. Likewise, park rangers in city, county, state, and federal park areas become busy controlling crowds and troublemakers on hot summer days. So, use the search function on your scanner and search out those channels that may only be active during the "outside" summer and early fall months. And, if you like listening to business or special emergency frequencies, here's a tip: school buses don't use these channels during the summer months, so you may find new users on these frequencies.

This photo of the remains of the A.P. Murrah Federal Building in Oklahoma City is forever etched in our minds. But should disaster strike your community, as a monitor, are you prepared?

Preparing For The Worst

Terrorist actions occur all too often these days. Are you prepared for scanning activity should such an incident strike your community or city? Any unfortunate major emergency situation will offer an intense listening experience for many scanner hobbyists in the surrounding region. In fact, depending on the severity of the incident, scanner listeners may be able to tune in communications from a variety of services, ranging from police and fire rescue operations, to temporary radio systems brought in by federal agencies such as the Federal Emergency Management Agency and the FBI.

For many, there could be new frequencies to find every day. In a blast, if you don't find salvage operations on business or General Mobile Radio Service frequencies, there certainly are news media operations to scan in the 161-, 450-, and 455-MHz bands.

What any incident should teach each monitor, though, is that the hobby should not be taken for granted. I'm sure most scanner hobbyists who have monitored a major emergency in their community will tell you that their scanners provided them with a lifeline during the crisis. Radios carry information instantaneously — especially desirable when friends, family, and loved ones might be involved.

The question, however, is how many scanner enthusiasts are prepared to monitor what could become the news story of the year in their very own community. Look around you. Do aircraft fly over your community? Is there a large chemical plant nearby? Are there naturally occurring hazards that can strike your community? Any natural hazard, such as a tornado, hurricane, or volcano, can become a disaster at any time.

Perhaps the real question is just *when* disaster will strike. How many monitors in the Oklahoma City area ever would have calculated that the bombing of a public building would be a hazard in their community? Probably none. But it all points in one direction: hobbyists need to be prepared to listen to the "big event" should it occur near their homes.

How do you prepare to monitor an event that may last for days or weeks? How do you anticipate what frequencies may be used during a major emergency? With the availability these days of scanners that can be programmed with hundreds, or even thousands, of frequencies and even with 800-MHz trunked systems, it shouldn't be too hard to load up one of these receivers with frequencies that are not only used on a daily basis, but also with others that may become active only when necessary.

Sure, you may not want to monitor public works frequencies on a daily basis, but when all city units get pressed into ser-

A fleet of FEMA emergency communication vehicles prepares to depart the airport. (Photo courtesy FEMA)

vice for a major emergency, you'll want to monitor just about everything. The trick is to program every frequency you think of that might become active so you don't miss the action. Make it easy to access these channels, too, if you aren't monitoring them on a daily basis. Lock out the channels or banks containing these frequencies. And if you don't have a scanner capable of handling hundreds of channels, at least make a list, either on a computer or in a notebook, of all the frequencies you'll need.

And don't forget frequencies in other services that might become active. For instance, you can bet that during a major emergency, frequencies such as 151.625, an itinerant business channel, or 156.800, VHF marine Channel 16 for calling an emergency, might become active with emergency-related communications. If contractors bring in heavy machinery, special industrial frequencies might be pressed into service. If city buses are used to transport emergency personnel, you'll also find activity on the bus frequencies. The trick with crisis communications monitoring is that you can never rule out any frequency coming into use.

Do It Yourself

Ken, from Ken's Electronics in Michigan, wrote saying he thought we might be interested in mentioning his *Orange Book of Scanner Repair* for hobbyists who want to learn how to fix their own scanners. The guide has repair notes on several hundred models of scanners that his business has fixed for local customers — he quickly notes that he does not do mail-order repairs anymore, as he's quite busy.

Readers can get more information about the guide on the World Wide Web at <http://www.kenselectronics.com/books/orangebook.html>. The *Orange Book* sells for $25 plus $3 postage and handling, which, as many of you know, is considerably less than most places charge for an estimate, let alone repairs. Ken's business also accepts Visa, Mastercard, and Discover cards for immediate order processing, or customers can send a money order to: Ken's Electronics, 2825 Lake St., Kalamazoo, Michigan 49001. Phone: 616-345-4609; e-mail: <ken@kenselectronics.com>.

On The Rails

Phil Starks, KBØFFW, of St. Charles, Missouri, writes in to say he just finished reading this column in the June issue of *Pop'Comm* and was surprised to see how long it was that month. He sent E-mail to pass along some railroad frequencies for the Burlington Northern Santa Fe Railroad, of which he is 43-year veteran. Here's his list: 161.100, Lindenwood Yard, St. Louis, Missouri; 161.160, Springfield, Missouri, Division; 161.410, Galesburg Division; 161.130, radiotelephone; and 160.665, radiotelephone.

Phil says he also works part time for Wal-Mart and would like to know the fre-

quencies used by the truck drivers going to various stores, and to the home office in Bentonville, Arkansas, as well as for the walkie-talkies used by management inside the stores. He says he started scanning about 35 years ago on an analog type scanner, graduated to RadioShack crystal receivers, and now uses a Bearcat 800XLT. He adds that this column is the first one that he reads each month, followed by "The Ham Column" because he's a ham with a General class license.

Ken, Wal-Mart stores typically use VHF or UHF business band frequencies. I've found several stores using 154.570. Search out the frequencies and you'll soon find them. The truckers, however, probably aren't using anything other than cellular phones or satellite uplinks for in-truck communications.

Buffalo Update

Mike Breier of Buffalo, New York, sent E-mail to let us know that NOAA will be broadcasting on a new frequency of 162.425 MHz in the Buffalo area. He learned of the frequency while monitoring 162.550 MHz. He says he hasn't monitored the new frequency yet, but promises to keep us updated.

In addition, Mike said that after reading this column in the January issue, he's done a lot of looking for frequency information for the United States and Canada. He offers a Web address for U.S. and Canadian frequency information: <http://www.panix.com/clay/scanning>. He says it's a great site for the scanner monitor.

News Chatter

Bill Paysen of Las Vegas, Nevada, says he'd like to monitor news media communications between TV studios and reporters. But he's not quite sure where to find these communications.

Actually, they're quite easy to find, if they're using the frequencies designated for them. Remote pickup broadcast frequencies typically used by TV and radio stations are in the 161.640 to 161.760, 450 to 451 and 455 to 456-MHz bands. In addition, 166.250 and 170.150 are used similarly outside a 150-mile radius of New York City, where the two frequencies are used for fire departments.

You'll hear cuing, paging, helicopters, reporters, technical crews, and more on these frequencies. However, in some areas, the news media actually may use business or trunked systems. I've found some use of business repeaters in the 461 to 465-MHz band, as well as several stations that use 800-MHz trunked business shared systems. In addition, almost all news gathering operations use cellular phones these days, so it's likely you'll be missing out on some action that's going on over cellular channels. Tune in and see where you can find your news while it's still fresh.

Down Under Phones

Kev from Australia sent along an E-mail with his comments on wireless phones. He says:

I've been reading with interest the problems you have with the banning of the mobile phone monitoring, and wonder why the U.S. government doesn't do what they have done here, and force all mobile phones to digital systems. Then there won't be any problems with us grubby little "electronic stalkers." Also, this way the cost of digital phones will come down, as they have here. All mobiles will be digital by 2000 and phasing out the old analog system will be complete. Just after that, no more problems. Easy! And we still can get full-coverage scanners.

Sounds smart to me. Government doesn't always think smartly, though.

Write In

What are your favorite frequencies? Do you have any scanner-related questions? Do you have any listening tips worth passing along to your fellow readers? How about sending in a photo of your listening post or antenna farm? Write to: Chuck Gysi, N2DUP, "Scanning the Globe," *Popular Communications*, Box 11, Iowa City, Iowa 52244-0011, fax to 516-681-2926, or E-mail to <SCAN911@aol.com>. Make sure you indicate in your E-mail that you are writing regarding this column. ■

Clandestine Communiqué

BY GERRY L. DEXTER

TUNING IN TO ANTI-GOVERNMENT RADIO

From The Middle East To Africa And Asia, Clandestine Activity Abounds!

Let's peek down a few back alleys and find out what's happening in the dark world of clandestine radio these days!

Radio Patria Libre, the anti-government station in the mountains of Colombia continues its somewhat sporadic activity, generally operating in the area around **6250** but, unfortunately, signing off around 2300, which makes reception more difficult as our daylight hours lengthen.

The Supreme Council for the Islamic Revolution in Iraq (SCIRC) operates the **Voice of Rebellious Iraq**. The schedule (more or less) is 0330 to 0530 on **6195, 7115, 7295, 7295, and 9610**. SCIRC is a Shi'i Moslem group supported by the Iranian government, which is where the broadcasts probably originate. The group's address is P.O. Box 11365/738, Tehran, Iran. As with all reports to clandestine stations, it's a good idea to use the organization's name in the address rather than that of the station.

There are currently three clandestines aiming words at the Eritrean government, all of them operating on **9230. The Voice of Democratic Eritrea—Voice of the Eritrean Liberation Front Revolutionary Council** is on the air in Arabic and the Tigrigna language from 1500 to 1530. The address is ELFRC, P.O. Box 2000434, Bonn, Germany. **The Voice of Free Eritrea** is the station of the Eritrean National Alliance, which includes several groups hostile to the Eritrean government. It's on from 1530 to 1600 in Arabic and Tigrigna. The third station is the **Voice of Truth,** which speaks for the Eritrean Islamic Jihad Movement. It's on (in the same two languages) from 1600 to 1630. The transmitter carrying all these "stations" is believed to be located in the Sudan.

The Voice of Oromo Liberation is the official voice of the Oromo Liberation Front which opposes the Ethiopian government. It operates on **9980** on Mondays, Wednesdays, and Saturdays from 1700 to 1800, and is believed to broadcast via transmitters in the Ukraine.

Another part of Ethiopia's clandestine scene is the **Voice of the Revolution of Tigray.** This one broadcasts on **5500 and 6315** from 0400 to 0500 Monday to Friday (Sundays until 0800). It's also on those frequencies Monday through Friday from 0930 to 1030 and from 1500 to 1600 Saturdays and Sundays.

Sudan, in turn, is also the target for clandestine broadcasting. **The Voice of Sudan** operates on **8000** (sometimes a hair higher or lower) until sign off at 1800. Also used is **9025**. Jill Dybka in Tennessee has heard this one in Arabic on 8000 (and parallel 9025) at 0414 with a presumed political speech. Another supposedly active frequency **(12008)** was not heard. The 0400 to 0600 part of the schedule is being quite widely heard.

Multiple clandestine signals also target the government of Nigeria, although the status of one of them seems a bit shaky at the moment. **Radio New Nigeria** was operating on weekends only (Saturdays at 0100 to 0129 on **5905**, 0600 to 0629 on **11670** Sundays at 1500 to 1529 on **6175**), but may currently be off the air.

The Voice of Free Nigeria, believed to be transmitted from Germany, is active on **11645** from 1900 to 2000 Saturdays. A third station, **Radio Kuridat**, operates on **6205** from 1900 until just past 2000. Still another one is **Radio Nadeco**, which airs on U.S. commercial broadcaster WWCR at 0600 on **5070.**

The Democratic Voice of Burma, aired via transmitters in Germany, operates from 1245 to 1315 on **15330,** and via Norway from 1430 to 1500 on **11850**. Much of the material aired on the Democratic Voice of Burma is gathered by a group with members in the All Burma Students Democratic Front. The reporters work out of a guerrilla camp in the jungle on the Thailand side of the Salween River. In addition to news reports, they also put on dramas and educational programming. The Democratic Voice of Burma is supported by the government of Norway. They issue a very attractive QSL card for correct reports and can be reached at P.O. Box 6720, St. Olavs Plass, N-0130 Oslo, Norway.

The Voice of Tibet is now broadcast at 1225 to 1255 on **7400.** It is also supported by, and aired from, Norway. The address for this one is Wellhavensgat 1, N-0166, Oslo. **The Voice of Palestine** is aired over Iranian government transmitters and is currently scheduled at 1930 to 2030 on **7190**.

The Democratic Voice of Iran is on the air from 1830 to 1900 UTC daily and claims not to be connected with any particular political group or religion. The frequencies used include **5835 and 6210**. There are two known addresses for this one: Box 555, 11479 Stockholm, Sweden and BCM Box 5842, London, WC1N 3XX, England.

Jill Dybka in Tennessee reports logging **VORGAN (Voice of the Resistance of the Black Cockerel)** to 0103 sign off on 6220 (check **6225**, too.) This is the (now) semi-clandestine which has been the radio voice of the UNITA opposition for many years and, for the last couple of years, has been moving toward the status of becoming a legitimate, licensed broadcaster. It's been a long, tortuous process, however, and lately there's been increased pressure from the Angolan and U.S. government, as well as the UN, to "get with the program." It's likely that VORGAN, as we know it, will close down sooner or later, and will probably become a local FM station. The bottom line: if you haven't logged this one yet, you'd better have a go at it while it still exists.

Remember, your information on clandestine broadcasting subjects is always wanted and appreciated. This includes loggings, addresses, QSL information, station schedules, news clippings, information about the groups which sponsor such stations and such. Some of you prefer not to be mentioned, but you know who you are. Thanks to everyone for the continued support. ■

CB Scene

27-MHz COMMUNICATIONS ACTIVITIES

BY JOCK ELLIOTT, SSB-734
<lightkeeper@sprintmail.com>

The Readers Speak Out About Class-A Family Radio Service

The proposal in the June issue to create a Class-A Family Radio Service, which would include seven higher power channels, seven low power channels, and one General Mobile Radio Service repeater channel, has drawn more response than anything else in my tenure as "CB Scene" editor. I am impressed that most of the response was quite civil, with a couple of notable exceptions, even from the people who disagreed with the proposal.

Most, including Irene G. Bailey, like the idea. She wrote: "Saw your article in the June issue of *Popular Communications* about a Class-A Family Radio Service. I think it is a great idea. I vote yes."

Some offered interesting suggestions, including Bob Earl, KD6UIH, who said:

I am all for the proposed Class-A Family Radio Service. I have tried to get my son to study for a ham license, but he just is not interested. He sees me involved in the hobby in a big way and he doesn't want to go there. Neither one of us like the 11-meter CB band as it is today. We live 65 miles apart with a mountain range between us. However I will be moving out to that area in the not too distant future (retiring) and it would be nice to have a NICE clean means of communication between us. Until I move, it could be used mobile-to- base, mobile-to-mobile, etc.

I think 5 watts with the use of an external antenna would be fine. I think you should be able to use any size antenna as long as you do not exceed the 5 watts out at the transmitter. Maybe there could be some kind of sensing circuit in the transceiver so if an amp is put in line, the unit would shut down and not operate — something like the SWR protection in the brick amps I use on VHF/UHF. I don't know if this is possible, but if it is, then it could prevent the use of amps.

The mobile radios should be under $200 (street price) and base radios $250/$275 to be affordable. They should all have CTCSS encode/decode so that they can be monitored without having to listen to everything on the channel. This way you would only have to listen to your own family members or neighborhood group as you choose.

Here's another letter:

Your idea about establishing a Class-A Family Radio Service in conjunction with the FRS sounds good to me. I think there might be a slight technical problem, however.

When I first read about the FRS, when it was first proposed, it was mentioned that FRS radios were to be limited to a deviation of ±2.5 kHz. This would make FRS radios not very compatible with current GMRS equipment, as GMRS gear uses the 'standard' ±5-kHz deviation. Do FRS radios operate with ± 2.5- or with ± 5-kHz deviation?

You were exactly right in your article when you said 'In a very real sense, CB was never intended to be a hobby.' One of the biggest problems with CB is the 'ham-wannabe's' that seem to be so prevalent. It's extremely easy to get an amateur radio license; with it one can 'work skip' and 'run power' legally.

Bill, N9QLS

Bill, in answer to your question — yes, the FRS radios do indeed use the narrower deviation, but I haven't found any real problem talking between FRS and GMRS radios.

And reader Roy PB writes:

I agree with your concept of a Class-A Citizen's Band Radio Service, but disagree as to whether or not users or the FCC will be able to 'prevent the riffraff from raising hell . . .' I began my radio hobby about 23 years ago as an 8th grader with an interest in monitoring the police bands. From there I shortly moved on to CB (Class-D) and eventually into amateur radio. I've learned one thing: No matter what you do, there will always be a goof or two out there.

I'm sure you know that the identifying data burst is not a new concept. Many public safety agencies use them, and there is even an amateur repeater in the Chicago area (WA9VGI - "FishFAR") that requires it in order to gain access to the system. The problem with the data burst is that it can be pirated. At some point someone who knows enough about radio, and wants to violate the law, will. This is the same kind of thing going on with cloned cellular phones.

Without even going to the trouble of changing an ID, what's to stop someone from simply programming a radio to go to these frequencies — either a commercial radio, or one of the wideband ham radios?

I think your idea for a Class-A CB Service is a winner. I don't think it needs to be complicated by registered IDs and transfer forms. Who would be responsible for the administration of these forms? The FCC? The PRSG?

> ***"Neither one of us like the 11-meter CB band as it is today."***

Thanks for taking the time to hear my opinion. I really enjoy your column, and although I have a ham license, am still an active CBer.

And from Scott H. comes this letter:

I think your ideas about extending FRS into a serious communications service (June *Pop'Comm)* are excellent.

The restructuring you propose would preserve the low-power simplex channels, as well as allow slightly higher power for base-to-mobile contacts. Adding in the GMRS traveler assistance pair was a stroke of genius, as was the use of a digital burst ID string to deter 'agitating.' CTCSS would get rid of a lot of it, anyway, but having a unique identifier on each transmitter and registering it with the FCC would be a much stronger tool in catching and stopping troublemakers.

I'm glad to see that your proposal includes a reinstatement of licensing, as well as a way to positively track each radio. Now if we can only get the equipment manufacturers to get behind it and the FCC to administer and enforce it — we may at long last see the benefits promised so many years ago by the old Class-A CB Service. Keep up the good work and 73!"

Going A Step Further

And at least one reader wanted to go even further:

I read with interest your article in the June issue of *Pop'Comm*. I was heavy into CB radio back in the '70s during the time the 55-mph speed limit was imposed due to the Arab oil crisis. I would go one more step with this fix . . . make the manufacturing and sales of 11-meter CB rigs illegal after the year 2000. I know there would be a lot of eyebrows raised (REACT included!), but maybe the current dilemma on 11 meters would slowly fade away. I know the FCC has done little concerning enforcement, and I would suggest that

people contact their Senators and Representatives and urge them to get the FCC into the enforcement mode. I am a past president of Douglas County (Nebraska) REACT (now called Heartland REACT).

About 11 years ago, totally frustrated with 11 meters, my wife and I earned our amateur radio licenses. Notice the reference to 'earned.' The No-Code license has really opened the door to those wanting to get into amateur radio.

I don't agree with doing away with the code requirement for high frequency operation. Sure we have our problems, but the amateur radio service is self-policing, and there are few problems. I am also past president of the AK-SAR-BEN (Omaha) Amateur Radio Club, currently a member of the Amateur Auxiliary (Official Observer) and the ARRL Section Manager for Nebraska. Something has to be done, and since the FCC created this mess, they should be the ones to fix it. 73,

Bill McCollum, KEØXQ, Nebraska
ARRL Section Manager.

And Corwin Moore, head of the Personal Radio Steering Group, the national advocacy organization for personal licensees in the General Mobile Radio Service, wrote:

The primary deficiency with your proposal concerns how the personal spectrum might or could be PROTECTED. We have already seen in some areas that businesses and other commercial/governmental users have moved in and taken over many of the FRS channels. That usurpation was entirely expected! GMRS is protected from this usurpation by the licensing process, specifically by licensee eligibility and station operator eligibility. Until people address how control of the spectrum can be maintained — how users that should be elsewhere are kept off personal-use spectrum (there is clearly not enough spectrum in GMRS for both personal and commercial use, as plentifully demonstrated from history!) — then any proposal for change is fundamentally incomplete. If we don't recognize and prepare to counter the problems that history has so adequately demonstrated, then history will merely repeat itself.

And so how is personal/family-use spectrum going to be protected? I would welcome dialogue on how to keep personal and family communications protected from being blown away by users who have their own spectrum, and who should be located elsewhere. In the absence of constructive recommendations (other than trashing the spectrum, like happened with CB radio, and making it unusable for most non-frivolous communications), then any discussion of delicensing existing licensed services (like GMRS), or expanding unlicensed services (like FRS), simply fails to address reality.

The Opposition — And Vern's World

And some readers just hated the idea of a Class-A Family Radio Service.

I totally disagree with your ideas about increasing the power on the new Family Radio Service, and especially removable antennas. It will ruin a good thing quickly. If people want more power and more range, they can get their amateur radio licenses, but they would have to study and take a test to do that. How about just getting a GMRS license, that would do the trick.

Leave well enough alone.

Hector F. Nieves
Abilene, TX

Another reader wrote:

I read Jock's article the day I received my issue of *Popular Communications*. The next thing I did was look at the date of the magazine. I know it reads June 1998 BUT that must be a typo! It MUST be June 1988. The proposal for a low-powered personal service made available to the general public what a great idea from the '80s. To inform Jock, GMRS HAS just such a service. All one needs to do is fill out a license application and send in $70 and you are all set. No location information other than an address; no terrain information, just like the old CB; limited to 20-foot high antennas; 5 watts ERP and you are on seven itinerant GMRS channels — mobile or base with external antennas! . . . come on guys, have you been sleeping the past 10 years? Everything in Jock's article has been suggested by Corwin Moore of PRSG over 15 years ago! As for the manufacturers jumping in — they jumped out last year for this type of equipment! Where is Tom when we need him? *(Funny you ask. I just called Tom, a few minutes ago. He was too busy to talk 'cause he was having too much fun using his new FRS radios to stay in touch at the beach! And, as I expected, he reports no interference to those GMRS repeaters! — Editor)*

Vernon Reed, W9VCR

From still another reader:

I read the article in your May issue of *Pop'Comm*, proposing changes to FRS. I found this article rather disturbing. I oppose any changes to FRS as you propose.

FRS range is just fine for its intended purpose. FRS was NEVER intended as a hobby service. Your proposal will make it just that. FRS users do not want to talk to anyone other than the group we intend to communicate with. I don't need jokers out there breaking the channel to talk to me.

"I think your ideas about extending FRS into a serious communications service (June* Pop'Comm*) are excellent."

All in all, you have a very bad idea going. Leave the FRS users alone. You want FRS to become like 27 MHz. We went to FRS to get rid of the mess on CB. Do not turn our clean service into another mess like CB.

John L. Wilkerson Jr.
(Creator of newsgroups <alt.radio.family> and <us.misc.family.radio>)

Despite John's objections, I still think there is a need for a radio service that offers reliable short-range communications and the ability to summon roadside help at longer range, so I'll give the last word to Charlie, who writes:

This sounds like a super idea. I would be interested in a service like this. My wife and I used CB to communicate over short distances, but now the weirdos have taken over in our area.

I especially like the ident decode idea. If the power/antenna combo was sufficient to get out five or six miles it would be great. How do we get this idea rolling?

Charlie, WN3J, SSB-33Y

There's good news, Charlie. Bob Leef, who bounced around ideas with me and is a tireless worker for REACT and the Red Cross, has already filed a Petition for Rulemaking with the FCC for a Driver's Radio Service. It includes all 14 FRS channels (but limits power to 1/2 watt on all but a GMRS repeater pair), automatic transmitter identification, and a small ($5 licensing fee). It allows both mobile rigs with external antennas and handheld radios. While it differs from my proposal in a number of small ways, I support it. Stay tuned here to see what happens next.

To all who responded to the June column my heartfelt thanks. Keep those cards and letters coming! ■

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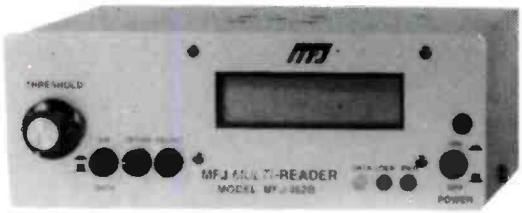

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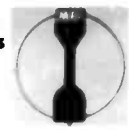

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MFJ-108B **$19.95** MFJ-105B **$19.95**

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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 device. Good to 500 MHz. 60 dB isolation at 30 MHz.

MFJ-1702B for 2 antennas.

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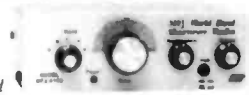

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Pop'Comm's World Band Tuning Tips

August 1998

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

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

UTC	Freq.	Station/Country	Notes
0000	2300	Caribbean Beacon, Anguilla	
0000	5055	RFO Guyane, French Guiana	FF
0000	6055	Radio Exterior de Espana, Spain via C. Rica	SS
0000	7375	Radio Bulgaria	
0000	7935	China National Radio	CC
0000	9705	Radio Mexico Int'l	SS
0000	9810	Radio Budapest, Hungary	
0000	9900	Radio Cairo, Egypt	AA
0000	11845	Radio Pyongyang, North Korea	
0000	17820	Voice of America, via Philippines	
0030	5950	Radio Vilnius, Lithuania, via Germany	
0030	5950	Radio Vilnius, Lithuania	SS
0030	6725	Radio Satelite, Peru	SSW
0030	7345	Radio Prague, Czech Republic	SS/EE
0030	7465	Radio Denmark, via Norway	DD
0030	9650	VOIRI, Iran	
0030	11915	VOIRI, Iran	
0030	11955	Radio Nacional, Angola	PP
0030	13695	Radio Thailand	
0045	9730	Sri Lanka Broadcasting Corp.	
0050	6010	RAI, Italy	
0100	4915	Radio Anhanguera, Brazil	PP
0100	5012	Radio Cristal, Dominican Republic	SS; variable
0100	5930	Radio Slovakia Int'l	
0100	5960	Deutsche Welle, Germany, via Canada	
0100	6200	Radio Prague, Czech Republic	
0100	9737	Radio Nacional, Paraguay	SS
0100	11710	RAE, Argentina	
0100	11785	Radio Guiaba, Brazil	PP
0100	15520	Voice of Russia	
0130	7145	Radio Ukraine Int'l	
0200	4885	Radio Clube do Para, Brazil	PP
0200	4940	Radio Amazonas, Venezuela	SS
0200	5018	Radio Horizonte, Peru	SS
0200	9475	Radio Cairo, Egypt	
0200	9585	Radio Globo, Brazil	PP
0200	11720	Radio Bulgaria	
0200	11815	Radio Brazil Central, Brazil	PP
0200	15170	Radio Tahiti	FF/TT
0200	15415	Radio Clube Ribeiro Preto, Brazil	PP
0230	6113	Radio Tirana, Albania	
0230	11735	All India Radio	
0230	15270	Radio Pilapinas, Philippines	EE/Filipino
0300	4835	Radio Tezulutlan, Guatemala	SS
0300	4980	Ecos del Torbes, Venezuela	SS
0300	6000	Radio Havana Cuba	
0300	6260	Voice of Greece	Greek/EE
0300	7200	Republic of Sudan Radio	AA
0300	9650	Radio Guineenne, Guinea	FF
0300	9745	HCJB, Ecuador	
0330	3210	Radio Exterior de Espana, Spain via C. Rica	SS
0330	4828	Zimbabwe Broadcasting Corporation	
0330	7115	Radio Sweden	
0330	7270	RAI, Italy	RR
0330	7500	Radio Moldova Int'l, via Romania	
0330	9820	Far East Broadcasting Assn., Seychelles	Various langs.
0330	11675	Radio Kuwait	AA
0358	5500	Voice of the Tigray Revolution (clandestine)	Tigray
0400	3320	Radio Sonder Grense, South Africa	Vern.
0400	4919	Radio Quito, Ecuador	SS
0400	6030	Radio Ukraine Int'l	
0400	6265	Zambia Nationala Broadcasting Corp	
0400	7110	Voice of Ethiopia	Amharic
0400	9730	China Radio Int'l, via French Guiana	
0400	9780	Republic of Yemen Radio	AA
0400	9905	Swiss Radio Int'l	
0400	11785	Radio Iraq Int'l	EE/AA
0430	3345	Radio Uganda	
0430	7415	Voice of America, via Botswana	
0430	9590	Radio Netherlands via Bonaire, Neth. Antilles	
0445	3290	Namibian Broadcasting Corp.	Vernacular
0500	3400	Star Radio, Liberia	
0500	4770	Radio Nigeria, Kaduna	Vern/EE
0500	4850	RTV Cameroon	FF
0500	5030	Adventist World Radio, Costa Rica	
0500	5077	Caracol Colombia	SS

0500	5470	Radio Veritas, Liberia	
0500	6065	Christian Voice, Zambia	
0500	7255	Voice of Nigeria	
0500	7520	Radio Bulgaria	
0500	7645	Kol Israel	
0500	9675	Channel Africa	Saturdays
0500	9830	Croatian Radio	Various langs.
0500	11900	Radio New Zealand	
0530	11900	Channel Africa	
0600	4800	XERTA, Mexico	SS, irregular
0600	5025	Radio Rebelde, Cuba	SS
0600	5047	RT Togolaise, Togo	FF
0600	7185	Croatian Radio	EE/others
0600	12005	RTV Tunisienne, Tunisia	AA
0630	4815	Radio Burkina, Burkina Faso	FF
0630	6015	Radio Austria Int'l, via Canada	
0630	6165	Swiss Radio Int'l	
0630	11805	Radio Georgia, Georgia Rep.	
0645	5840	Swiss Radio Int'l, via Germany	
0645	9685	Trans World Radio via Albania	
0700	4783	RTV Malienne, Mali	FF
0700	4832	Radio Reloj, Costa Rica	SS
0700	5100	Radio Liberia	
0700	6070	CFRX/CFRB, Canada	
0700	11625	Radio Norway Int'l	
0800	5865	HCJB, Ecuador	
0800	11880	Radio Australia	
0830	6130	Radio Vlaanderen Int'l, Belgium	
0830	6155	Radio Austria Int'l	
0900	3290	Radio Centro, Ambato, Ecuador	SS
0900	4890	NBC, Papua New Guinea	
0900	9580	Radio Australia	
0930	4875	Radio Roraima, Brazil	PP
0930	5949	Guyana Broadcasting Corp.	
0930	9700	Radio New Zealand	
0930	11635	Far East Broadcasting Corp., Philippines	
1000	4775	Radio Tarma, Tarma, Peru	SS variable
1000	6937	Yunan People's Bc Station, China	Various langs.
1000	9795	Radio New Zealand	
1030	4552	Radio Pattiti, Bolivia	SS
1100	3905	Radio New Ireland, PNG	Pidgin
1100	4887	Radio Vila Rica, Huancavelica, Peru	SS variable
1100	4900	Voice of the Strait, China	CC
1100	5020	Solomon Is. Broadcasting Corp.	
1100	6130	CKZN, St. John's, Newfoundland, Canada	
1100	6150	Radio Singapore Int'l	
1100	9385	KHBI, Saipan	
1100	9535	Swiss Radio Int'l	
1100	9865	Radio Sweden	
1100	11660	KCBS, North Korea	KK
1100	11760	Radio Republik Indonesia	II
1130	18950	Radio Denmark, via Norway	Danish
1200	15445	Radiobras, Brazil	
1200	17775	Radio Tashkent, Uzbekistan	
1200	17890	Radio Exterior de Espana, Spain	
1215	11402	Icelandic National Broadcasting Service	Icelandic
1230	9400	Radio Moldova Int'l	
1230	9760	Voice of America via Philippines	
1230	9810	Radio Thailand	
1230	9885	Radio Thailand	
1230	12020	Voice of Vietnam	EE, others
1300	11705	Radio Japan/NHK	JJ
1300	11745	Radio Taipei Int'l	CC;via WYFR
1300	13800	Radio Norway Int'l	NN/EE
1300	15125	Radio Republik Indonesia	II
1300	15390	Radio Romania Int'l	
1300	17745	Radio Romania Int'l	
1330	7145	Radio Thailand	
1330	9715	Radio Tashkent, Uzbekistan	
1330	9840	Voice of Vietnam	//12020
1330	11690	Radio Jordan	
1330	11735	Radio Finland Int'l	
1330	15240	Radio Sweden	
1400	11600	Far East Broadcasting Assn., Seychelles	
1400	12125	Voice of Hope via Georgia Rep.	EE, others
1400	13580	Radio Prague, Czech Republic	
1400	21645	Radio France Int'l	SS
1430	15615	Kol Israel	FF
1500	15395	UAE Radio, Dubai, UAE	
1500	21455	HCJB, Ecuador	USB mode
1500	21551	Radio Vision Cristina, Chile	various langs.
1530	9525	Radio Veritas, Philippines	various langs.
1600	11570	Radio Pakistan	
1600	17620	Radio France Int'l, via French Guiana	FF
1600	17710	RDP Portugal	PP, Saturdays
1630	13675	UAE Radio. Dubai, UAE	
1730	11680	Radio Vlaanderen Int'l, Belgium	
1730	15475	Africa Number One, Gabon	FF
1730	15570	Vatican Radio	
1800	9200	Republic of Sudan Radio	AA
1800	11625	Vatican Radio	unk lang.
1800	11990	Radio Kuwait	
1800	13780	All India Radio, Bangalore	
1800	17670	Radio New Zealand	
1800	17840	BBC via Canada	
1900	15120	Voice of Nigeria	various langs.
1930	9022	Voice of Islamic Republic of Iran	
1930	13750	AWR, Costa Rica	
2000	11715	Radio Algiers Int'l, Algeria	
2000	15160	Radio Algiers Int'l, Algeria	
2030	6285	Voice of Hope, via Georgia Republic	
2030	9770	UAE Radio Dubai, UAE	
2030	15476	LRA36, Argentine Antarctica	PP/SS; M-W-F
2100	9855	Radio Kuwait	AA
2100	9965	Voice of Armenia	
2100	11925	Radio Bandeirantes, Brazil	PP
2100	11935	Broadcasting Svc of Kingdom of Saudi Arabia	AA
2100	12085	Radio Damascus, Syria	EE/AA
2100	13630	Radio Japan/NHK	
2130	7210	Belarussian Radio, Belarus	GG
2130	9545	Deutsche Welle, Germany	GG
2130	9575	Radio Medi-Un, Morocco	FF
2130	11975	Voice of America via Sao Tome	
2200	9505	Radio Record, Brazil	PP
2200	9615	Radio Cultura, Brazil	PP
2200	9950	All India Radio	
2215	7105	Cyprus Broadcasting Corporation	weekends
2300	6135	Voice of Turkey	
2300	9725	Adventist World Radio, Costa Rica	
2300	9755	Radio Canada Int'l	
2330	6980	Radio For Peace Int'l, Costa Rica	
2330	9425	Voice of Greece	Greek/EE

BY HAROLD ORT AND R.L. SLATTERY

Product Parade

REVIEW OF NEW, INTERESTING AND USEFUL PRODUCTS

Scancat Fully Supports ICOM PCR1000

Computer Aided Technologies announces complete support for the newest addition to their scanner lineup: the PCR1000. Scancat-Gold for Windows is a state-of-the-art receiver-control software developed to control the new and revolutionary ICOM PCR1000 broadband receiver. Scancat controls all the conventional operations of the ICOM PCR1000, (scanning, logging, spectrum analysis, etc.) plus with support of over 45 radios, all in the one program. The new features include bandscope (up to 500 kHz), direct frequency readout by mouse control of the bandscope display, DSP support (notch filter and noise reduction), and IF shift control.

There are a multitude of features Scancat will add to your PCR1000 that aren't offered with OEM software, including faster scanning speed, sequential-multiple frequency range searches, scan entire disk files (without the 50-channel-per-bank limitation), and multiple "keyword" searches of disk files, and much more.

The Scancat-Gold for Windows "SE" is available for $159.95, and Scancat-Gold for Windows, $99.95. For additional information, contact Computer Aided Technologies at P.O. Box 18285, Shreveport, LA 71138 or call 888-722-6228 (or 318-687-2555 from 9 a.m. to 2 p.m. M-F). You can FAX them at 318-686-0449 or visit their Web site at <http://www.scancat.com>. Don't forget to tell Jim that *Pop'Comm* sent you!

Fifth Edition Of Australasian Shortwave Guide

The new 28-page *Australasian Shortwave Guide* features comprehensive schedules for the current transmission period for broadcasts in English beamed to Australia, New Zealand, Oceania, the Far East, Asia, and the Indian sub-continent, and in languages other than English for Australia, New Zealand, and Oceania. Nearly 600 entries are given, in alphabetical order with target areas, broadcast days and relay sites. The latest frequencies are also included.

The guide also features a time index: a convenient listing hour-by-hour and referenced to the main alphabetical data. And DXing Papua New Guinea, an in-depth study of broadcasting in the region, covering mediumwave, shortwave and VHF-FM with substantial background information on the languages, history, culture and geography of the area is included, along with current schedules.

There's much more in the new *Australasian Shortwave Guide* which is available outside Australia for $7 (U.S.) or 10 IRCs. Checks other than those drawn on Australian banks are not accepted. Payment can be made by money order, made out to "Bob Padula" and sent to 404

Mont Albert Road, Surrey Hills, Victoria 3127, Australia. Phone: +61 3 8908 2906 or E-mail Bob at <bpadula@compuserve.com>. Early ordering is recommended as there will not be a second printing of this guide. The next edition is planned for December, covering the winter-98 season.

Cobra Introduces New Line Of Six-Band Radar Detectors

Cobra Electronics' new radar detectors provide drivers with all four speed monitoring systems in use today (X, K, Ka, and Laser), plus the "detector detector" monitoring band and the Safety Alert Traffic Warning System band.

John Pohl, Vice President of Marketing for Cobra Electronics reports, "Our new line of six-band detectors offers the most comprehensive alert system in the industry."

The line begins with the ESD-6000 which offers consumers many key features found in the more advanced models, including visual and audio alerts for all six bands and three-level dim switch.

The ESD-6100 and 6200 both have Cobra's LaserEye™ 360-degree laser detection for multi-directional protection from increasingly popular laser guns, a Memo-Set function that memorizes dim, muting and city/highway, and a new auto mute system. The 6200 model also offers Voice Alert™ identifications of all six bands as well as operating settings.

The top-of-the-line ESD-6500 has all the features found in the other six-band detectors, plus high visibility text LED displays for each alert. These detectors, available in April, will carry suggested retail prices from $99.95 to $199.95.

For additional information, contact Cobra Electronics, Inc. at 6500 West Cortland Street, Chicago, IL 60707, phone 773-889-8870.

MFJ Book Brings Fresh Approach To Morse Code Training

Author of the new book, *Morse Code: Breaking the Barrier*, Dave Finley, N1IRZ shows how, using a computer or a microprocessor-based pocket code trainer (MFJ-418), a ham and would-be ham can use a technique developed in 1936 by Ludwig Koch to build high-speed code proficiency quickly and efficiently. Finley says: "Besides its speed, Koch's method has another, more important advantage over 'traditional' code training methods. With Koch's method, you receive frequent, positive reinforcement — assurance that you really are making progress. That means there are no 'plateaus,' you stay motivated and don't quit out of frustration."

Finley, who used Koch's technique himself to go from No-Code Technician to Extra class, became an avid CW operator. The book, published by MFJ Enterprises, Inc. also includes chapters on sending code with keys, bugs and keyers; on making your first CW QSOs; and on a variety of on-the-air activities where CW can make your hamming more fun. The book also includes a fast-paced chapter on the fascinating history of telegraphy, both landline and wireless. "When we use Morse Code on the air, we become part of a tradition that goes back more than 150 years. Knowing that history adds to the pleasure of operating," Finley says.

For more information on *Morse Code: Breaking the Barrier*, which is available for $14.95 plus shipping, contact MFJ Enterprises at MFJ Publishing Company, Starkville, MS 39759; phone: 800-647-1800; fax: 601-323-6551; e-mail: <mfj@mfjenterprises.com>; or you can check out local dealer and other ordering information on their Web site at <http://www.mfjenterprises.com>.

Broadcast DXing

DX, NEWS AND VIEWS OF AM AND FM BROADCASTING

BY BRUCE CONTI
<BAConti@aol.com>

Solar Activity Is Heating Up

Mediumwave DXers were treated to a sign of things to come with a major solar flare that occurred in the spring. According to Norwegian DX Listeners Club data, the A index reached a peak of 317 during the three-hour measurement period between 0300–0600 UTC on May 5. The Big Bear Observatory also noted the event, issuing a "Bear Alert" for the Earth to be impacted by the results of a major X-class flare. The results were obvious across the AM band, as transatlantic reception was nil, while stations from southern latitudes were reaching well into the northern United States and Canada.

The solar activity of Cycle 23 is expected to peak by 2000, although some are now predicting that the peak may not occur until as late as 2004. To keep up with the latest solar activity and forecast information, visit the Big Bear Observatory Website at <http://www.bbso.njit.edu.> Lethbridge University also maintains an excellent solar observatory site at <http://solar.uleth.ca/solar/>. For solar information specific to DXing, check out the Norwegian DX Listeners Club Website at <http://www.dxlc.com>.

Outside the studios of 3ZB-1098, ZM FM-91.3 and classic hits 97.7 Christchurch, New Zealand.

Broadcasters Face The Music

The Canadian Radio-Television Commission (CRTC) has increased the required air-time for music by Canadian artists to 35 percent. Canadian content requirements were previously at 30 percent. The change was the result of a compromise between radio station owners who wanted to loosen the requirements, and the Canadian recording industry which called for an increase to 50 percent. The debate had extended into TV land as well, with the CBC planning to institute an all-Canadian program schedule next season. The CBC has dropped all U.S. programs from their television schedule.

Canada isn't the only country where music is a hot issue. In Mexico, and bordering U.S. communities, there's a growing concern over the increasing popularity of "narco-corridos," songs about illegal drug trafficking. Some Mexican states have banned these songs from the airwaves. Interested in Mexican broadcasting? A database of Mexican radio and television is now available at the SCT (the Mexican equivalent of the FCC) Website at <http://www.sct.gob.mx/infraestructura.html>.

Broadcasting Around The World

"Webcasting" is gaining momentum. Even the smallest stations are being heard around the world via the Internet. Take for example 150-watt WRBC, the broadcast voice of Bates College in Maine. Not only have listeners across the U.S. been calling in to request songs, but the station has also been receiving listener E-mail from as far away as New Zealand and Singapore. In fact, there are now some 4,000 stations broadcasting on the Web. One has to wonder how this is going to affect the DX hobby, especially QSLing. The availability of broadcasts via satellite, cable, and the Internet can only serve to diminish the value of reception reports and QSLs. Perhaps taped reports will have to become the norm for verification of station reception.

Speaking of New Zealand, *Pop'Comm* reader Marty Foss recently visited a couple of radio stations down under. "As I traveled around the south island of New Zealand, I listened almost everyday to Newstalk ZB, an AM talk radio network on several frequencies throughout New Zealand," says Foss. The south island's network flagship is 3ZB Christchurch on 1098 kilohertz. The ZB network is also on 1ZB Auckland at 1080, 2ZB Wellington at 1035, 4ZB Dunedin at 1044, and 4ZA Invercargill at 864 kilohertz. Foss also had the opportunity to visit the island of Tasmania, where he enjoyed 7HHO "Hobart's Better Music Mix, Mix 101" on 101.7 FM.

Closer to home, "CD Radio" has become one of the first networks licensed by the FCC for DAB/digital radio via satellite. And old-time radio is one of the services the network is expected to pro-

Here's a bumper sticker from station 7 HHO, Hobart Tasmania, Australia.

vide. Popular old-time radio programs like "The Shadow" and "The Green Hornet" will be broadcast 24-hours-a-day on one of their 50 satellite channels. CD Radio plans to launch the service in 1999.

Calling Electronics Experimenters

Remember building Heathkit radios and televisions? For those who'd like to experiment with AM stereo, along with other facets of broadcast electronics, Heathkit Educational Systems offers a course on wireless communications systems which investigates AM stereo, FM stereo, TV, satellite, and multichannel communications. Emerging HDTV technology is also covered. An AM stereo C-QUAM detector, FM stereo detector, SCA detector, and stereo audio amplifier are part of the model EB-554 lab experiment platform provided with extensive course materials on broadcast systems technology. For additional information, Heathkit can be found on the Web at <http://www.heathkit.com>, or write to them at 455 Riverview Drive, Benton Harbor MI 49022.

More Radio News/Talk

Sportscasting legend Curt Gowdy has sold the last of his collection of radio stations. WCCM Lawrence, Massachusetts, on 800 has been sold to Costa-Eagle Radio in partnership with the local newspaper, with the goal of becoming an all-news station featuring local news not covered by Boston stations. The format change may also result in a swap of dial positions with other Costa-Eagle stations WHAV 1490 and WNNW 1110. One plan under consideration would move WCCM to 1490, WHAV to 1110, and WNNW to 800. WNNW "La N Once-Diez" is the lead station of the three, broadcasting in Spanish to Hispanic communities in the Lawrence-Lowell region. The move to 800 would give WNNW improved full-time coverage of its target audience.

In Los Angeles, Spanish newcomer KSCA 101.9 has taken over the top spot in the ratings, beating Spanish sister station KLVE 107.5 FM. News/talk KFI 640 AM is the first among the English-language stations to show up in the ratings, at number five.

In Washington, DC, WWRC and WTEM have swapped frequencies. Bloomberg Business Radio on WWRC is now at 570, and sports talk WTEM is at 980. WTOP-FM has also changed frequency, moving to 107.3 while continuing to simulcast news from 1500 AM.

Congratulations go out to WGN Chicago at 720, named Station of the Year by the Illinois Broadcasters Association. WGN's Bob Collins also received top honors as the Personality of the Year. And congrats to WBZ 1030 radio talk show host David Brudnoy, recipient of the Massachusetts Associated Press award for excellence in news/talk.

X-Band Files

A couple of religious broadcasters are spreading the word on 1640. KKJY Lake Oswego, Oregon, is on the air at 1640, simulcasting religious programs from KKSL 1290. WKSH Sussex, Wisconsin, is expected to be on the air shortly at 1640, if not already. They plan to vacate their 1370 spot on the dial, bringing the WKSH calls and religious programming to 1640, rather than simulcasting for an extended period as other X-banders are doing.

"The Sports Animal" WNML Warner Robbins, Georgia, is now being heard nationwide on 1670, simulcasting 96.5 FM with sports talk from the Sports Fan Network. According to their Web site, the mailing address is 7080 Industrial Highway, Macon, Georgia 31216.

QSL Information

555 Radio ZIZ, St. Kitts — Full-data QSL card in 30 days for report and two

IRCs, signed Bertill Browne-CE, The Government Broadcasting Service. Address: P.O. Box 331, Springfield, Basseterre. (Conti)

738 RFO Mahina, Tahiti (French Polynesia) — Full data QSL card, including a list AM & SW frequencies and powers. Address: RFO Polynesie Francaise, B.P. 125, Papeete. (Jackson)

1260 CBRU Squamish, BC — QSL card from CBC-Vancouver in 10 days, signed Dave Newbury-CE. Listed as 250 watts. This is one of the new higher powered LPRTs. (Martin)

1280 WBIG Aurora, IL — Full-data letter, signed Ron Newman, Assistant Chief Operator and News Director. Address: 620 Eola Road, Aurora, IL 60504. (Spies)

1350 CBKY Keremeos, BC — QSL card from CBC-Vancouver for this high-power LPRT, running 400 watts. Received in 10 days from Dave Newbury-CE. Address: CBC, P.O. Box 4600, Vancouver, BC V6B 4A2. MW QSL #2979. (Martin)

1480 KNTB Lakewood, WA — Form letter in 20 days for taped report, signed Tim Mauch-Eng. Sent to 71 Yesler Way, Seattle WA 98104, but postmarked San Bernardino, CA. Station owner Triangle Broadcasting has their offices in Palm Springs, CA. (Martin)

Broadcast Loggings

Patrick Martin in Oregon reports, "One of the best mornings for Hawaiians I've had for a long time. It was unbelievable!" Nile Kelly checks in with the results of DXing in Arizona, and I add some logs of southern latitude stations heard in New Hampshire as a result of the spring solar flare for this month's selection of loggings. All times are UTC.

540 XEWA Monterrey/Rio Verde, Mexico at 0650 good; band and romantic music, "la gran cadena W" ID, parallel 900. (Conti)

540 XETIN Tijuana, Mexico heard at 0435 with Spanish music and "X-Bach AM" IDs, parallel KNOB Costa Mesa, CA. (Kelly)

550 KMVI Wailuku, Hawaii, good with "Cruzin' 55" IDs and weather at 1335, way over KOAC. (Martin)

560 KSFO San Francisco, CA, at 0806 with "Hot Talk 560" ID and "Coast-to-Coast" with Art Bell. (Kelly)

570 KQNG Lihue, Hawaii, very strong over everything else with rock music, ID's as "Kong," YMCA spots at 1310. (Martin)

610 R. Difusora Nacional de Colombia, Uribia, Colombia at 0620 fair; rustic music, "cultura de Colombia" ID, parallel 4955 SW. (Conti)

650 KHNR Honolulu, Hawaii at 1430 good with news promos and IDs at 0930, Sacramento way underneath. (Martin)

670 KBOI Boise, ID at 0900 with "Newstalk 670" ID and Idaho Stampede vs. Bobcats basketball. (Kelly)

690 KQMQ Honolulu, Hawaii, fair with Michael Jackson and other pop music, Mariah Carey giving canned ID at 1422. (Martin)

690 XETRA Tijuana, Mexico at 0920 in English with "Sports 690" ID and sports talk. (Kelly)

700 R.Net, Cali, Colombia at 0230 fair; Radio Net ID and woman with news, over an unID Latin American music station. (Conti)

730 XEX Mexico City, at 0710 fair; "La X de Mexico" ID, ballads and romantic music, over CKAC. (Conti)

760 RCN, Barranquilla, Colombia at 0145 good; "RCN la radio de Colombia" ID, UTC-5 time check, and news, parallel a much weaker signal on 770. (Conti)

760 KGU Honolulu, Hawaii, very good with "One on One Sports" at 0940, many Honolulu area spots. (Martin)

780 Ecos del Torbes, San Cristobal, Venezuela heard at 0130 fair; Ecos del Torbes promo/ID, nostalgia parallel 4980 SW. (Conti)

900 KNUI Kahalui, Hawaii, at 0950 good with Filipino program, announcer with accent mentioning KNUI, way over others. (Martin)

900 XEW Mexico City, at 0635 good; Mexican accordion and brass "banda" music. (Conti)

940 KJPN Waipahu, Hawaii, very strong (best ever heard) with "JPN" IDs and programming in Japanese at 0947, beautiful Japanese pop music. (Martin)

940 XEQ Mexico City, at 0755 fair to good; classic jazz instrumentals, "Fonoteca" IDs, and noticias promos, over/under WKGM. (Conti)

1160 KSL Salt Lake City, UT, at 0800 "The news watch never stops, KSL 1160, your news, weather, and sports station" and talk about BYU. (Kelly)

1170 KVOO Tulsa, OK, at 0315 with ID as "The Voice of Oklahoma," an ABC news promo, and C&W music. (Kelly)

1170 CARACOL, Cartagena, Colombia heard at 0020 fair; futbol report from Radio Globo-Brazil, "cadena Caracol de Colombia" ID, in WWVA null. (Conti)

1530 KFBK Sacramento, CA heard at 0900 heard through jumble of stations with ID as "AM 1530, Capital City Radio." (Kelly)

1530 VOA, Pinheira, Sao Tome e Principe, at 0350 fair, swing jazz feature in English parallel 7105 SW. (Conti)

1580 WSRF Ft. Lauderdale, FL at 0445 good; Entertainment Radio with a report from *South Florida Internet Weekly*, a report on nutrition, weather and 24-hour traffic. (Conti)

1670 WNML Warner Robbins, GA at 0140 good; Atlanta Hawks basketball // WSB-750, "96.5 The Sports Animal" IDs, later an "It takes two to tango" promo announcing the addition of 1670. (Conti)

1701 Radio 1701, Brisbane, Australia, Tentative, with non-stop Hindi programming at 1230-1310, alternating male and female announcers at times. Barely above the noise most of the time. Tentative taped report sent. (Martin)

Many thanks to the following contributors for another great column: Marty Foss, Bob Gilbert, Alan Hilsop, Gary Jackson, Randy Kaeding, Nile Kelly, Patrick Martin, Paul McDonough via BADX, Ronald Slate, Klaus Spies, and Elmer Wallesen.

The FM and TV DX season is here; how about some tips and logs from the MHz end of the broadcast spectrum? ■

Seeking Permits to Construct New FM Stations

AK	Anchorage	93.7 MHz	
AK	Nikiski	93.3 MHz	
AL	Selma	89.7 MHz	6 kW
AL	Selma	105.3 MHz	
AR	Atkins	99.3 MHz	
AL	El Dorado	101.5 MHz	
AR	Harrisburg	95.9 MHz	
AR	Hatfield	104.1 MHz	
AR	Lakeview	95.3 MHz	
AR	Mena	105.3 MHz	
AZ	Lake Havasu City	96.7 MHz	
AZ	Wellton	104.5 MHz	
CA	Hydesville	94.1 MHz	
CA	Johannesburg	100.9 MHz	
CA	Kerman	95.3 MHz	
CA	Merced	94.1 MHz	
CA	Shasta Lake City	107.1 MHz	
CA	Shingletown	96.1 MHz	
CA	Tehatchapi	100.1 MHz	
CO	Colorado City	89.9 MHz	9 kW
CO	Delta	103.3 MHz	
CO	Rye	90.1 MHz	
CO	Silverton	103.7 MHz	
CO	Trimble	88.5 MHz	3 kW
CO	Westcliffe	89.9 MHz	500 watts
DE	Harrington	88.7 MHz	17 kW
FL	Key West	90.1 MHz	25 kW
FL	La Crosse	99.5 MHz	
FL	Murdock	98.9 MHz	
FL	Nocatee	105.3 MHz	
GA	Mount Vernon	101.7 MHz	
HI	Kilauea	91.9 MHz	(KAQA booster)
IA	Bettendorf	91.1 MHz	20 kW
IA	New London	97.3 MHz	
ID	Coeur d'Alene	102.3 MHz	
ID	Lewiston	105.1 MHz	
IL	Atlanta	96.3 MHz	
IL	Carthage	93.9 MHz	
IL	Knoxville	105.3 MHz	
IL	Peoria	90.7 MHz	1 kW
IN	Lafayette	90.7 MHz	17 kW
IN	Roann	101.9 MHz	
KS	Dearing	98.1 MHz	
KS	Galena	104.3 MHz	
KS	Hutchinson	97.1 MHz	
KS	Ingalls	96.3 MHz	
KY	Campton	103.7 MHz	
LA	Ball	105.5 MHz	
MA	Nantucket	89.5 MHz	780 watts
ME	Machias	101.1 MHz	
MI	Benton Harbor	94.9 MHz	
MI	Frankenmuth	93.7 MHz	
MI	Gladstone	105.5 MHz	
MN	Belview	105.9 MHz	
MN	Faribault	107.5 MHz	
MN	Park Rapids	92.5 MHz	
MN	St. Joseph	99.9 MHz	
MN	Walker	101.9 MHz	
MO	Boonville	93.1 MHz	
MO	Jefferson City	104.1 MHz	
MO	Miner	107.1 MHz	
MO	Scott City	93.9 MHz	
MS	DeKalb	105.7 MHz	
MS	Prentiss	104.9 MHz	
MS	Stonewall	106.9 MHz	
MT	Great Falls	91.5 MHz	250 watts
NC	Norlina	94.3 MHz	
ND	Bismark	91.5 MHz	2 kW
ND	Harwood	100.7 MHz	

NE	Hastings	94.5 MHz	
NH	Farmington	106.5 MHz	
NM	Carlsbad	106.1 MHz	
NM	Grants	105.5 MHz	
NV	Moapa valley	104.7 MHz	
NV	Sun Valley	94.5 MHz	
NY	Albion	95.5 MHz	
NY	Jewett	97.9 MHz	
NY	Sylvan Beach	100.3 MHz	
OH	Pleasant City	92.1 MHz	
OH	Willard	96.9 MHz	
OK	Ada	89.9 MHz	300 watts
OK	Chickasha	90.5 MHz	1.3 kW
OK	Idabel	102.9 MHz	
OR	Coos Bay	90.5 MHz	880 watts
OR	Newport	92.7 MHz	
PA	Barnesboro	93.5 MHz	
PA	Brookville	103.3 MHz	
SD	Clear Lake	107.1 MHz	
SD	Dell Rapids	95.7 MHz	
SD	Rapid City	88.3 MHz	100 kW
SD	Rapid City	106.3 MHz	
TN	Bulls Gap	100.3 MHz	
TN	Henry	104.7 MHz	
TN	Middleton	100.7 MHz	
TN	Norris	106.7 MHz	
TN	Parker Crossbands	96.5 MHz	
TX	Blossom	92.7 MHz	
TX	Borger	106.7 MHz	
TX	Bridgeport	90.5 MHz	200 watts
TX	Cameron	94.3 MHz	
TX	Doss	88.1 MHz	6 kW
TX	Gregory	104.5 MHz	
TX	New Boston	105.1 MHz	
TX	Wake Village	92.5 MHz	
TX	Winters	96.1 MHz	
UT	Blanding	92.1 MHz	
UT	Levan	99.1 MHz	
VA	Cape Charles	89.1 MHz	16.5 kW
VA	Deltaville	92.3 MHz	
VA	Emporia	89.3 MHz	2.5 kW
VA	Falmouth	104.5 MHz	
VA	Jonesville	99.1 MHz	
VA	Matthews	89.1 MHz	8 kW
VT	Putney	91.1 MHz	
WA	Shelton	94.5 MHz	
WI	Barron	97.7 MHz	
WI	DeForest	93.1 MHz	
WI	Siren	105.7 MHz	
WI	Superior	88.5 MHz	
WI	Wentworth	88.1 MHz	25 kW
WV	Salem	103.3 MHz	
WY	Green River	92.1 MHz	
WY	Jackson	93.3 MHz	
WY	Lost Cabin	99.1 MHz	

Granted Permits to Construct New FM Stations

AS	Leone	93.9 MHz	
AS	Pago PAgo	93.1 MHz	500 watts
CA	Arvin	92.5 MHz	
FL	Yankeetown	96.3 MHz	2.75 kW
IA	Mason City	88.5 MHz	
ID	Bonners Ferry	92.1 MHz	
KS	Cawker City	96.3 MHz	
KS	Great Bend	89.7 MHz	
LA	Gibsland	104.5 MHz	
LA	Ruston	99.5 MHz	6 kW
LA	Shreveport	102.9 MHz	
MO	Macon	99.9 MHz	6 kW
MO	Moberly	97.3 MHz	25 kW
MT	Hamilton	98.1 MHz	15.3 kW
NC	Charlotte	98.3 MHz	25 kW
NY	Calverton	105.3MHz	6 kW
NY	Endwell	107.5 MHz	1.1 kW
NY	Norwood	96.1 MHz	6 kW
OK	Sulphur	90.7 MHz	1 kW
PA	Stroudsburg	88.7 MHz 7	.9 kW
TX	Farmersville	92.1 MHz	
TX	Gatesville	89.9 MHz	
TX	George West	104.1 MHz	3 kW
TX	Jordanton	95.7 MHz	6 kW
VA	Cape Charles	90.7 MHz	
WI	Sturgeon Bay	88.5 MHz	50 kW
WV	Vienna	106.1 MHz	(WRZZ booster)

Changed AM Facility

WEMB	Erwin, TN	1420 kHz	Added 32 watt night service

Seeking to Change FM Freqeuncy

KTFW	Stamford, TX	92.1 MHz

Changed FM Frequencies

WAAI	Hurlock, MD	100.5 MHz	Changed to 100.9 MHz
WCKM-FM	Lake George, NY	98.5 MHz	Changed to 99.1 MHz

New AM Call Letters Issued

KBAG	Farmington, NM
KBCM	Fort Worth, TX
KQJD	West Fargo, ND
KQXX	Brownsville, TX
KSMH	Aburn, CA
KSPW	Casper, WY
KYIZ	Renton, WA
WAXK	Princeton, NJ
WAXP	Warner Robins, GA
WAYU	Rochester, NH
WAZC	Lexington Park, MD
WDHP	Frederiksted, VI
WJVA	South Bend, IN
WMIB	Marco Island, FL

Pending AM Call Letter Changes

New	Old	
WDZY	WAOD	Colonial Heights, VA
WSFN	WPIQ	Brunswick, GA

Changed AM Call Letters

New	Old	
KATZ	KMJM	St. Louis, MO
KDOX	KDOL	Henderson, NV
KDXX	KMRT	Dallas, TX
KENI	KYAK	Anchorage, AK
KFXD	KBKK	Nampa, ID
KKGT	KKEY	Portland, OR
KKWK	WKBQ	St. Louis, MO
KMEM	KICS	Hastings, NE
KNRS	KISN	Salt Lake City, UT
KNWZ	KPSL	Thousand Palms, CA
KTZN	KENI	Anchorage, AK
KXPS	KNWZ	Thousand Palms, CA
WDZY	WZOD	Colonial Heights, VA
WIST	WTLI	Statesville, NC
WJWL	WSSR	Crete, IL
WKHT	WAWT	Portsmouth, VA
WPTT	WIXZ	McKeesport, PA

New FM Call Letters Issued

KAZS	Montrose, CO
KAZX	Kirtland, NM
KBAJ	Deer River, MN
KBAN	DeRidder, LA
KBBP	Kerrville, TX
KBCV	Paris, TX
KBCW	McAlester, OK
KBCX	Big Spring, TX
KCAS	McCook, TX
KGUL	Edna, TX
KISU-FM	Pocatello, IA
KMSE	Rochester, MN
KMZL	Missoula, MT
KOXZ	Comanche, TX
KRFD-FM	Richfield, UT
KRMP	Portland, TX
KSIZ	Maumelle, AT
KUSR	Logan, UT
KWGB	Colby, KS
WAKC	Pittsfield, IL
WAQB	Sister Bay, WI
WARD	Charlotte Amalie, VI
WAXU	Troy, AL
WAXV	Westerville, OH
WAYD	Islesboro, ME
WAYH	Port Wentworth, GA
WAYI	Thomaston, AL
WAZA	Liberty, MS
WFPF	Aurora, NC

Changed FM Call Letters

New	Old	
KAJM	KZJM	Rockport, TX
KATH	KSET	El Paso, TX
KCRL	KAXJ	Sunrise Beack, MO
KDXX-FM	KICI-FM	Corsicana, TX
KFSD	KBKK	Nampa, ID
KGNT	KNUC	Smithfield, UT
KKCN	KAXR	Sterling City, TX
KKUU	KCMJ-FM	Indio, CA
KKYK-FM	KMZX	Lonoke, AR
KNDL	KCDS	Angwin, CA
KNRX	KCCX	Lexington, MO
KOCL	KCQV	Arthur, ND
KRAK	KRXQ	Roseville, CA
KRXQ	KRAK	Sacramento, CA
KSIB-FM	KITR	Creston, IA
KTUZ	KWCO-FM	Chickaska, OK
KUUL	WLLR-FM	East Moline, IL
KYOR-FM	KSES	Yucca Valley, CA
WBGB	WTLK-FM	Ponte Verde Beach, FL
WCMB-FM	WCMV-FM	Oscoda, MI
WEHR	WDDA	Elberton, GA
WDRV	WVTY	Pittsburgh, PA
WISY	WHMX	Canandaigua, NY
WJDK-FM	WJEK	Seneca, IL
WJZA	WSWZ	Lancaster, OH
WKJS	WVGO	Crewe, VA
WLLR-FM	KUUL	Davenport, IA
WMAX-FM	WRCD	Honeoye Falls, NY
WNKT	WBUB	St. George, UT
WNNL	WZZU-FM	Fuquay-Varina, NC
WQTZ	WLFX	Ocean Pines, MD
WVOZ-FM	WAHQ	Carolina, PR
WWZK	WFNN	Villas, NJ
WXOX	WBTF	Attica, NY
WYST	WJCO	Harwichport, NY

The Computer Corner

BY ED GRIFFIN
<griffened@sprynet.com>

RECEIVER CONTROL, SOFTWARE, AND MORE

PCR1000 Update And New AOR Receiver

I've been using my ICOM PCR1000 for about two months now, and have been very pleased with this unit. My job requires me to travel three out of four weeks in a month, and the PCR1000 has found a permanent home in my notebook's carry bag. I set this up in the hotel room each time, and get a chance to do some monitoring in the evenings.

I've found that HF reception using the supplied antenna, or the RS telescoping whip, was not so hot in the western U.S. I fixed that by going down to RadioShack and picking up a solderless male right-angle BNC with strain relief (Part No. 278-126) and a 50-foot spool of 30 AWG Kynar insulated wrapping wire (Part No. 278-501). It was easy to attach one end of the wire to the BNC, and now when I set up the radio, I string out as much as I can across the room, and am able to hear some weaker signals.

I spoke with ICOM America, and they confirmed that they're making the command set for the interface available to qualified developers of radio control software. This should speed the addition of support for this radio in third party packages, and allow for features not found in the included software.

Breaking News!

As this column was being prepared for submission, word of a new radio from AOR was beginning to circulate on the net. The AR8200 is a portable being billed by AOR as "The Superior Concept" receiver. Although limited information was available at press time, be sure to check out <http://www.qsl.net/n2mca/NEWSFLSH.HTM>. You may want to use a search engine to find out more on this new handheld receiver. Rich Wells maintains this site, and there's lot of good stuff regarding new scanners and other items of interest.

GMRS/FRS Mailing List

For those of you interested in the General Mobile Radio Service (GMRS) or the new Family Radio Service (FRS), there's a mailing list that you can join. Doug Smith has info on GMRS on his Web page at <http://www.dougweb.com/gmrs.html>. To subscribe to the list, send a message to <majordomo@tpas.palladium.net> and include the following in the body: "Subscribe gmrs" and your E-mail address.

I recently picked up two Motorola TalkAbout FRS radios, and, based on my satisfaction with both the performance and the affordability, I predict there will be lots of activity on the FRS channels.

AOR distributed this flyer on the new AR8200 scanner at the recent 1998 Dayton Hamvention.

Mailbag

Do you need remote control software for your AR8000 or information about

"The AR8200 is a new portable, billed by AOR as 'The Superior Concept' receiver."

the EEPROM in your AR5000? Well, Buysen Gommert (<gommert.buysen@micromass.co.uk>) wrote to say that both items can be found on his Web site at <http://www.geocities.com/SiliconValley/Horizon/9163/arc.html>.

John Fallows, VE6MBA (<john.fallows@shaw.wave.ca>), wrote to tell me about the latest version of ERGO. This is a Windows program that allows for receiver control with radios such as the AR7030, NRD535, NRD535D, R8A, R8B, and HF-1000. There's a companion product that supports lookup into some third party databases. These supported databases include the BC98 shortwave database contained on the Klingenfuss Super Frequency List CD-ROM, as well as the ILG shortwave and mediumwave databases. Windows 95 or NT and a Pentium-class processor are some of the hardware requirements. Check it out at <http://calgary.shaw.wave.ca/~jfallows/Ergo_1.htm>.

Scanning Links

Terry (<scorpion@centtel.com>) wrote to say that he's built a large Web page of scanning links at <http://www1.centtel.com/scorpion/scanner.htm>, so check it out if you're looking for pages that might cover a specific area!

Scott Bias (<CTPDS49@aol.com>) sent along a link to his Web page at <http://members.aol.com/ctpds49/index.html>, which has information about CTP Speech Inversion Descramblers and how to purchase them.

OK, I admit a Web page about how to avoid some poor design features when creating your own Web page isn't directly related to radio, but I thought I'd mention it because a lot of us create our own pages, or read those of others. Check out <http://www.glover.com/sucky.html> for some tips with a little humor thrown in. Don't be surprised if you see a couple that apply to your own pages.

If you're interested in finding out more that will aid in your monitoring of federal agencies, try the search bot at <http://ciir.cs.umass.edu/ciirdemo/Govbot/>. Another good URL to check out belongs to the National Telecommunications & Information Administration. They're at <http://www.ntia.doc.gov/>. These types of searches can turn up all kinds of information, such as contract awards and requests for bids that detail the types of technology required and implemented.

Israel On The Web And AR8000 ToolKit Update

Daniel (Doni) Rosenzweig (<danielzr@touro.edu>) sent me an E-mail with a load of Web links for information on Kol Israel Shortwave Radio in Israel on the WWW. Send me an E-mail and I'll forward a copy to you if you mention that you're interested in the links.

Eddy J. Gurney (<eddy@mich.com>), author of the AR8000 ToolKit, wrote to announce the release of version 2 of their popular Macintosh-only shareware package for controlling and programming the AOR AR8000 handheld wideband receiver. One of the features of this product is a simulated keypad and display that matches that of the AR8000, and is displayed on your computer's desktop. This interface lets you control the radio via your keyboard and pointing device. Frequency data can be edited and transferred between your Mac and the radio, and all of the radio's features may be configured via the software interface. This new version offers fully native support for Power PC users, but is still compatible with any Mac capable of running System 7.0 or later with at least 2MB of free memory.

AR8000 ToolKit 2.0 is available for download from the EddyWorks Web site, located at <http://www.mich.com/~eddy/works/>. This will allow you to try the program out to see if it meets your needs prior to registration.

For those of you without access to the Internet, a registered copy of the latest version of AR8000 ToolKit on disk can be obtained by sending in a check or money order for U.S. $50 to: Eddy J. Gurney, 18712 Westbrook Way, Livonia, Michigan 48152-2896.

Andre Brandao (<acrbb@camoes.rnl.ist.utl.pt>), author of AirNav, an aircraft tracking software program for Windows, wrote to mention that his software is used by many monitoring and aviation enthusiasts to convert their PCs into radar screens displaying the aircraft that cruise the skies of the globe. If this sounds like something that interests you, surf on over to <http://www.geocities.com/SiliconValley/Lakes/9420> and check it out.

BAYSCAN Mailing List

Thanks to James Cook, scanning enthusiasts in the San Francisco Bay area have a mailing list on which to discuss their interests. You can sign up by sending a message to <subscribe-bayscan@hp.ipnetwork>.

Frequently Asked Frequencies File

One of the things that I recommend every scannist keep a copy of is the Frequently Asked Frequencies file, or FAF.TXT, that's maintained by Barry Mulligan at <mulligan@acm.org>. You can get this file via <ftp://oak.oakland.edu/pub/hamradio/docs/misc/scanner.faf>, or from the Scanning Library Number Two in the HamNet forum found on CompuServe.

Till Next Time...

That's it for this column, but if there's something that you'd like to share with other readers, or were wondering about, drop me an E-mail at <griffined@sprynet.com> or a letter, and I'll see if we can cover it next time. ■

BY EDWARD TEACH

The Pirate's Den

FOCUS ON FREE RADIO BROADCASTING

There's Square Dance Music, Erotic Talk, And Much More In The Pirate Realm!

What a collection this month! More than 40 loggings follow, so let's get on with the show.

Anteater Radio, 6955 USB at 0024 played songs by other than those most associated with them. Another time at 0024 the station was heard with the same programming approach. Mentioned they had all sorts of QSL designs. Also at 0043 claiming to be broadcasting from West Virginia while waiting to be loaded. (Silvi, OH)

WLIQ, 6955 USB heard at 0117. Sounded like square dance music. (Jerry Coatsworth, ON) 0330, 2047, and 0058. (Lee Silvi, OH) 1708 and 2052, off with Blue Ridge address. (Dave Jeffery, NY)

Altered States Radio, 6955 USB heard at 1515 with weather for Caribbean. (Coatsworth, ON) 2020 and 2101. (Silvi, OH)

WUNH, 6955 USB heard at 2122 with songs and IDs. (Silvi, OH)

WMPR, 6955.4v AM at 2140 with soft rock, and dance. (William Hassig, IL) **6955** at 2030 with usual format, also 2238. (Silvi, OH)

Free Radio 888 (?) **6955 USB** at 2119 discussing gas masks, survival, etc. (Silvi, OH)

Triple 888 (*same as above? Ed*) 0319 at sign off mentioning Midwest U.S. (Coatsworth, ON)

Free Hope Experience, 6955 USB at 0211, possibly live. Also 1859 with sign on. (Silvi, OH)

Mystery Radio, 6966 USB at 0956 to close with "Miss Giggles" at 1003 followed by a QSO. (Buch, *state?*) 0517 with instrumental versions of rock numbers. (Coatsworth, ON)

Take It Easy Radio, 6955 USB at 2025 to 2105 close with "Talk It Easy" by the Beatles. QRM from a "Radio Caliente" testing. (Buch)

Radio Eclipse, presumed, **6955 USB** at 0020 with a song and what sounded like mention of "a Radio Eclipse presentation." (Silvi, OH)

Eve of Destruction, 6955 USB at 0245. "Eve of Destruction" song with some Gulf War clips, also heard an ID for Alpha Romeo 876 just before the broadcast. Also tentative at 2037. (Silvi, OH)

WSRR (tentative call), **6955 USB** at 2255. Also at 0104 with IDs, music, mail drop. Also at 1430 with mention of Sen. Edward Kennedy. (Silvi, OH)

WGTG (fake) **6955 USB** "Glory to

The Voice of Shortwave Radio

New Listener Certificate

awarded to

WILLIAM K. FLAGEL

Thanks For Tuning Us In!

You Are Listener # 2! Congratulations!!

Presented on:

JUL 30 1997

Tune In Again Next Time, and Good DX!

Bubba

Bubba, Owner / Operator

William Flagel got QSL number two from the Voice of Shortwave Radio, one of the many pirates reported this month!

Gumby," "Glory to Garters," My first pirate log! (Ken Metz, OH) 2234 with Bam Stoker ID, kid music, parents should leave the room. Also heard at 1535 with "Ron Papsmear of the FCC." (Coatsworth, ON) At 2322 with repeat program. 1823 with hilarious spoof of the real WGTG. (Silvi, OH)

WLIS, 6955 USB at 0452. Jack Boggan updater on who has the most WLIS QSLs (Coatsworth, ON) (0004 with repeat of their 8th anniversary show. Again at 2316. (Silvi, OH)

Radio Pinnochio, tentative, **6955 USB** at 0058 with songs and IDs.

K-2000, 6955 USB heard at 0125 with songs, IDs and "America's great stuff." (Silvi, OH)

Radio Nonsense, 6955 USB at 0209 with music and IDs. Also at 0202 with usual format. (Silvi, OH)

Voice of Hell, 6955 USB at 0255 with Guns and Roses, several IDs. Also at 2354. (Silvi, OH)

Radio Gerbil, 6955 USB at 1445 with repeat of an earlier program. Again at 1743 and 2319. Also 1818 with mix of Radio Azteca clips. (Silvi, OH)

Radio Metallica World Wide, 6955 at 1845. (Coatsworth, ON) Also at 1701. And at 1802 and 1613, with "Monster Hash" and commentaries. (Silvi, OH)

Montana Audio Relay Service, 6955 USB at 1841 with address as Box 293, Berlin, ON N0P 1WO, Canada. Off at 1915. (Jeffery, NY) 2340 with presumed repeat. (Silvi, OH)

WORD, 6955 USB at 0042 with talk show on survival tactics. (Silvi, OH)

KORN, 6955 USB at 0219 with country music from Kentucky and Providence, RI, address. (Silvi, OH)

Radio Outpost, 6955 USB at 1815 with music from the '20s and '30s, calling themselves the "last bastion of civilized radio, broadcasting worldwide and to all the ships at sea." (Dean Burgess, MA) 1752 with old songs; "Three Coins in the Fountain" etc. (Silvi, OH)

Radio Universe, 6955 USB heard at 07616 after QSO with Mystery Radio. (Coatsworth, ON)

WKND, 6955 USB heard at 0015 with Radio Animal and friend Ricochet. (Coatsworth, ON)

Radio Tornado, 6955 USB at 1705 with taped segments of Radio Metallica. (Dean Burgess, MA) Tentative, 6955 USB at 0035. (Silvi, OH)

One Voice Radio, tentative, **6955 USB** heard at 1727 with talk show format. (Silvi, OH)

Voice of Shortwave Radio, 6955 USB at 2141 with an Ajax Pet Store spoof. (Dean Burgess, MA) 2210 with usual format. (Silvi, OH)

Voice of Green Acres at 0010 with talk of Lincoln, Jefferson, and bits from KAT tapes. (Hassig, IL) 2210 with usual IDs and theme music. (Silvi, OH)

WPAT, 6955 USB with Monkees tunes and others. E-mail as "...excite.com." (Silvi, OH)

Voice of South Ireland, tentative, **6955 USB** at 2305 with talk of Ireland and Irish pirates. (Hassig, IL)

KRAP, 6956 at 0050. Said playing 12-inch disco records, QSL via Blue Ridge Summit. (Hassig, IL)

WMOS, tentative, **6955 USB** at 0015 with music, phone call. (Hassig, IL)

Radio Azteca, 6955 at 1750 calling themselves "Montezuma's Revenge — radio for all that's gross and distasteful — the station that lifts and separates — one of America's gross national products." (Burgess, MA)

Rock It Radio, 6955 USB at 2048 with rock, ID, off at 2051. (Jeffery, NY)

WFJB, 6955 heard at 2151 with "cheesy" music. Off at 2157, no address. (Jeffery, NY)

One Horse Radio, 6955 USB at 1823 with talk of toxic chemical pollution, medical research. Off at 1840 with Belfast address. (Jeffery, NY)

Radio Erotica, 6955 USB, at 1916 with music and erotic talk. Providence address. (Jeffery, NY)

Laser Hot Hits, 6955 USB at 1957 with '50s and '60s rock. Off at 2044 with Berlin, Ontario address. (Jeffery, NY)

Betty Boop Radio, 6955 at 1430 with Betty Boop sound effects, Popeye theme, Providence address. (Jeffery, NY)

Thanks for the great logs and great support. Keep it coming, gang! ■

BY HAROLD ORT, N2RLL, Editor

Product Spotlight

POP'COMM REVIEWS PRODUCTS OF INTEREST

R.L. Drake's R8B Communications Receiver

The Exceptional R8B Has Plenty Of "Standard Equipment"

It's hard to improve on perfection, but in my opinion, R.L. Drake has done it again. I've been using the older, renowned R8, with its 100 memories, superb filtering, sensitivity, and great audio for a number of years, and until now, never thought of needing another receiver. But after trying out the R8B for a couple of months, that notion has changed!

The "package" looks nearly the same as the original R8. The rig is housed in a sturdy black metal cabinet with an impressive array of push-button controls on the front panel, and large display window. There are significant differences between these two model receivers. Whereas on the older R8, a couple of key presses were required to change bandwidths and mode, a single keypress on the R8B changes to any of the five filters: 6.0, 4.0, 2.3, 1.8, and 0.5 kHz (or auto, and the receiver will change to the common bandwidth for the mode you're using). There are other improvements, which we'll get to in a few moments.

I got the original R8 for two reasons: It was a top-of-the-line receiver that didn't need additional filters or accessories to enhance its performance. Connect a good outdoor antenna, and you're in business. The same is true for the new R8B: Buy this receiver, and you're all set. And you don't have to mortgage the house or sell the family car to own this radio!

The Drake R8B receiver is a top-of-the-line communications receiver for the discriminating hobbyist. (Courtesy R.L. Drake Company)

Front Panel Layout

This is probably one of the least-complicated receivers I've ever operated. It only takes a few minutes to learn the ins and outs of the operation thanks to an intuitive large, LED illuminated front panel and well-written manual. There's a firm feel to the rubberized pushbuttons, which are all clearly labeled and easily visible even in minimal lighting. And the way the panel is organized makes changing modes, adding the noise blanker, or scanning frequencies a breeze. Of course there's still the tuning wheel located just off-center which zips through frequencies according to user-set parameters. You can program the receiver to tune in three steps with corresponding readout on the large display: 1 kHz, 100 Hz, or 10 Hz (the latter used mostly for tuning sideband, CW or data signals). You can even program the step size for a specific mode with a couple of simple key presses.

The R8B tunes the entire shortwave spectrum from 100–30,000 kHz in AM, LSB, USB, CW, RTTY and FM modes, and operates on various worldwide voltages (make sure you've got the voltage selector switch set properly before plugging the unit in!). New in the R8B is the detachable power cord — excellent if you're a frequent mover, as it allows for easier packaging for your move.

Easy Programming Of 1,000 Channels!

From the factory, the American-made R8B comes preprogrammed with 20 standard frequencies including WWV, CHU, and a handful of shortwave broadcast frequencies. But you're in control of the receiver, and can easily overwrite these because of those 1,000 user-programmable memory channels. They're divided into blocks of 10; in this way you can group your frequencies in any number of ways to suit your own personal listening. Programming the memories takes only a few minutes, but once you're finished, you'll be able to scan or automatically monitor your programmed frequencies that store Frequency, mode, bandwidth, AGC setting, PRE or ATTN setting, Antenna, Notch On/Off, Noise blanker setting, Synchronous detector On/Off and NAME. Of course, you don't have to sit down and program the memories the minute you plug in the receiver; take some time to get used to the radio, compile a list of stations/frequencies and make programming the memories a rainy day project once you're more familiar with the radio. Then sit back and enjoy all that the R8B has to offer, giving you the DX edge, and making your listening more enjoyable.

I've programmed all my favorite military, air, SW broadcast, and Coast Guard frequencies, and still have room for hundreds more. And scanning is faster than the older R8; the new R8B zips through programmed channels at a good clip — certainly sufficient for any radio enthusiast. On the DX side of things, I programmed in various targets in Africa and the Middle East, so checking these stations could be done at the push of a but-

R8B Specifications

Frequency Range	100 kHz – 30 MHz
Modes	AM, LSB, USB, CW, RTTY and FM
Sensitivity (SSB, CW 10dB S+N/N)	0.5 µV nom (preamp off) Less than 0.25 µV (preamp on)
Sensitivity (AM 10dB S+N/N, 1000 Hz, 30% mod)	1.5 µV nom (preamp off) Less than 1.0 µV (preamp on)
Sensitivity (FM 12 dB SINAD)	Less than 0.5 µV
Frequency Accuracy	Better than ± 100 Hz
Selectivity (AM, LSB, USB, RTTY, CW)	6 kHz @ -6dB, less than 12 kHz @ -60dB 4 kHz @ -6dB, less than 8 kHz @ -60dB 2.3 kHz @ -6dB, less than 4.5 kHz @ -60dB 1.8 kHz @ -6dB, less than 3.6 kHz @ -60dB 500 Hz @ -6dB, less than 1.5 kHz @ -60dB
Ultimate Selectivity	Greater than 95dB
Image Rejection	Greater than 80dB
IF Rejection	Greater than 80dB, 45 MHz Greater than 100dB, 50 kHz
Dynamic Range	97dB, 100–30,000 kHz @ 100 kHz spacing
Notch Filter Attenuation	AF type, 40dB min. Depth (500–5000 Hz)
External Speaker Output	2.5W, 4 ohms @ less than 5% distortion
Line (recorder) Output	300 mV, 4.7K Ohms
AC Power Requirements	100/120/200/240 Vac
DC Power Requirements	11–16 Vdc @ 2 A
Weight	13 lb
Dimensions (HWD)	5 1/4" (including feet) x 13 1/8" x 13"

ton. Drake has really made life easy for us with the extensive memory and scan functions, two 24-hour clocks and timer.

A Great Noise Blanker!

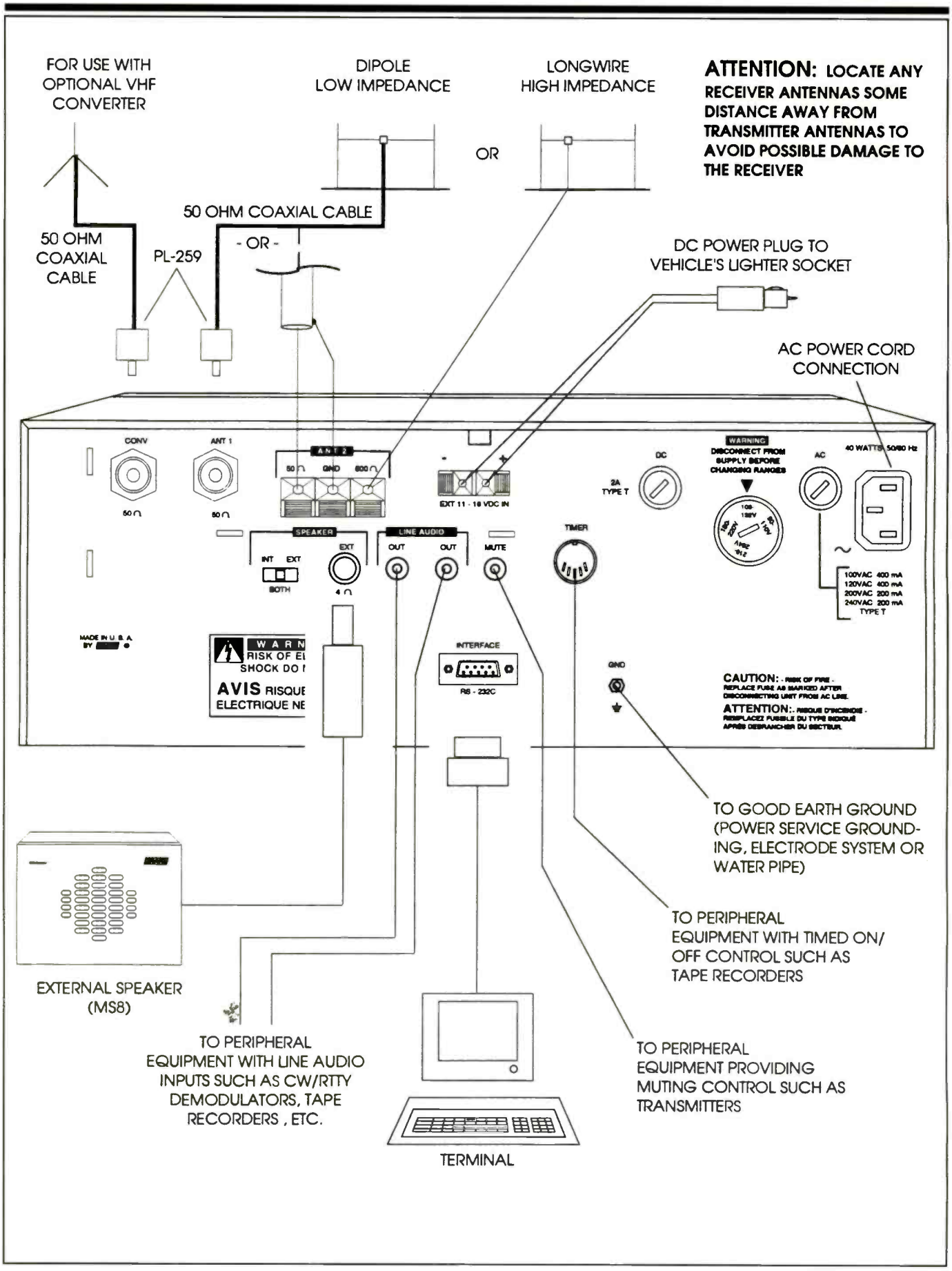
The R8B's noise blanker has two settings which are easily enabled or disabled at the push of a button. About the noise blanker, the manual states, " . . . which will reduce or eliminate much noise interference encountered." Right on the money, Drake! I'm plagued with intermittent power line noise and even computer-generated hash at my monitoring post, that often reads between S7 and 9 on the receiver's meter. Enabling the noise blanker in 8 out of 10 instances completely eliminated my power line and manmade electrical noise. I realize that this is a pretty strong statement to make, especially considering the many readers who are also tortured by noise, but the effectiveness of the R8B's noise blanker circuit truly amazed me, to the point where I found myself turning the noise blanker on and off several times just to experiment with eliminating noise. (Perhaps New Jersey's GPU will be hearing less from me now!)

Synchro - Selectable Sideband Synchronous Detector

It's true that we see lots of fading of shortwave signals, and doing something about it is usually beyond your control, but it isn't with the R8B. Once an AM station is tuned in, adjust the **Passband Offset** control, and press AM/SYNC to activate the synchronous detector. The word "SYNC" will be displayed in the window, and flashes briefly until a "lock" is achieved, delivering to your ears the best possible audio of a fading signal, or one that's arriving at your antenna at varying effects of propagation. It's truly a worthwhile control that you'll use quite often! It can also be used to reject interference from an adjacent signal. Since an AM signal is comprised of two sidebands, additional careful adjusting of the tuning wheel, in conjunction with use of the AM/SYNC button to tune either sideband of the desired signal, will typically allow the detector to "lock" onto the desired signal with amazing clarity. If you're still not satisfied, you can use the SYNC control in conjunction with pressing either the LSB or USB button (you'll still be in the AM mode), putting you in the SSSD mode to further separate offending signals.

Additional Features And Operation

Also in the new R8B is the alphanumeric display, and an improved AGC (automatic gain control) for sideband monitoring. Speaking of SSB monitoring, the receiver automatically selects the 2.3 kHz bandwidth filter for either USB



A look at the rear panel of the R8B.

or LSB. However, if you experience interference from an adjacent station, you can always manually select the built-in 1.8 kHz filter, which is automatically selected if you're tuning RTTY signals. I checked out several military frequencies including 11175 and 6761 kHz to see how well the R8B fared rejecting adjacent channel interference. The pre-set 2.3 kHz bandwidth filter sufficiently reduced or eliminated nearby interference, especially when I used it in conjunction with the Passband Offset control. It only needed a minor adjustment to provide clear reception of sideband stations on frequencies where interference was a problem.

On the AM side of the house, the R8B also shines brightly. With so many powerhouse international broadcasters around these days, hearing a low-powered station on a nearby frequency can be a challenge for many receivers. Not the R8B. The 49-meter band at night can be a listener's nightmare — or dream — depending on your receiver and antenna combination. With my outdoor 50-foot longwire, stations would boom in, easily pushing the analog S-meter to the limit. Hearing stations between these monster broadcasters isn't easy, but the R8B, continuing on the tradition of the former R8, performed flawlessly. Most of my shortwave listening is done using the 4.0 kHz bandwidth which is just narrow enough to reject adjacent stations, but when the going gets rough, switching to the narrower 2.3 kHz (normally reserved for sideband reception) the desired stations are pulled out of the mud with only a slight degradation in audio quality — truly, a very impressive filter!

My only criticism of the R8B is a minor one: The new flip-down metal bar that elevates the receiver for a proper viewing angle takes near super-human strength to pry the bail open, but once it's opened and holding up the radio, it's certainly a lot sturdier than the older plastic feet that snapped off on my R8. Otherwise, the new R8B is loaded with features that make it a top-of-the-line receiver.

But if you asked me for a short one-liner evaluation of the new Drake R8B, it would be "it's a classy, smooth, well-thought-out and engineered receiver for the serious DXer as well as casual listener." Drake has clearly listened to the suggestions and comments from R8 and R7 owners; the R8B is the culmination of their years of experience and dedication to the communications hobby.

There's also an optional VHF converter accessory that provides you with additional frequency coverage of 35 to 55 and 108 to 174 MHz. Drake recommends a qualified service tech install the converter. It typically sells for about $199.

Coming next month, we'll look at a receiver control program specifically designed for the R8 family of receivers called FirstRate. It really lives up to its name. It comes with a complete database of shortwave broadcasters. Install FirstRate in Windows™ and simply connect a serial cable between your computer and Drake R8, R8A or R8B, and you're in charge of a multitude of receiver functions with FirstRate. So be sure to check out next month's *Pop'Comm!*

The Drake R8B retails for $1,199, and is available directly from the R.L. Drake Company, 230 Industrial Drive, Franklin, OH 45005 with a 15-day money back guarantee, or from radio dealers nationwide. The receiver carries a one-year warranty. For additional information, be sure to stop by Drake's Web page at <http://www.rldrake.com> or call them at 513-746-4556. ■

The Listening Post

BY GERRY L. DEXTER

WHAT'S HAPPENING: INTERNATIONAL SHORTWAVE BROADCASTING BANDS

Around-The-Clock News From The VOA, And A New Brazilian Station On The Air!

The Voice of America — all news, all the time! This startling switch in programming philosophy at the VOA should be in place by now. The new format offers news in English around the clock, shortens the length of news items, and is designed to move at a faster pace. Hopefully, we'll continue to hear a wide variety of stories from, or about, a wide variety of places. And, hopefully, VOA won't become a news clock "VOA News time two past the hour," and, hopefully, we won't hear "traffic and weather together on the ones" or any of the other cute gimmicks used by today's all-news stations on the broadcast band.

Another VOA note: The relay station at Rhodes, Greece, was to have closed down sometime during July.

A new station on the air from Porto Alegre, Brazil, is **Sistema LBV Mundial**, a religious broadcaster operating on **11895**. We don't know their exact schedule, but give 'em a try during the afternoon and evening hours.

The **Voice of Asia**, a Taiwan government broadcaster which was merged with Radio Taipei International for a brief time, has been split off and is now a "separate" entity again. The Voice of Asia focuses its efforts on Asia (mostly mainland China) and operates on **7445** from 0800–0900 and 1100–1700. It also operates on a new frequency, **11745**, in Indonesian from 1600 sign-on.

A new station in Chile, **Voz Cristiana**, is continuing with what's proving to be a very long test period. It's still being heard well on **21550** — and sometimes one kilohertz up. Once things get rolling, their tentative schedule calls for broadcasts to Mexico and Central America from 1300–0100 on **21550** and from 0100–0600 on **11690**; to northern South America and the Caribbean from 1100–1400 on **15375**, 1400–2100 on **17680**, and 2100–0600 on **9360**; to Brazil at 0800–1100 on **11890**, 1100–2100 on **21500** (or 21550?) and 2100–0500 on an as yet unspecified 25-mb frequency. Also to southern South America from 0900–1200 on **6070**, 1200–2000 on **9635**, and 2000–0400 on **6070**. Tests are currently also taking place on **11890**. In all, there are eight transmitters at this site, located north of Santiago.

ENGLISH (SHORT-WAVE)

UTC	Frequencies (kHz)	Days	Programs
UNITED STATES, CARIBBEAN			
0100-0200	5960, &9535, 9755, &11715, &13670:	MO:	(RCI) NEWS / ARTS IN CANADA [4] / THE MAILBAG
		TU-SA:	(RCI) NEWS / SPECTRUM [1]
		SU:	(RCI) NEWS / VENTURE CANADA [6] / EARTH WATCH [5]
0200-0230	9535, 11715, 9755, 13670:	TU-SA:	(RCI) NEWS / SPECTRUM [1]
0200-0300	9535, 9755, 11715, 13670:	SU:	(CBC) NEWS / THE GREAT EASTERN [4] MADLY OFF IN ALL DIRECTIONS [4]
		MO:	(CBC) NEWS / TAPESTRY [4]
1200-1300	9640, 11855, 13650:	MO:	(CBC) NEWS / INSIDE TRACK [3] MADLY OFF IN ALL DIRECTIONS [4]
		TU-SA:	(CBC) NEWS / AS IT HAPPENS [1]
		SU:	(CBC) NEWS / QUIRKS AND QUARKS [5]
1300-1359	9640, 11855, 13650:	TU-FR:	(CBC) NEWS / THIS MORNING, TONIGHT [1]
		MO:	(CBC) NEWS / P. GZOWSKI'S FORUM [1] / OUT FRONT [1]
1500-1600	11855, 13650:	SU:	(CBC) NEWS / THIS MORNING [1]
2200-2230	5960, 9755, 13670, 15305:	MO-FR:	(CBC) THE WORLD AT SIX [2]
		SA-SU:	(CBC) THE WORLD THIS WEEK-END [2]
2230-2300	5960, 9755, 13670:	SAT:	(CBC) NEWS / MYSTERY PROJECT [4]
		SUN:	(CBC) NEWS / SOUND ADVICE [4]
2230-0000	5960,9755, 13670:	MO-TH:	(CBC) NEWS / AS IT HAPPENS [1]
		FR:	(CBC) NEWS / AS IT HAPPENS [1] / C'EST LA VIE [1]
2300-2330	11895, 15305:	MO-FR:	(CBC) THE WORLD AT SIX [2]
2300-0000	5960, 9755, 11895, 13670, 15305:	SA:	(CBC) NEWS / QUIRKS AND QUARKS [5]
		SU:	(CBC) NEWS / SOUND ADVICE [4]
MIDDLE EAST			
0400-0430@	9715U, 11835W, 11975V:	TU-SA:	(RCI) NEWS / SPECTRUM [1]
		SU:	(RCI) NEWS / VENTURE CANADA [6]
		MO:	(RCI) NEWS / THE MAILBAG
1330-1400	15325S:	MO-FR:	(RCI) NEWS / SPECTRUM [1]
		SA:	(RCI) NEWS / VENTURE CANADA [6]
		SU:	(RCI) NEWS / THE MAILBAG
2000-2100@	5995U, 7235U, 11690, 13650, 15325, 17870:	MO-FR:	(RCI) NEWS / SPECTRUM [1]
		SA:	(RCI) NEWS / VENTURE CANADA [6] / EARTH WATCH [5]
		SU:	(RCI) NEWS / ARTS IN CANADA [4] / THE MAILBAG
2100-2130@	11890U:	MO-FR:	(CBC) THE WORLD AT SIX [2]
		SA:	(CBC) NEWS / MADLY OFF IN ALL DIRECTIONS [4]
		SU:	(CBC) NEWS / THE INSIDE TRACK [3]

UTC	Frequencies (kHz)	Days	Programs
LATIN AMERICA			
0100-0200	5960, &9535 9755, &11715, &13870:	MO:	(RCI) NEWS / ARTS IN CANADA [4] / THE MAILBAG
		TU-SA:	(RCI) NEWS / SPECTRUM [1]
		SU:	(RCI) NEWS / VENTURE CANADA [6] / EARTH WATCH [5]
0200-0230	9535, 9755, 11715, 13670:	TU-SA:	(RCI) NEWS / SPECTRUM [1]
0200-0300	9535, 9755, 11715, 13670:	SU:	(CBC) NEWS / THE GREAT EASTERN [4] / MADLY OFF IN ALL DIRECTIONS [4]
		MO:	(CBC) NEWS / TAPESTRY [4]
2200-2230	5960, 9755, 13670, 15305:	MO-FR:	(CBC) THE WORLD AT SIX [2]
		SA-SU:	(CBC) THE WORLD THIS WEEK-END [2]
2300-2330	11995, 15305:	MO-FR:	(CBC) THE WORLD AT SIX [2]
2300-0000	5960, 9755, 11895, 13670, 15305:	SA:	(CBC) NEWS / QUIRKS AND QUARKS [5]
		SU:	(CBC) NEWS / SOUND ADVICE [4]
ASIA			
1200-1230	9660Y, 15195Y:	MO-FR:	(RCI) NEWS / SPECTRUM [1]
		SA:	(RCI) NEWS / EARTH WATCH [5]
		SU:	(RCI) NEWS / ARTS IN CANADA [4]
1330-1357	9535X, 11795X:	MO-FR:	(RCI) NEWS / SPECTRUM [1]
		SA:	(RCI) NEWS / VENTURE CANADA [6]
		SU:	(RCI) NEWS / THE MAILBAG
1630-1657	6140X, 7150X:	MO-FR:	(RCI) NEWS / SPECTRUM [1]
		SA:	(RCI) NEWS / VENTURE CANADA [6]
		SU	(RCI) NEWS / THE MAILBAG
2200-2230	11705Y:	MO-FR:	(CBC) THE WORLD AT SIX [2]
		SA&SU:	(CBC) WORLD THIS WEEK-END [2]
EUROPE, AFRICA			
1330-1400	11935U, 15325S, #17820:	MO-FR:	(RCI) NEWS / SPECTRUM [1]
		SA:	(RCI) NEWS / VENTURE CANADA [6]
		SU:	(RCI) NEWS / THE MAILBAG
2000-2100@	5995U, 7235U, 11690, 13650, 13670, 15150, 15325, 17820, 17870:	MO-FR:	(RCI) NEWS / SPECTRUM [1]
		SA:	(RCI) NEWS / VENTURE CANADA [6] / EARTH WATCH [5]
		SU:	(RCI) NEWS / ARTS IN CANADA [4] / THE MAILBAG
2100-2130@	7235U, 11690, 11890U, 13650, 13670, 15150, 15325, 17820:	MO-FR:	(CBC) THE WORLD AT SIX [2]
		SA:	(CBC) NEWS / MADLY OFF IN ALL DIRECTIONS [4]
		SU:	(CBC) NEWS / THE INSIDE TRACK [3]
CANADIAN ARMED FORCES			
TO EUROPE, AFRICA AND MIDDLE EAST:			
0500-0530@	7295U, 9595U, 11835U, 15429U:	MO-FR:	(RCI) NEWS / CFN GOOD MORNING [7]

Here's the current schedule for Radio Canada International in English. Note, too, the schedule of broadcasts by Canadian Armed Forces Radio.

A "new" Costa Rican shortwaver is **Radio 88 Estero** in Perez Zelendon on **6071**. This station was reported briefly about a year ago, but was forced to put things on hold due to the engineer becoming ill. The station relays the local San Jose FM outlet on 88.5 and operates from 1000–0500. The address is Apartado 827-8000, Perez Zelendon, Costa Rica. You're probably going to have trouble copying this one due to CFRX/CFRB's occupancy of 6070.

Remember RTBF, the Belgian French language community station which used to broadcast on shortwave? Well, it's sup-

posed to return, only not via the Belgian-based transmitters of Radio Vlaanderen International it formerly used. These transmitters are in constant use by RVI, so RTBF is seeking to rent time somewhere. It's always great to see stations realize the error of their ways, even if it does take time for the light to go on — in this case about seven years!

Maybe the dark cloud hanging over HCJB's transmitter site, in the form of a new airport planned for Pifo, isn't as dark as first thought, or is at least approaching from a lot further away. Reports now say that the Ecuadoran government hasn't yet made a commitment to begin building the airport. If the airport is not built, then the Pifo transmitting site would not have to be torn down. A lot will depend on which party wins the upcoming elections, due to be held in August.

Remember, we always seek and welcome your input. Logs should be listed by country, just as they are here. Please double space (at a minimum) and include your last name and state abbreviation after each item. Also sought are photos of you at your listening post, spare QSL cards you don't need returned, station photos, schedules, brochures, and background information. Thanks for your continuing interest and cooperation!

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

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.

ABKHAZIA — Radio Republik Abkhazie, tentative, **9494.7** at 0329 with tone, open carrier, chorus, talk, piano. This station was heard during an amazing opening to Eastern Europe and the Mideast. (Paszkiewicz, WI)

ALBANIA — Radio Tirana, **6025, 7135, 7160** at 0246. (Miller, WA) **6090v** at 0050 with local folk music, talk in Albanian. Good level but unstable, wobbly carrier creating het with Caribbean Beacon on 6090. **//7269.89, 6113.26** at 0245, poor. Better on parallel **7160**. Also **7283.6v** and **7257.2** at 0150 to 0220, weak and distorted. Parallel **6080** with slight wobble. (Alexander, PA) **7160** at 0250, 0340. (Delfratte, PA)

ANDAMAN ISLANDS (India) — All India Radio, Port Blair, tentative, **4760** at 1152 to 1214 fade. YL talk, subcontinental music, tabla drums, possible mention of Port Blair, flute. (Paszkiewicz, WI)

ANTIGUA — BBC relay, **5975** at 2200 and 0000. (Jeffery, NY)

ARGENTINA — Radio Nacional, **15345**, poor in SS at 2331. (Miller, WA)

ASCENSION ISLAND — BBC relay African program stream, **15400** at 2000 and **17830** at 1808. (Jeffery, NY)

AUSTRALIA — ABC, VL8T, Tennant Creek, **2325** at 1112 with fishing program.

This sharp QSL is from RDP Internacional, the Portuguese government broadcaster which discontinued foreign language broadcasts earlier in the year, and now airs programs in Portuguese only. (Thanks: Andy Johns, Texas)

(Foss, AK) Radio Australia, **9580** at 0805, parallel **9710**. Also at 1220. **9710** at 1135. (Delfratte, PA) **9710** at 1031 with news in unidentified language. (Gillihan, AR) 1046 in EE and Tok Pisin. (Ziegner, MA) **15240** at 0432 and **17795** at 0233. (Jeffery, NY)

AUSTRIA — Radio Austria Int'l, **9495** at 0204. (Harris, TN) 0237 with "Radio E." (Jeffery, NY) **13730** at 1650 with ID in GG, symphonic music. (Delfratte, PA)

BOSNIA — Radio Yugoslavia relay, **6185** at 2158 with IS, ID, news. Also **9720** at 1931 with news. Barely audible. (Jeffery, NY)

BOTSWANA — VOAS relay, **7340** at 0305. //9885. (Dybka, TN) **9885** at 0319 with "Daybreak Africa." (Jeffery, NY)

BRAZIL — Radio Brazil Tropical, **5015** in PP heard at 0020 with Brazilian music. (Delfratte, PA) Radio Nacional do Amazonia, **11780** at 2313 in PP. (Miller, WA) **15445** at 1220 with news in EE. (Delfratte, PA) Radio Brazil Central, **11815** in PP at 0800 with ID, "mas potencia" and mention of Goiania. (Dybka, TN) Radio Clube, Ribeiro Preto, **15414.78** at 0210 with Brazil pops. PP announcements, commercials, jingles. Weak. (Alexander, PA) Radio Capixaba, Vitoria, **4935** at 0506 in PP. (Miller, WA)

BULGARIA — Radio Bulgaria, **7375** at 0210 with ID, music. Also **11720** at 2325 with "Magazine Economy" show. (Delfratte, PA)

CANADA — BBC Sackville relay, **6175** at 0400, **9515** at 1300, 1400; **15220** at 1450, **17840** at 1700. (Jeffery, NY) **CHU,** Ottawa, time station, **3330** at 1021, **7335** at 1039, **14670** at 2127. (Gillihan, AR) Radio Japan Sackville relay, **5960** at 0335 in JJ and **6120** at 1225 in EE. (Jeffery, NY) Radio Canada Int'l, **15235** at 2008. (Gillihan, AR)

CHILE — Voz Cristiana, **21550** at 1300 to 1400 in SS with music. (Wallesen, IL) 21551 at 2358 to 0102 with test broadcasts. 15 minutes of music with IS and SS IDs at 0000 and 0032, EE IDs at 0014 and 0047. (Silvi, OH)

CHINA — Voice of Pujiang, **3280** at 1118 with CC vocals. (Foss, AK) China Radio Int'l, **9690** (via Spain) at 0330. (Delfratte, PA) **9730** (via Fr. Guiana) at 0301 in CC. (Wilden, IN) **9945** at 1230 with trade news. (Northrup, MO) **15400** at 0957. (Gillihan, AR) **13610** Central People's Broadcasting Station (presumed) 1240 to 1351 fade. All CC, with a couple of U.S. tunes. (Silvi, OH)

COLOMBIA — Radio Nacional, 4955 at 0417 in SS. (Miller, WA)

COSTA RICA — RFPI, **6980 SSB** at 0800. (Delfratte, PA) **7385** at 0525. (Foss, AK) **15050 SSB** at 1930. (Jeffery, NY) Radio Exterior de Espana relay, **11815** at 2220 in SS. (Jeffery, NY) Adventist World Radio, **5030** at 0320 in SS with classical music. (Jeffery, NY) **9725** at 1220 with Voice of Prophecy broadcast. (Delfratte, PA) Radio Reloj, **4832** in SS at 1038. (Gillihan, AR)

CROATIA — Croatian Radio on **new 9925** heard at 0130–0230 with talk. (Paszkiewicz, WI)

CUBA — Radio Havana Cuba, **6000** heard at 0454. (Gillihan, AR) **9820** at 0529. (Delfratte, PA) **12000** 2nd harmonic, at 0410. (Alexander, PA)

CZECH REPUBLIC — Radio Prague, **7345** heard at 0315 and **9595** at 1130. (Delfratte, PA) **9435** at 2237. (Jeffery, NY) 0258 "You are tuned to Radio Prague, the external service of the Czech Republic." (Miller, WA)

DENMARK — Radio Denmark (via Norway), **13800** at 1330 with station ID and news in DD. (Delfratte, PA)

DOMINICAN REPUBLIC — Radio Cristal Int'l, **5013v** at 0014 to 0100 possible Sign-off. Much music and occasional SS announcer, several clear IDs. (Silvi, OH)

ECUADOR — HCJB, **9745//15295** at 0408; **15140** at 2225 in SS, **17790** at 1826 in unidentified language. (Jeffery, NY) **12005** at 1130. (Gillihan, AR) **21455 USB** at 1600. (Silvi, OH) Radio Centro, Ambato, **3289.87** at 1025, continuous SS talk, ID at 1054. (Alexander, PA)

EGYPT — Radio Cairo, **9900** at 2200. 0000 with Egyptian tunes, EE ID and lesson. (Delfratte, PA)

ENGLAND — BBC, **7325** at 0501 with news in AA. (Foss, AK)

FINLAND — Radio Finland Int'l, **11785** at 1517 in FF. (Miller, WA)

FRANCE — Radio France Int'l, **9715** at 2243. (Harris, TX) **11700** at 0749 in FF. (Foss, AK) **21580** at 1620 in FF to Africa. (Silvi, OH)

FRENCH GUIANA — Swiss Radio Int'l relay, **9905** at 0211. (Harris, TN) Radio Japan relay, **11895** at 0420 in SS. (Jeffery, NY)

GABON — Africa Number One, **9580** at 2146 in FF. (Miller, WA) Radio France Int'l relay, **15540** at 1225 with news. (Delfratte, PA)

GERMANY — Deutsche Welle/Voice of Germany, **6100** (Foss, AK) **9615** at 2141. (Gillihan, AR) **11810** at 0116. (Wilden, IN) **21705** at 1602 in GG/AA. (Silvi, OH)

GREECE — Voice of Greece, **6260** at 0345, also **15630** at 1230. (Delfratte, PA) **11645** at 0758 in Greek. (Foss, AK) VOA relay, **7200** at 0234. (Dybka, TN)

GUAM — KTWR, **9820** at 1203 in unidentified language. (Gillihan, AR) KSDA, **11775** at 2315. (Delafratte, PA)

GUATEMALA — Radio Coatan, San Sebastian, **4800** at 1204 in SS. (Miller, WA) Radio Tezulutlan, Coban, **4835** in SS at 1127. (Gillihan, AR)

HAWAII — KWHR, **9930** at 0531 with religion. (Foss, AK) 0815. (Delfratte, PA) **17510** at 0251 and **17555** at 0241, not in parallel. (Jeffery, NY)

HUNGARY — Radio Budapest, **9580** heard at 0102. (Wilden, IN) 0215. (Delfratte, PA) **9840** at 2146 in presumed Hungarian. (Gillihan, AR) **11700** at 2121 with news, features, music, ID. Off at 2129. (Jeffery, NY)

INDIA — All India Radio, **11620** at 2100 with news. (Gillihan, AR) **11900** at 0135 to 0200 close. Talk in language and exotic vocals. (Paszkiewicz, WI)

INDONESIA — Voice of Indonesia, Jakarta, **9525** at 1258 with ID by woman, anthem and sign-off at 1300. (Miller, WA) **11785** heard at 0838 sign-on with flute, frequencies, IDs at 0853 and 0859 — "You are listening to the Voice of Indonesia in Jakarta."

IRAN — VOIRI, **9022** with music at 0121. (Harris, TN)

IRAQ — Radio Iraq Int'l, **11785** at 0250 in EE with current events, ID, AA music. (Paszkiewicz, WI) 2158 to 2251 close. Into EE at 2202 with news, comment, AA pops, anti-American talks, ID. Poor to fair. (Alexander, PA)

IRELAND — Radio 1, Dublin, via relay, **12160** at 2015 with soccer scores, mentions of "Radio One, medium wave." (Wilden, IN)

ISRAEL — Kol Israel, **11585** at 1625 in Hebrew. (Miller, WA) Reshet Bet domestic

International shortwave broadcast listeners visit the modern studios of Radio Singapore International.

Radio Slovakia International sent this beautiful, full-color QSL card to Andy Johns in Texas.

service, **9390** at 2208 in HH with music, off 2215. (Jeffery, NY)

ITALY — RAI, **21535** heard at 1545 in presumed II to South America, music and then seemingly live sports event. (Silvi, OH)

JAPAN — Radio Japan, **9505** at 0611. (Foss, AK) **9515** at 0230 with IS, ID. (Paszkiewicz, WI) **9835** at 1240 in CC or JJ. Classical music. (Northrup, MO) at 1415 "This is Radio Japan, NHK World Network, Tokyo." (Delfratte, PA)

JORDAN — Radio Jordan, **11690** at 1500 with DX program. (Miller, WA)

KIRIBATI — Radio Kiribati, **9810** at 0600 in EE with music. (Gentry, PA)

KUWAIT — Radio Kuwait, **9855** at 2238 in AA. (Harris, TN) **11657** at 0304 in AA. (Miller, WA)

LIBERIA — Radio Veritas, **3450** at 0600. Poor. (Gentry, PA) **5470** at 0600 with short chorus, opening announcements. (Paszkiewicz, WI) 0715 with news, ID and station promos, short breaks of African folk or pop. (Alexander, PA)

LIBYA — Radio Jamahiriya, **15415** at 2242 in AA. (Miller, WA)

MADAGASCAR — Radio Netherlands relay, **9860** at 0124 and **11655** at 0222. (Jeffery, NY) RTV Malagasy, **5009.59** at 0254 sign-on with xylophone IS, choral anthem, announcements by woman in vernacular, talk, local religious choral music. (Alexander, PA)

MALAYSIA — Radio Malaysia, Sarawak, **7270** heard at 1444, unidentified language. (Miller, WA)

MEXICO — XERTA, **4800.7** at 0105 to past 0300 with SS announcements, rancheras, EE ID at 0204. (Alexander, PA) Radio Educacion, **6185** at 0148 in SS. (Miller, WA)

MONGOLIA — Voice of Mongolia, **12085** at 1112 in Mongolian; 1230 in EE. (Ziegner, MA) 1200 with "What Happened in Mongolia This Past Week." (Gentry, PA) 1200–1229 close with EE to Southeast Asia. (Alexander, PA)

MOROCCO — Radio Medi Un, **9575** at 2349 with Middle Eastern music. (Miller, WA) Voice of America relay, **15410** at 1929. (Harris, TN) 2003 with news. (Jeffery, NY)

NEW ZEALAND — Radio New Zealand Int'l, **9700** at 0804. News was interrupted with special weather bulletin for the Cook Islands. (Dybka, TN) **11905** at 0548. (Foss, AK) **15115** at 2032 with sports. (Miller, WA) **17675** at 0125. (Jeffery, NY)

NETHERLANDS ANTILLES — Radio Netherlands Bonaire relay, **9715** at 1158 with IS, ID, into SS. (Gillihan, AR) **15315** at 1929. (Jeffery, NY)

NIGERIA — Voice of Nigeria, **7255** at 2010 and 0625. (Alexander, PA) **15120** at 2000 with news. (Gentry, PA) 2012 with commentary. (Paszkiewicz, WI) 2035 with African news. (Miller, WA)

NORTH KOREA — Central People's Broadcasting Station, **2850** in KK at 1057, YL in KK at 1100. **Also 9665** at 0755 in KK. (Foss, AK) Radio Pyongyang, **13790** at 0551 in KK. (Foss, AK)

NORWAY — Radio Norway Int'l, **7465** heard at 0200 with EE ID, Norwegian news. (Delfratte, PA)

OMAN — Radio Oman, **9735** in AA monitored heard at 2048 with call-in program. (Ziegner, MA)

PAKISTAN — Radio Pakistan, **11570** monitored at 1742 in unidentified language. (Miller, WA)

PARAGUAY — Radio Nacional, **9735** in SS heard at 0037 with political discussion. (Miller, WA)

PERU — Radio Libertad, Junin, **5039.2** 0955 in SS with pops, folk, echo announcements, ID. (Alexander, PA) Radio Sudamerica, Cutervo, **5522.2** at 0230 to 0238 sign-off, SS talk, folk music, announcements, ID, abrupt off. (Alexander, PA) Radio Huancabamba, **6535.75** at 0015 to 0104 close, OA folk music, SS talks, ID. Off with national anthem. S/off time varies. (Alexander, PA) Radio Huamachuco, **6676** at 0100 in SS. (Gentry, PA) Radio Altura, Cerro de Pasco, **3339.93**, 1008 to past 1100 in SS with OA folk music, ID. (Alexander, PA) Radio Huancabamba, **6535** at 0100 in SS. (Gentry, PA) Radio Atlantida, Iquitos, **4790** at 1000 in SS. (Gentry, PA) Radio Oriente, Yurimaguas, **6188** at 1100 in SS. (Gentry, PA) Radio Ancash, Huaraz, **4991** at 0451 in SS. (Miller, WA) Radio Cora, Lima, **4915** in SS at 0731. (Foss, AK)

PHILIPPINES — Radio Philipinas, **11890** at 1737 in Tagalog. (Miller, WA) Voice of America relay, **17735** at 2225 and **17820** at 2232. (Jeffery, NY)

PORTUGAL — RDP Internacional, **9570** at 0200 in PP. (Miller, WA)

ROMANIA — Radio Romania, **6155** at 0208. (Paszkiewicz, WI)

RUSSIA — Radio Tikhy Okean, Khabarovsk, **7489** at 1254 with JJ music, IS and sign-off at 0450. (Miller, WA) Magadan Radio, **9530** at 0649 in RR. (Foss, AK) Radio France Int'l, via Irkutsk, **7420** at 0935 in presumed CC. (Dybka, TN) Radio Netherlands via Petropavlovsk-Kamchatsky, **7260** at 0940. //**9810** via Irkutsk. (Dybka, TN)

RWANDA — Deutsche Welle relay, **9765** at 2242 and **17860** at 1935. (Harris, TN) **21560** at 1606 with GG to Mideast. (Silvi, OH)

SINGAPORE — BBC relay to Asia/Pacific, **11955** at 2218. (Jeffery, NY)

SPAIN — Radio Exterior de Espana, **6055** heard at 0030. (Delafratte, PA) **11715** at 1026 in SS. (Gillihan, AR) **15110** at 2220 in SS. (Jeffery, NY)

SRI LANKA — Deutsche Welle relay, **11965** at 0208 in EE. (Paszkiewicz, WI)

SOUTH AFRICA — Channel Africa, **9525** at 0422 with IS, IDs in EE and FF, news in FF. (Jeffery, NY) **15240** at 1833 in FF to close at 1855. (Miller, WA)

SOUTH KOREA — Radio Korea Int'l, 0200 to North America. (Silvi, OH)

SWAZILAND — Trans World Radio, **4775** at 0419 with religious broadcast. (Miller, WA)

SWEDEN — Radio Sweden, **15235**// **17870** to North America at 1129–1159. **15235** very strong, 1870 very weak. (Silvi, OH)

SWITZERLAND — Swiss Radio Int'l, **9885** heard at 1250 with economic news. (Northrup, MO)

TAHITI — RFO Tahiti, **15170** at 0145 fade in until WYFR sign-on at 0358. Occasional male and female announcers in FF with lots of music including "island" type and U.S. pops.

Seemed to change languages one night at 0308, possibly into Tahitian? (Silvi, OH)

TAIWAN — Radio Taipei Int'l, via WYFR, **5950** at 0716. (Gillihan, AR) **9680** at 0336 and **17555** at 1825 in CC. (Jeffery, NY)

THAILAND — BBC relay to Asia/Pacific **11955** at 0354. Barely audible. (Jeffery, NY) Radio Thailand, **15395** at 0031 with news in EE. (Miller, WA)

TUNISIA — RTT Tunisienne, **7475** in AA at 0417. (Paszkiewicz, WI)

TURKEY — Voice of Turkey, **6135** at 2300. (Delfratte, PA) **7185** (new) at 0045 in TT. **Parallel 5980, 9445, 9460**. (Alexander, PA) **9655** at 2245, closing EE at 2248. (Harris, TN) **11885** at 0352. Piano IS, national anthem. (Miller, WA) **11955** at 2214 in TT. (Jeffery, NY) **15290** at 1330. (Ziegner, MA)

UGANDA — Radio Uganda on new **3345** at 0426 with news about Kampala and Uganda. (Paszkiewicz, WI)

UNITED ARAB EMIRATES — UAE Radio, Dubai, **15400** at 1330 with "Role of Proverbs in Arab Society." (Ziegner, MA) **21605** at 1601 with AA to Europe. (Silvi, OH)

UNITED STATES — WINB, **11950** at 0530. ID and address. (Hill, ID)

VANUATU — Radio Vanuatu, **4960** at 0806 with country style tunes. Man in Pidgin or FF at 0811. (Foss, AK)

VATICAN — Vatican Radio, **7360** at 0325. (Delfratte, PA) 0505. (Foss, AK) **9600**

CAMEROON RADIO TELEVISION CRTV QSL

Mr. Gerald Gentry,

CRTV Dear Listener,

CRTV This is to confirm the exactitude of your listener's report of

CRTV the broadcast from Cameroon Radio Television, CRTV.

CRTV Date : 4th January, 1998

CRTV Time : 2100 to 2325 UTC

CRTV Programme identification : Network News broadcast

CRTV Frequency : 4.850 khz in the 60mb Short Wave

CRTV Station location : CRTV Yaounde

CRTV We hope that you will continue to dial other short wave radio

CRTV stations in Cameroon and enjoy their programmes.

CRTV Please, inform members of your DX-CLUB that henceforth

CRTV all letters and reports should be addressed as below :

CRTV Mr. James Achanyi Fontem

CRTV Cameroon link

CRTV Short wave monitors

CRTV P.O. Box 1460 Douala - Cameroon

CRTV They should also include 2 (Two U.S. Dollars) for

CRTV sponsoring the return postage. We are currently organizing a

CRTV vaste national campaign against HIV / AIDS. Please, we need

CRTV your donation for assistance to persons with AIDS in the

CRTV efines. Thanks in advance for your support

Yours sincerely, 12 MAR 1998

Dear Gerald,
We are overwhelmed with the interest you show in our broadcast and especially radio networking. Extend our greetings to your entire household./-

Cameroon Radio and TV sent this QSL sheet to Gerald Gentry in VA. This station is known for making "above and beyond" requests in order to issue a QSL — in this case, $2.

at 2358 to 0000 close. (Miller, WA)

VENEZUELA — Radio Nacional, **9540** at 1100 with IDs and music. (Miller, WA) Ecos del Torbes, **4980** at 0350 in SS with guitar music, ID. (Delfratte, PA) 1035 in SS. (Gillihan, AR)

YEMEN — Republic of Yemen Radio, **9780** at 1456 in AA. (Miller, WA)

ZAMBIA — Christian Voice, **6265** with news at 0500. (Gentry, PA)

ZIMBABWE — Zimbabwe Broadcasting Corp., **3306** at 0425 with talks in EE and language, time checks, commercials, African music. (Paszkiewicz, WI) Presumed this on **4828** at 0340. Reactivated and appears to replace **3396**, vernacular. (Alexander, PA)

That does it for this time. Raise up a mighty cheer for the following who came through for all of us this time: Tricia Ziegner, Westford, MA; Mike Miller, Issaquah, WA; Lee Silvi, Mentor; OH; Tom Delfratte, Sharpsville, PA; Jill Dybka, Knozville, TN; Sheryl Paszkiewicz, Manitowoc, WI; Marty Foss, Talkeetna, AK; David Jeffery, Niagara Falls, NY; Gerald Gentry, Virginia Beach, VA; Thomas W. Hill, Mountain Home, ID; Paul Harris, Columbia, TN; Mark Northrup, Gladstone, MO; Bruce Alexander, Mechanicsburg, PA; Joey Gillihan, Bono, AR; Susan Wilden, Indianapolis, IN and Elmer Wallesen, La Grange, IL. Thanks to each one of you!

Until next month, good listening! ■

The ACARS Downlink

BY BOB EVANS

YOUR LINK TO DIGITAL AIRCRAFT COMMUNICATIONS

Service Message Indicators

In our last column we attempted to make sense of ACARS transmissions by examining the Technical Element Identifiers (TEIs) that make up much of the ACARS traffic we monitor. This month, our column focuses on another common element encountered in all traffic messages — namely Service Message Indicators.

An Service Message Indicator (SMI) is a three-letter code used at the beginning of the Service Message Transmission (SMT) to uniquely identify the type of SMT. Consider the following example:

```
.N321AA 5R 1
F005AA0475#M1AAEPN433524W08021362250370M5729759YAY/0105/370
.N321AA  Address: Aircraft Registration Mark:  American Airlines Boeing 767
5R       Downlink Message Label:
1        Downlink Block Identifier
F005     Message Sequence Number  (FMC Avionics Subsystem Downlink)
AA0475 American Airlines 475
#M1A     Message originated by Flight Management Computer #1
AEP      Fixed ICAO Format Position Report with Weather (SMI Code)
N433524          Current North Position: 43:35.24 degrees
W0802136         Current West position: 80:21:36 degrees
2250     Time over current position 22 hours 50 minutes
370      Flight Level FL370
M57      Outside Air Temperature - Minus 57 Celsius
297      Wind Direction; Blowing from 297 degrees
59       Wind Speed in Knots: 59
YAY      Next Position : St. Anthony Nfld VOR
/0105    Time at next position (St. Anthony) 0105
/370     Flight level at next position (St. Anthony) FL370
```

The above transmission contains a very common SMI code "AEP" for an Aircrew-Initiated Position report. If you locate AEP in the table, you will note two entries:

AEP 57 DN Alternate Aircrew Initiated Position Report 5.3.47 S
AEP 5R DN Aircrew Initiated Position Report 5.3.5 A, S

The values 5.3.47 and 5.3.5 identify the ARINC document sections were they are defined. If the SMI "AEP" were used in a message by itself, the message label could be 57 or 5R. The table indicates that message label "57" is only used by SITA for Alternate Aircrew Reports while message label 5R is used by both ARINC and SITA for standard reports.

The following SMIs are approved for use in ground-to-ground, air-to-ground, and ground-to-air operations; flight plans; and meteorological messages. Many airline companies have also defined their own SMIs.

Four major ACARS systems are found throughout the world, each using slightly different message protocols. These are ARINC (A), Air Canada (C), AVICOM Japan (J) and SITA (S) — the system prevalent in Europe. See the legend below.

A = ARINC
DN = Downlink
UP = Uplink
G/ G = Ground to Ground
C = AIR CANADA
J = AVICOM, JAPAN
S = SITA
N/A = Not Applicable

Note: The two-character sequences Ax and Bx thru BA are designated for ATS applications. These characters are used as labels for ATS messages to/ from an ACARS MU, and as Message Function Identifiers (MFIs) for ATS messages to/from an ACARS peripheral.

SMI Codes

SMI LABEL/SUBLABEL	UPLINK/DOWNLINK	DESCRIPTION	SOURCE
A80 to A~ 80 to 8~	ND	Aircrew-Addressed Downlink	A, S, C, J
AAM None	G/G	ACARS Station Advisory Messages	A
AEP 57	DN	Alternate Aircrew Initiated Position Report	S
AEP 5R	DN	Aircrew Initiated Position Report	A, S
AFD B0	DN	ATC Facility Notification (AFN)	
AFU A0	UP	ATS Facility Notification (AFN)	
AGM 5Z	DN	Airline Designated Downlink	S, C, J
AGM ABM 7B	DN	Aircrew Entered Miscellaneous Message	S, C, J
AGM N/ A 52	DN	Ground UTC Request	C
AID None	N/A	Airborne Instrumentation Data System	A
ALR None	N/A	Alerting Message	A
AOA None	G/G	ACARS Station(s) Outage Advisory	A
AOS None	G/G	ACARS Station(s) Outage Status Advisory	A
ARA None	G/G	ACARS Station(s) Restoral Advisory	A
ARI None	G/G	Fuel/ Close-out Report	A
ARR QS	DN	IN Report (ICAO Airport Code)	
ARR QM	DN	Arrival Information Reports ETA/Diversion Report	S
ARR QC	DN	ON Report (IATA Airport Code)	S, C, J
ARR QD	DN	IN Report (IATA Airport Code)	S, J
ARR F3	DN	Dedicated Transceiver Advisory	S, J
ARR QY	DN	Unassigned	
ARR QT	DN	OUT/Return IN Report (ICAO Airport Code)	
ARR Q1	DN	Departure/Arrival	S, J
ARR QL	DN	Arrival	S
ASA None	G/G	ACARS Station(s) Addition	A
ASD None	G/G	ACARS Station(s) Deletion	A
ATC BA	DN	ATC Communications	
ATC AA	UP	ATC	
AUD H1/AD	UP	ADS (To selected ATSU/ADSU)	
AUL H1/A1	UP	ADS (To left ATSU/ADSU)	
AUR H1/A2	UP	ADS (To right ATSU/ADSU)	
AVR 54	DN	ACARS Frequency Uplink	A, S
Axx		Aircrew-addressed downlink message, where xx is the label of a User-defined function (80~ 8~)	
CDAQ B4	DN	Departure Clearance Readback Downlink	S
CFD H1/CF	U/D	Central Fault Display	A, S, C, J
CFX H1/CF	UP	Central Fault Display (No Header)	A, S
CHO		Changeover or In-range Report	
CLA B2	DN	Oceanic Clearance Readback	S
CLD A3	UP	Departure Clearance	S
CLK Q3	DN	Clock Update Advisory	A, S
CLK Q3	DN	Airborne GMT Clock Request	C, J
CLR		Flight Clearance	
CLX A1	UP	Oceanic Clearance	S
CMD RA	UP	Command/Response Uplink	A, S, C, J
CNL None	N/A	Cancellation of Flight	A
CP1 to CP9 C1 to C9	UP	Designed Cockpit/Cabin Printer Messages	A, S, C, J
CPL None	N/A	Current Flight Plan	A
CPn		Cockpit/Cabin Printer Message, Where Printer Designator 0 thru 9	
CPO CO	UP	Undesignated Cockpit/Cabin Printer Message	A, S, C, J
DAI A9	UP	ATIS Report	S
DDS A8	UP	OUT/Fuel Report (IATA Airport Code)	S, J, C, A
DEP QW	DN		
DEP QH	DN	OUT Report (IATA Airport Code)	
DEP QP	DN	OUT Report (ICAO Airport Code)	
DEP QZ	DN	Unassigned	
DEP QF	DN	OFF/Destination Report (IATA Airport Code)	S, J
DEP QH	DN	OUT Report (IATA Airport Code)	S
DEP QB	DN	OFF Report (IATA Airport Code)	S, J
DEP QR	DN	ON Report (ICAO Airport Code)	
DEP QK	DN	Landing Report (ICAO Airport Code)	S
DEP QE	DN	OUT/Fuel Destination Report (IATA Airport Code)	S, J
DEP QU	DN	Unassigned	
DEP Q1	DN	Departure/Arrival Report	S, J
DEP Q1	DN	Departure/Arrival Report	C
DEP QV	DN	Unassigned 5. 3. 42	
DEP QQ	DN	Departure (ICAO Airport Code)	
DFD H1/DF	U/D	Digital Flight Acquisition Unit	A, S, J
DFX H1/AD	UP	Digital Flight Data Acquisition Unit	S
DIV QN	DN	Diversion Report	S
DLA Q7	DN	Delay Message	A, S, C, J
ECS H1/EC	DN	Engine Display System	
ENG 7A	DN	Aircrew Initiated Engine Data Takeoff Thrust Report	S, C, J
ENG H1/E1	DN	Engine Report	
ETA 5Y	DN	Aircrew Revision To Previous ETA/Diversion Report	S, J
ETA Q2	DN	Estimated Time of Arrival Report	A, C, J
ETR None	N/A	Aircrew-Initiated Revision to Previously Advised E.T.A.	
ETR None	N/A	Filed Flight Plan	A
FAM H1/MD	N/A	Flight Movement Advisory	A

FCD H1/M1	UP	Flight Management Computer	A
FCL H1/M2	UP	Flight Management Computer Left	A
FMD H1/MD	UP	Selected Flight Management Computer, (No Header)	A, S, C, J
FML H1/M1	U/D	Flight Management Computer, Left (No Header)	A, S, C, J
FMR H1/M2	U/D	Flight Management Computer, Right (No Header)	A, S, C, J
FPF None	N/A	Aircrew-Originated Request for Flight Plan Update	A
FPL		Filed Flight Plan	
FPR		Aircraft-Originated Request for Flight Plan Update via ACARS	
FPU None	N/A	Ground-Originated Flight Plan Update to Aircraft	A
FSM A4	UP	Flight Systems Message	S
FTD B7	DN	Free Text to ATC	S
FTU A7	UP	ATC Free Text	S
GVR 54	DN	Ground Party Address	S, C, J
GVR 54	UP	Voice Go-Ahead	S, C, J
HJK 00	DN	Emergency Situation Report (Aircraft Hijack)	A, S, C, J
LIF		Ground-Originated Aircraft Load Information	
M10 to M4~10/None to 4~	U/D	User Defined Messages (Header)	A, S, C, J
MED SA	DN	Media Advisory	
MNT		Aircraft Maintenance Message	
MVA M2	DN	IATA Movement Report: Arrival	S
MVA3 M3	DN	IATA Movement Report: Return to Ramp	S
MVA M4	DN	IATA Movement Report: Return from Airborne	S
MVA M1	DN	IATA Movement Report: Departure	S
MVA M2	DN	User-Defined Messages	A, S, C
Mxx		Miscellaneous User-Defined Message, Where xx is The Label of a User-Defined Function (10~ 4~)	
N/A j _	N/A	Reserved	S, J
N/A 51	DN	Ground GMT Request	S, J
N/A _ DEL	U/D	General Response (Demand Mode)	S, J
N/A Q6	DN	Voice Data Channel Changeover Advisory	S, J
N/A 5P	DN	Temporary Suspension	S, J
N/A :;	UP	Data Transceiver Auto-Tune	S, J
N/A Q4	UP	Voice Circuit Busy	S, J
N/A SQ	UP	Squitter Messages	S, J
N/A Q0	DN	Link Test	S, J
N/10-N4~ N1/10-H1/4~		User Defined Messages (No Header)	A, S, C, J
NOA H1/None	DN	Meteorological Report	S, C, J
OAT H1/None	UP	Optional Auxiliary Terminal	S
OAT H1/Any	U/D	Optional Auxiliary Terminal Message	A, S, C, J
OAT H1/PS	U/D	Keyboard/Display Unit	S, C
OAX Hy/Any	UP	Optional Auxiliary Terminal Message (No Header)	A, S
OAX H1/None	U/D	Optional Auxiliary Terminal	S
PAR B6	DN	Provide ADS Report	S
PDM None	G/G	Possible Duplicate Message	
POS		Position Report Without Weather	
PSN None	N/A	Aircrew Initiated Position Report With/Without Weather Information	
QTB None	G/G	Incomplete Message	A
RAI B9	DN	Request ATIS Report	S
RAR A6	UP	Request ADS Reports	S
RCD B3	DN	Request Departure Clearance	S
RCK B1	DN	Request Oceanic Clearance	S
RDO RB	DN	Command Response Downlink	C
RDO RB/~ to RB/~4	DN	Command/Response Miscellaneous Message Dwonlink	A
RDO None	DN	Out/Return Report	A
RDS B8	DN	Request Departure Slot	S
REJ HX	DN	Undelivered Uplink Report	
REM None		Remarks	A
RTN QG	DN	OUT Report	
RTN QG	DN	OUT/Return IN Report (IATA Airport Code)	S, J
SDD H1/SD	U/D	SDU, Selected (No Header)	
SDL H1/S1	U/D	SDU, Left (No Header)	
SDR H1/H2	U/D	SDU, Right (No Header)	
SNR S1	UP	Network Statistics Report Request	
SPL None	DN	Supplemental Flight Plan	A
SVC None	G/G	Communications Service Message	A
SVC CC	G/G	Printer in Local or Test Mode	S, J
SVC Q5	G/G	Unable to Deliver Uplink Messages	S, J
SVC CE	G/G	Printer Buffer Overrun	S, J
SVC CD	G/G	Printer Out of Pager S, J	
SVC CF	G/G	Printer Initialized Before Completion	S, J
SVC CA		Communication Service Message, Printer Status Annunciation - Error in Printer	C, J
SVC CB	G/G	Printer	S, J
THR None	N/A	Aircrew-Initiated or Auto-Sensed Takeoff Thrust	A
TIS None	DN	Automated Terminal Information Service Report (ATIS)	A
TIS 5D	DN	ATIS Request	S, C, J
TT1 - TT8 H1/T1 - H1/T8	U/D	Cabin Terminal Messages (No Header)	A, S
TWI AB	UP	Terminal Weather Information for Pilots	A
TWR BB	DN	Terminal Weather Information for Pilots	A
TX1 - TX8 H1/T! - H1/T8	UP	Cabin Terminal Messages (No Header)	A, S
Q9 DN		Unassigned	
WXM H2	DN	Meteorological Report	
WXO H1/WO	N/A	Weathr Observation Report	A, J
WX 5U	DN	Weather Request	A, S, C, J

The Ham Column

BY KIRK KLEINSCHMIDT, NTØZ

GETTING STARTED AS A RADIO AMATEUR

Traveling With Amateur Radio

Using your handheld 2-meter rig to work your buddies across town is a lot of fun, but taking your radio along on your next cross-country outing will really broaden your radio horizons. You'll enjoy added safety and increased fun, and you're likely to make a batch of new friends along the way.

But before hitting the road, make sure you know how to use your radio — especially the tricky programming functions you use only occasionally for setting repeater splits and subaudible tones, for example. Brush up on how to power your handheld (from batteries and from your car's cigarette lighter socket) and how to boost its signal using car-mounted antennas, bigger "rubber duckies," and so on. A little extra effort up front will make life on the road a lot easier! And don't forget to review repeater etiquette and procedures, too!

All Set? Here We Go!

While you're traveling, most repeaters you'll use will be on frequencies other than the ones you're used to seeing. How will you know what those frequencies are, and where the repeaters are located? The 1998–1999 *ARRL Repeater Directory*, a pocket-size reference that's a must-have for traveling VHF and UHF operators, is probably the best single info source (it's available from your favorite amateur radio products dealer or directly from the ARRL). RadioShack's *North American Repeater Atlas* is also handy.

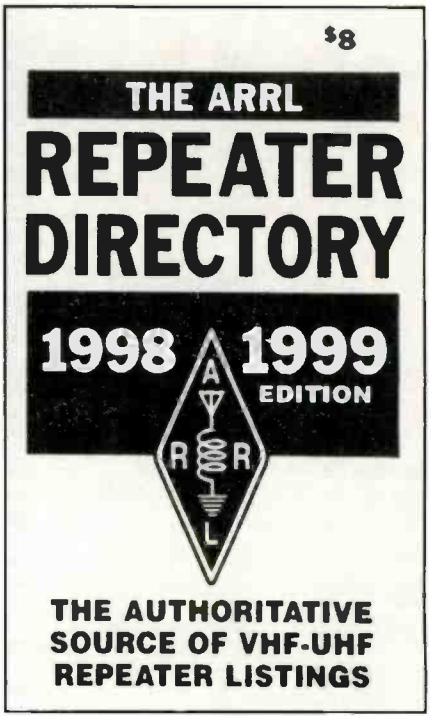
Accessing repeaters on the road is a lot like using the ones you're familiar with close to home. Common sense will take you far, as will common courtesy. And don't be shy about letting people know you're on the air and traveling through their little corner of the world. Most hams will welcome you to whatever machine you're keying up. The few who won't aren't worth bothering with anyway.

Over-The-Road Radio

If you're not sure how ham radio can make traveling better than ever, try the following activities on for size. Remember: you may make so many new friends along the way, that extra time may be required. You'll also come up with your own activities and procedures once you're underway. Have fun!

☞ Ragchewing: Ham radio's oldest activity is the mainstay of many radio-active travelers. On 2-meters, towns, repeaters, and conversations come and go periodically, depending on local geography and population. There are a lot of interesting people to chat with, that's for sure. With your rig along, you'll meet them for yourself. You'll discuss skydiving, cookie recipes, steam tractors, wild nightclubs — or all the above! Just be sure to coax the "lurkers" into action with your "This is WLXYZ travelin' through" calls on new machines.

☞ Travel Emergencies: This is why many hams carry VHF/UHF radios (or cellular phones) in their cars. The nature of your



The ARRL Repeater Directory *is available from your favorite amateur radio dealer or the ARRL.*

Two-Meter Mobiling Tips

• Listen to new repeaters before transmitting. If you have an emergency, however, step right up and key the mic. Often, the machine's voice controller will periodically announce any special operating procedures or events taking place.

• To let people know you're around, simply say, "This is WLXYZ monitoring." Or, while being brief, be a bit more revealing: "This is WLXYZ from Hartford, Connecticut, traveling through Ottumwa on County Road B." Or be specific: "This is WLXYZ. I'm just east of Ottumwa and I'm looking for directions." Ham radio still is a friendly hobby. Don't be afraid to let people know you're interested in chatting.

• Don't kerchunk the repeater! Pause briefly after each transmission to keep the machine clear for emergency traffic.

• If you get a rip-roaring conversation started, move to a simplex frequency, if possible, to free up the repeater for more mobile traffic. In some rural areas, repeaters are almost never busy. If the locals seem content to ragchew on their machine, feel free to follow their lead, remembering to pause after transmissions, of course!

emergency will determine how you use the local radio systems. If lives are at stake, don't worry about etiquette: Get in there and grab the mic. Emergency ops have the whole show, so if your need is legitimate, everyone will assist you.

☞ Asking for Directions: Although not exactly ragchewing, asking for directions often can whip up a good conversation. Some hams seem to live to dispense travel advice, and somehow they know every nook and cranny of the surrounding countryside. These folks are priceless resources for travelers.

☞ Eye-to-Eye: If your cross-country pace is leisurely, on-air ragchews can occasionally lead to face-to-face encounters (called an "eyeball QSO" in some parts). You'll may be invited to lunch or coffee, or to see someone's new ultralight airplane, or whatever! In addition to the friends you'll likely make, these side adventures could be more interesting than your planned destinations, so don't discount them up front!

☞ Ham and Eggs? In many parts of the country, hams get together for a Saturday morning breakfast that's usually held at a local family restaurant (days and times vary regionally, so ask around). The hour that these group get-togethers commence usually depends on tradition and the average age of those attending: old-timers usually get up early, baby boomers often like to sleep late on weekends. Some Saturday morning groups hang around for stragglers all morning long.

☞ Flea Markets and Hamfests: What traveling ham could bypass a hamfest? Certainly not me! The hamfest calendar listings in *CQ Amateur Radio*, *CQ VHF*, or *QST* will keep you up-to-date on most hamfests and swap meets. And don't worry about finding the place: someone will always be able to "talk you in" via repeater or simplex. Ask around for unpublicized events, too. They're out there!

☞ Public Service Monitoring: Many modern FM handhelds receive frequencies outside the 144- or 440-MHz amateur bands. These frequencies often include aeronautical, police, fire, sheriff, trains, public service, federal government, military, and business, among others. Some newer rigs even double as VHF scanners, adding fun to what might otherwise be boring miles. Yet, some states restrict mobile scanners, so be sure to behave yourself appropriately — at least in situations where your radio may be eyed suspiciously by authorities. A run-in with the local authorities won't improve your travel itinerary!

☞ Funnel Clouds and Flash Floods: NOAA weather radio broadcasts on 162.400, 162.475, and 162.550 MHz are run by the National Weather Service. These continuous broadcasts contain weather forecasts, observations, and alerts for whatever area you happen to be traveling through. If your 2-meter rig can receive the NOAA broadcasts, you'll have a 24-hour "weather channel" along for the ride.

☞ Hiking and Cycling: If your travel destinations include more adventurous outdoor activities, your handheld transceiver will more than likely be up to the tasks of emergency and casual communications (and it may help you receive weather alerts). The same considerations apply, although weight and bulk probably will be more important. If your outdoor adventure party includes other hams, having your handheld in your gear makes even more sense.

☞ A Room with a View: Elevation and VHF go hand in hand. During your travels you'll probably come across some type of towering structure, natural or man-made. If you're going to the top — even if it's to a hotel room on the 24th floor — take your HT along. See how far it'll "get out." If conditions are right (summer is the season), you will be surprised! Be careful: this can be addictive!

This short list of travel activities is far from complete, but I hope you can see that there's a lot of fun to be had in making your FM rig a mandatory traveling companion. Here's to the open road — and those open repeaters!

Do you have a topic you'd like to see covered in "The Ham Column"? Send your suggestions, QSL cards, and letters to me c/o *Popular Communications*, 25 Newbridge Road, Hicksville, NY 11801. I'd like to know what you're interested in, so don't be shy! ■

BY RICHARD "RD" BAKER
<CommConf@concentric.net>

Communications Confidential

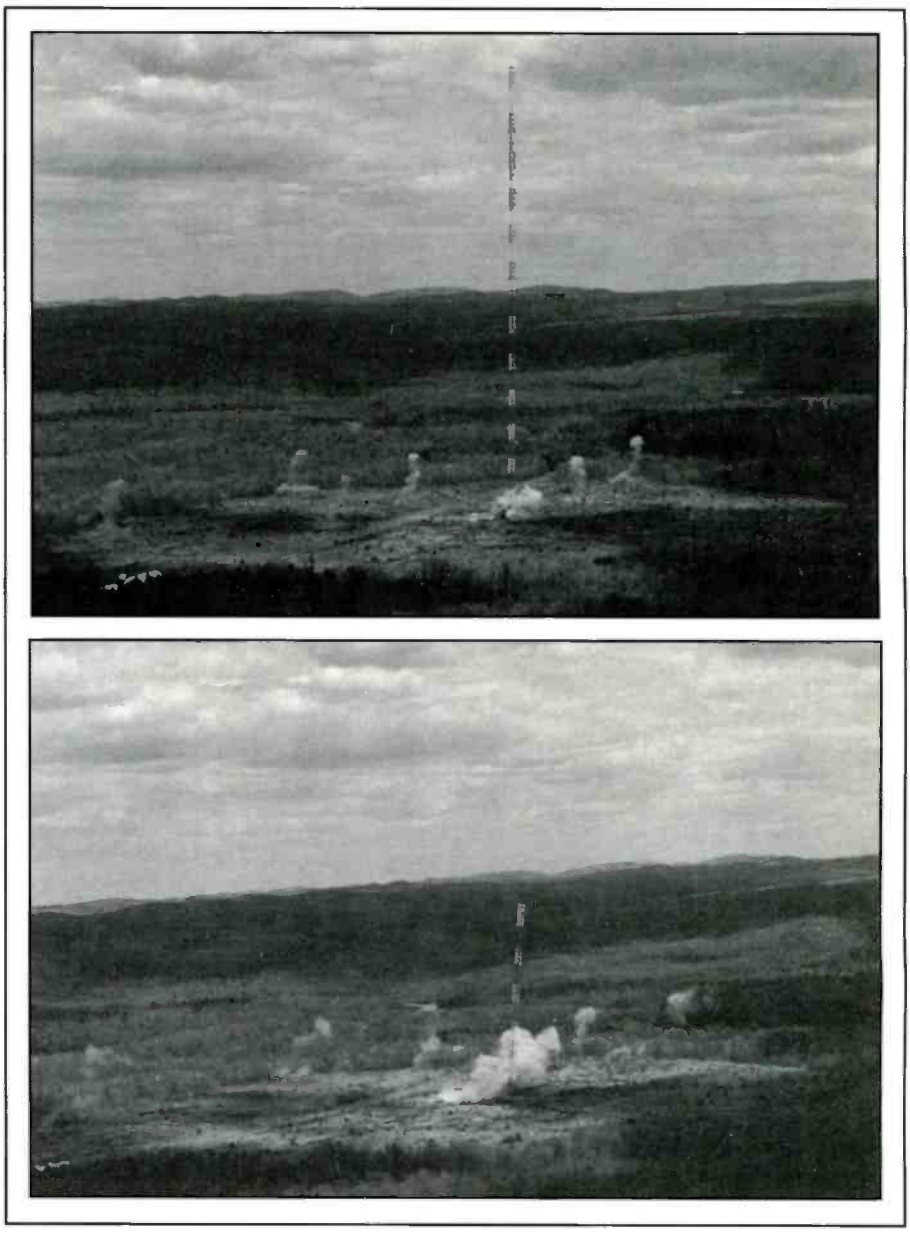
YOUR GUIDE TO SHORTWAVE "UTILITY" STATIONS

The Ships Of Greenpeace

Greenpeace earned its first fame by sailing into the U.S. atomic test site in the North Pacific, and from the fights it's engaged in to save the seals and the whales. More recent battles with the French government have earned them greater acknowledgment. Greenpeace's ships have proved to be an effective ally in Greenpeace protest actions. Indeed, some of these vessels have become known worldwide.

The S/V *Rainbow Warrior*, callsign PC8024, was inspired by a North American Indian legend which prophesies that when man has destroyed the world through his greed, the Warriors of the Rainbow will arise to save it again. Probably one of the better-known ship names in the fleet, the new *Rainbow Warrior* replaces the original sunk by the French secret service in 1985. The motor-assisted, three-masted schooner was rebuilt on the hull of the former fishing vessel *Grampian Fame*, and launched on July 10, 1989, the anniversary of the sinking of her predecessor. Equipped with the latest in electronic navigation, sailing, and communications equipment, she's an oceangoing vessel intended for assignments in the Pacific. She's some 555 gross tons.

M/V *Sirius*, callsign PHNA, is named for the star Sirius, the brightest in the firmament and a positive portent since ancient times. The *Sirius*, at 380 gross tons, was built to naval specifications at "Boele" shipyard in the Netherlands in 1950 as one of seven pilot vessels owned by the Dutch government. In early May of 1981, the ship was dry-docked in Scheveningen, where a handful of volunteers labored to get the vessel shipshape. In just 10 weeks, volunteers of all ages and from many countries came on board for a few days, or a few weeks, to help out. The ship's color scheme was changed to a green hull and rainbow colors, and a white dove of peace with an olive branch was painted on the bow. Since 1986, the vessel has operated almost continuously in the Mediterranean, with occasional campaigns in the North Sea. She's also homeported at Amsterdam, Netherlands.



As reported last month, the 1,218-foot antenna at the USAF's Rome Labs Forestport Site was brought down by explosives in April, as seen in these photos. (Photos courtesy AFRL Information Directorate/Albert Santacroce)

Another well-known ship of the fleet is the M/V *Greenpeace*, callsign PC8023, a Dutch-built former deep sea salvage tug of some 905 gross tons, and purchased by Greenpeace in 1985. It was the readied for Antarctica where it has already been six times for campaigns against whaling and the establishment of Greenpeace's World Park Base. It's been a very active ship in the Greenpeace fleet, straight from its first involvement in the anti-nuclear

testing demonstration at Moruroa Atoll in 1985, where it had taken over from the *Rainbow Warrior*. In 1995 the M/V *Greenpeace* joined the Greenpeace Peace flotilla in French Polynesia to protest the resumption of French nuclear testing in Moruroa and Fangataufa. The ship was logged many times during this campaign by shortwave UTE hobbyists around the world. Besides campaigns, M/V *Greenpeace* has made several research trips. A helicopter pad was added in 1986.

The 949 gross ton M/V *Arctic Sunrise*, callsign PCTK, is Greenpeace's latest addition to its fleet. The sea-going motor yacht is the former seismic research vessel *Polar Bjorn* and is homeported in Amsterdam, Netherlands. A vessel that has spent most of its life in ice regions, it's now been converted to a full-fledged "campaigning" vessel. Towards the end of 1996, the vessel was prepared for its first visit to the Antarctic.

M/V *Moby Dick*, callsign PC8031, was built in the Netherlands in 1959, and spent 27 years as a fishing vessel before joining Greenpeace. Its weight is some 118 gross tons. Greenpeace bought her in 1986, and, in just two weeks, the organization had her converted to a Greenpeace ship. Sporting her coat of green paint on the hull, the rainbow, and white whale on the bow, the *Moby Dick* left Hamburg, Germany, for its first campaign on May 31, 1986. *Moby Dick* operates mainly in the North Sea and in the Baltic although she also spent time in the U.S., campaigning on the Great Lakes, the Mississippi, and in the Gulf of Mexico.

Greenpeace Comms

M/V *Beluga*, callsign DPJP, is a river ship, and is named for the small white whales that used to appear in European rivers before pollution. The *Beluga* was built in 1960, and purchased from the City of Bremen, Fire Department, in 1984. She is some 84 gross tons. Greenpeace workers and some 40 volunteers spent over 10,000 hours converting the former inshore fire-fighting patrol boat into a laboratory ship for work in rivers, estuaries, harbors, and coastal waters. Her territory, according to Greenpeace, has been the Rhine, Elbe, Schelde, Weser, Thames, Humber, Tyne, Tees, Mersey, Meuse, and Seine rivers; the Westerschelde and the Waddensee; the coasts of England, Sweden, and Denmark; the Great Lakes, and the Mississippi.

All Greenpeace ship-to-shore communications took place on HF up to 1984, when they started installing their first Inmarsat terminals. A lot of those comms went through station KMC-237, Greenpeace, San Francisco, California, manned by Dick Dillman. The station had been located in his bedroom and comms were in Morse Code (CW). Dick reports the last great HF comms exchange was in 1983 when the (old) M/V *Rainbow Warrior* landed a crew at a whaling station/mink farm in Siberia and was being chased by the Russian Navy back across the Bering Sea. Everything was on Morse. According to Dick, "I asked the radio op, my friend Lloyd, 'What are your intentions?' He replied, "Our intentions are to proceed to Nome unless fired upon!" Worldwide press was amazed at the exchange by the "brass pounders." KMC-237 is off the air right now, but may return to the air after some equipment problems are fixed.

Primary traffic today is via satellite, but the ship's radio operators often set up schedules for informal chats. Check the maritime **simplex** frequencies at the top and bottom of each hour, especially **8297.0** and **12365.0 kHz USB,** where they have been logged before. These chats are often in Dutch, but one should be able to make out the callsigns. If there is a major Greenpeace effort going on, it's a good time to look for the vessels involved. Last summer, there was an anti-logging campaign in the forests of British Columbia, but their satellite terminals were useless, as the satellites were too low on the horizon for them to see from the valleys and fjords in which they were operating. Luckily they had sent several Kachina MP-25 portable HF backpack radios to use and had one ICOM IC-707 100-watt radio for a base. Plus, there was the HF radio on the M/V *Moby Dick*, the vessel on scene. With this equipment they were able to communicate.

To QSL Greenpeace ships, send requests to: (name of ship), Greenpeace Marine Services, Attn: Tim Gortner, Keizersgracht 176, Amsterdam 1016DW, Netherlands. Good hunting!

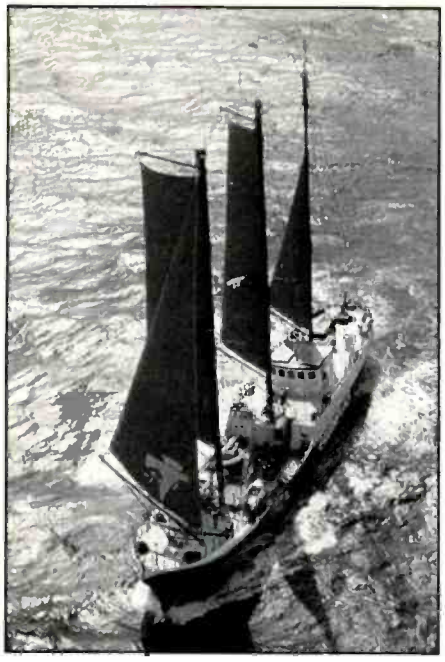
More UTE News

Lucky Navy fans were treated to two Joint Task Force Exercises recently: one on the west coast and one on the east. More than 16,000 sailors, marines, airmen, and reservists participated in a major exercise April 13 through 24 off the Southern California Coast in Pacific Joint

USAF B-2A SPIRIT Serial Numbers and Names

82-1066 DEVELOPMENT AIR VEHICLE 1
82-1067 DEVELOPMENT AIR VEHICLE 2
82-1068 SPIRIT OF NEW YORK (FORMER DEVELOPMENT AIR VEHICLE 3)
82-1069 DEVELOPMENT AIR VEHICLE 4
82-1070 SPIRIT OF OHIO (FORMER DEVELOPMENT AIR VEHICLE 5)
82-1071 SPIRIT OF ARIZONA (FORMER DEVELOPMENT AIR VEHICLE 6)
88-0328 SPIRIT OF TEXAS
88-0329 SPIRIT OF MISSOURI
88-0330 SPIRIT OF CALIFORNIA
88-0331 SPIRIT OF SOUTH CAROLINA
88-0332 SPIRIT OF WASHINGTON
89-0127 SPIRIT OF KANSAS
89-0128 SPIRIT OF NEBRASKA
89-0129 SPIRIT OF GEORGIA
90-0040 SPIRIT OF HAWAII
90-0041 SPIRIT OF ALASKA
92-0700 SPIRIT OF OKLAHOMA
93-1085 SPIRIT OF FLORIDA
93-1086 SPIRIT OF KITTY HAWK
93-1087 SPIRIT OF PENNSYLVANIA
93-1088 SPIRIT OF LOUISIANA

***Table 1**. List of B-2A names compiled by Dave Wright*



The beautiful S/V Rainbow Warrior *under sail. The new* Rainbow Warrior *replaces the original, which was sunk by the French secret service in 1985.*

Task Force Exercise 98-1 (PAC JTFEX 98-1). This 3rd Fleet exercise involved more than 25 ships, and various types of fixed-wing aircraft and helicopters from the *USS Abraham Lincoln* (CVN-72) Carrier Battle Group (CVBG) and the *USS Essex* (LHD-2) Amphibious Ready Group (ARG). PAC JTFEX 98-1 is the final training evaluation that certifies the forces for deployment to the Arabian Gulf this summer. On the east coast, we had JTFEX 98-2 for the Atlantic Fleet involving the *USS Dwight D. Eisenhower* CVBG prior to their deployment to Mediterranean Sea/Arabian Gulf area. Both were heard here in Ohio, providing a rare behind-the-scenes look at these realistic scenarios.

In other events reported by the *Navy News Service (NNS)*, the newest Seawolf-class nuclear submarine was named the *Jimmy Carter* (SSN-23). The sub is scheduled to join the fleet in the year 2001. Beginning May 29, the *USS Nimitz* (CVN-68) will undergo a 33-month overhaul that includes alterations, repairs, maintenance, and refueling of her nuclear reactors. So it may be a while before she is logged again. Astute UTE fans will recall that she and the *USS Nimitz* were "the stars" of the movie "The Final Countdown" a few years back. Oh yes, Martin Sheen and Kirk Douglas were in the movie, too . . . hi! The newly commissioned Arleigh Burke-class aegis missile destroyer *USS McFaul* (DDG-74) arrived at her new homeport of Naval Station Norfolk on April 30. *McFaul* was commissioned in Savannah, Georgia, April 25. The ship is named in honor of Chief Engineman (SEAL) Donald L. McFaul, who was killed during Operation "Just Cause," which drove Panamanian dictator Manuel Noreiga from power. No word yet on a callsign. The *USS Reid* (FFG-30), homeported in San Diego, began her eighth and final deployment April 23. Reid will conduct counter-narcotics operations in international waters in the Eastern Pacific in a joint effort with the U.S. Coast Guard under direction of Joint Interagency Task Force West. So you can soon cross her off your lists.

The *Air Force News Service* is reporting that the legendary SR-71 Blackbird, a pioneer in reconnaissance aircraft, will be "permanently retired from Air Force operations." The Air Force currently owns six SR-71 reconnaissance aircraft. Two SR-71A operational models were brought back to active duty in 1995 at the direction of Congress; two, including the SR-71B trainer model, are on loan to NASA for their high-altitude testing program; and two remain in returnable storage. It looks like the NASA birds will be the last chance to log an SR-71. Also, the Air Force has officially accepted the first of two C-38A aircraft. The C-38A, tail No. 94-1569, will be based at Andrews Air Force Base, Maryland, where the C-38A will replace the C-21. Because of its specialized electronics, the C-38A can assist in command, control, and communications in time of disaster or war.

During the first attempt to launch the space shuttle on STS-90, some new frequencies were passed. The frequencies that would have been used were **4708.4** (range safety) and **5718.4** (booster recovery) as passed along by Cape Radio on **10780.0 kHz**. This is an interesting departure from previously used frequencies that almost uniquely ended in ".0" rather than an offset.

Sad news from the PCH, Scheveningen Radio, Holland, Web site at <http://home.pi.net/~tdpch/schevrad.htm>. According to information there, the historic maritime station will close on January 1, 1999.

Reader Mail

Dan Ramos (California) has the possible solution to Mike Scott's mystery reported in the April, 1998, column. Normal CB with voice transmissions are Class "D." Dan thinks what Mike heard was a station transmitting on a Class "C" CB channel. Class C allows for remote control airplanes and paging, but no voice or music. The Class C frequencies are scattered throughout the Class D channels and are 27.045, 27.095, 27.145, 27.195, and 26.995 MHz. Scott's walkie-talkies probably weren't very selective, and hence his receiving of what sounded like a paging station. The newer CB was probably more selective. There you have it. Thanks Dan!

Table 1 is a list of B-2 bomber tail numbers and their corresponding name provided by Dave Wright (Texas). Most of the B-2 "Spirits" are named after a state.

Alan Gale tells us that the new 1998 edition of the *RAF Handbook* just came out, with lots of the usual good information plus a very informative four-page article about the new ARCC at Kinloss. This book explains why Alan has heard "Kinloss Primary" and Kinloss "Alternative" a few months ago. It seems they built a second control center just a short distance from the main one with everything duplicated in case of a major failure. The article contains a nice shot of the control room and assets, but gives the bad news that a future plan is to communicate with SAR helos via satellite data bursts. Alan also reports that there seems to have been a change in callsigns for some of the UK SAR helos over the past month. The 22 Squadron now seems to be using "SRG" instead of "SRD" prefixes, though one or two pilots seem to still use the old ones out of habit. Some other unusual calls have been heard, such as SRG 34, SRD 040, and SRG 09, but Alan is still attempting to work out what these all are.

It looks like all active SAR helos are now just going to be SRG, with SRD possibly replacing some of the SMG calls (training and HQ flights). It also appears that the German "Papa Charlie" prefixes are not allocated in any particular daily order, but rather on an "as needed" basis. The Swedes are using three different prefixes: Hotel, Yankee, and Quebec. When the "Hotel" prefixes are on air, all communications are in English only, while the others are usually just Swedish, but with the occasional bit of English used. The Norwegians and Germans seem to use mainly English, but will sometimes switch to local languages for long messages. The German operators will say in English "now in the German language" before changing.

Finally, RTE-1, the state broadcaster of the Irish Republic, has a weekly program dedicated to Marine matters, called

"Seascapes." This is broadcast at 2030 UTC every Thursday, and often features regular pieces from IMES (Irish Maritime Emergency Service), RNLI (Royal National Lifeboat Organization), and the Commissioners, or Irish Lights. The good news, for those with Internet access, is that details of this program (and back episodes!) are available in Real Audio from RTE's Web site at: <http://www.rte.ie/radio/index.html>. Also, the latest Marine news from the "Airtel" Teletext pages can be found at: <http://www.rte.ie/aertel/p384.htm>. Alan also noted an interesting item on last week's program which said that IMES would become the Irish Coastguard later this year.

Jeffrey S. Austin is now doing the QSLs for the U.S. Coast Guard, CAMSLANT Chesapeake, VA, NMN. You can receive a QSL card from CAMSLANT by sending a report via regular post to: U.S. Coast Guard CAMSLANT, 4720 Mile Post Road, Chesapeake, VA 23322-4202, USA, ATTN: TC3 Jeffrey S Austin or via e-mail at: <qsl/camslant@internet.uscg.mil>. Jeffrey suggests readers also check out their Web page at: <http://www.uscg.mil/lantarea/camslant/index.htm>.

Now, on with the show . . .

Another member of the Greenpeace fleet is the M/V Greenpeace, *seen here after installation of an aft helo pad in 1986. (Photos courtesy Greenpeace)*

UTE Logging's SSB/CW/DIGITAL

206: NDB LR, Las Cruces, nightly. (BF)
251: "SV," new NDB at the Silver City, NM airport at 0300, used to be identified as SVC but dropped the "C." It is not listed anywhere as far as I can find. However, flying right over it, you can't miss it. (BF)
410: BA, Columbus, IN heard at 0209. MSB, Iola, KS at 0210. XBR, Ft. Rucker, AL at 0210. (BF)
464: NDB RS, Risalpur, Pakistan & Beacon ZO, Billingsa, Russia at 0230, however, they were being interfered with by a female voice in an unid language in AM.
657: North Korean nbr stn (R. Pyongyang) hrd in powerful AM at 1500. Also noted on 3250,6400 kHz. (TY)
2118: M/V Stefania I at 0200 in USB wkg Sydney CG Radio, Canada, re collision w/ derelict barge, vsl enrt back homeport. (RK)
2182: MAYDAY at 0854 fm S/V Pooh Grew (55 ft yacht) re vsl taking on water near the Bahamas. USCG Group Moriches (NY) responds & tells skipped how to fix pump. Pump is repaired but can't fix leak. Group Moriches notifies Key West Group & all QSY 5696 at 1000. Key West adv cutter was enrt along with helo to hoist crew. USCG Southwest Harbor Group at 0128 clg USCGC Adak no joy. MAYDAY fm F/V Alaska King at 0400, vsl had run aground on underwater reef & raised CommSta Kodiak & USCG Adak Group, posn 55-42N/176-55E, ship was breaking up. CG helo later rescued all on board. M/T Emerald Star wkg CCG vsl Terry Fox re crew member of tanker wanted to talk to his brother aboard the Terry Fox which was going on arctic patrol. Hrd at 0450. All in USB. (RK)
2357.5: OUA32, Danish Navy Aarhus, DNK at 2159 in CW w/VVV marker. (AB)
2391: PIUM, mv Ijsselborg at 2304 w/mv Flinterzijl (PECX), req change to 2420 kHz. PCUN, mv Arrow, at 0001 w/mv Emmaplein. Both in USB. (AB)
2591: ARCHITECT at 0320 in USB w/aero wx, mostly unreadable in QRN. (AWH)
2592: IPL, Livorno Radio, at 2156 in USB w/nav wng. (AB)
2656: IPA, Ancona Radio, at 2151 in USB w/nav wng. (AB)
2688.5: LOV3, Rio Grande Naval, Arg at 0200 in RTTY 100/170 w/5LG tfc. (AWH)
2762: Kinloss Rescue, Scotland at 0740 in USB, passing mountain area wx forecasts to "Alpine 24" then clg "Rescue 131". (HOOD)
2824: PCG, Scheveningen Radio, HOL at 2150 in USB, tape w/msg that PCG is not available. (AB)
2863: Tokyo Volmet w/avian wx info in USB at 0910 in EE. Also noted on 13282, 8828, 6679 kHz. (TY)
3016: Air Europe 731 wkg Shanwick Oceanic for psn rpt in USB at 0746. (HOOD)
3116: Khabarovsk Volmet w/avian wx info in RR at 1945 in USB. (TY)
3137: Cuban babbler & voice net at 0438 on in USB; open carrier noted here several hrs previous, finally some tfc, SS/OM w/long counts, telco noise, then "6589" net type tfc w/several stations incl OCTAVO CUARTO (who is also heard on 5637). After 0500 some Babbler tfc proper. Maybe night time freq for 5637. (AWH)
3194.9: "R": Russian Navy Ustinov, RUS at 2114 in CW w/channel marker. (AB) "R"-Russian Navy single letter HF CW marker at 1634, where is the "R" stn? (TY) *(Ary was nice enough to pass that on in his log! — Ed.)*
3212.9: Russian Air Defense, RUS heard at 2057 in CW w/BT990057???????? (time = UTC+4). (AB)
3640: CI02, Mossad, Israel, hrd in USB at 1745. Also noted on 5230, 7605 kHz. (TY)
3698: Cuban Atencion spook stn at 1200 in AM w/5FGs already in progress. (AWH)
3810: HD2IOA, TS Guayaquil, Ecuador at 0800 in AM w/time pips & ann. in SS, first time I've heard it in several years. (IJ)
4015: USCG CommSta New Orleans, La at 1149 in USB clg W0X, norep. (AWH) *(a new CG freq for me — Ed.)*
4040: Unid tactical comms, U.S. (Navy?) at 1355 in USB w/3E wkg 5B re setting up radios. (AWH)
4073: Unid "time" station at 2315 in CW, transmits time in UTC+4. Is one minute ahead of DCF77. (AB)
4178: Fishing vsl LOUIS EVRARD (FNKL) in ARQ at 0752 wkg Bern Radio w/msg reporting transit of Pentland Firth. (HOOD)
4395: FOXTROT WHISKEY, Air Defense Warning (ADW) net for PAC JTFEX (Pacific Joint Fleet Exercise) 98-1 at 0218 in USB w/USS Abraham Lincoln battle group; at 0245 FW wkg FR re a/c 101 & 102 (VF-31 F-14 Tomcat nose numbers) will return after start of event. (*Ed.*)
4405: WOM, AT&T Florida at 0503 in USB w/ship/shore high seas call for the ship "Celebration." (SW) *(Carnival's 47,260 DWT cruiseship, c/s ELFT8 — Ed.)*
4447: P0U, unid NATO(?) tactical net, w/stns M4U, 9YO, 9YE, others at 2043 in USB, various nationalities, Dutch, German, Italian, French, Spanish & English accents. (AB)
4575: "V" (Khiva) Russian Navy single letter HF CW marker at 1322. (TY)

Abbreviations Used For Intercepts

AM	Amplitude Modulation mode
BC	Broadcast
CW	Morse Code mode
EE	English
GG	German
ID	Identification/Ied/location
LSB	Lower Sideband mode
OM	Male operator
PP	Portuguese
SS	Spanish
tfc	Traffic
USB	Upper Sideband mode
w/	With
wx	Weather report/forecast
YL	Female operator
4F	4-figure coded groups (i.e. 5739)
5F	5-figure coded groups
5L	5-letter coded groups (i.e. IGRXJ)

4622: FJA, Papeete Radio, Tahiti at 0640 in USB, OM/FF w/NAV warnings. (IJ)
4625: U.S. Tactical at 1158 in USB, BDUE wkg BJ5D, BZGP, B2GP, B1GP, passing verbal a/c track info. Not all stations in net audible. Odd callsigns. (AWH) *(probably one of the two carrier battle groups mentioned this month — Ed.)*
4634.5: Unid oil rig at 1216 in USB, unreadable callsigns as usual. (AWH)
4645: V, Russian Navy Khiva, RUS at 2209 w/CW channel marker. (AB)
4663: Tashkent Volmet, Uzbekistan, w/avian wx info in EE in USB heard at 1810. Another day, Khabarovsk Volmet, Russia, heard at 1135. (TY)
4665: MIW2, Mossad, Israel, hrd in USB at 1815. (TY)
4716.6: At 0009 H5J in USB wkg Group Key West w/posrep, QSY 3A9 for comm check in green. (AWH)
4745: IDR & IGJ IN Rome & Augusta Italy at 0535 in USB w/radio checks. (IJ)
5072: Russian counting station, RUS heard at 0600 in USB various callsigns & 10-digit msgs. (AB)
5091: JSR, Mossad, Israel, hrd in USB at 1830. (TY)
5144.5: KYF, Dutch Army exercises, HOL at 2020 in USB stations in the net: KYF, KFF, EUN, KNN, RNM, HNM, MKO, LFF, MRU. On-line encrypted RTTY on 5146 kHz. (AB)
5230: CIO, Mossad, ISR at 2049 in AM w/CIO2 broadcast. (AB) Abnormal Mossad callsign hrd. Mossad lady Rptng "CI016L12" in phonetics for more than 30 mins at 2245 in USB. Also noted on 7605 kHz. (TY)
5293.5: CCM, Colombian Navy, Magallanes, Chile at 0800 in RTTY 100/425 w/5LG's. (IJ)
5298.5: Gendarme Net, Noumea, New Caledonia at 0630 in RTTY 100/425 w/NON "PARKING DE LA FOL NOUMEA" headered tfc. (IJ)
5300: Gendarme Net, Noumea, New Caledonia & Papeete, Tahiti at 0635 in LSB re coordinating a RTTY Link, tfc in FF. These stations have become quite active again over the recent week. Only heard a couple of times last year. This freq was very active back in the late '80s & early '90s primarily for passport checks, now seems to be only used for setting up RTTY comms. (IJ)
5307: Cuba "6589" type net 1215–1500ish in USB, brief SS/OM QSO, at 1350 recheck had 4FG tfc read by man using cardinal numbers. At 1358 running Russian vocoder w/accompanying digital 100/170 key stream, lots to say, maybe numbers. Telco hum between transmissions. (AWH)
5320: USCG Group Ft. Macon at 1215 wkg CG41425, assumed radio guard, in Gulf of Mexico. (AWH) *(CG 41-foot patrol boat, rare catch on HF — Ed.)* RESCUE 2101, USCG HU-25B at 0318 clg unid for radio check. (DW) Both in USB.
5322: FDI22, French Air Force Narbonne, F in 2017 in CW w/VVV marker. (AB)
5377: 12B & 14, New Zealand Army at 2135 in USB w/radio checks & logistical msgs. (IJ)
5411: USS Eisenhower Battle Group at 0100 to 0200 in USB, using phonetic alphabet callsigns (i.e. KILO, FOXTROT, CHARLIE, etc.), traffic concerned course/speed duration, data links, & when certain callsigns would go multi freq. (RM)
5422: Lincolnshire Poacher in USB at 2200. Also noted on 6485, 8464 kHz. (TY)
5435: ART2, Mossad, Israel, hrd in USB at 1800. (TY)
5550: New York Radio at 0212 in USB w/various Selcal checks, KINGAIR 1960, FORCE 427 & CHINA 217, along w/LIFEGUARD were among flights checking in. (SW) *(Lifeguard is an air ambulance on a medical mission callsign, not common on HF — Ed.)*
5637: Cuba, EMPRESA FINAL wkg OCTAVO CUARTO 1400, also Babbler w/short counts. (AWH)
5680: Echo Sierra (Irish helo EI-MES) at 1316 clg Malin Radio (IRL). SRG 123 at 1145 in r/check w/Kinloss (G). SRG 122 at 1133 wkg Kinloss. Navy 703 at 1219 in r/check w/Kinloss. "Bullseye Formation" at 1416 wkg Kinloss. Wessex & Puma helos enrt from Liverpool to Aldergrove rqst r/watch. St. Anthony's CG Radio at 2324 w/test cnt. Foxtrot 97 (RAF Puma) at 1425 clg Kinloss for r/watch, enrt from EGAS (RAF Shawbury) to EGAA, Belfast Aldergrove. Kinloss Rescue at 1057 wkg Magic 98. Sluff 95 then clg Magic 98 to ask if he could assist. R123 at 1126 clg Magic 98, QSY 376.8 MHz. Sea King 599 at 1024 clg Kinloss for ground r/check. Navy Juliet Mike 69 (US a/c) at 1208 assisting Kinloss in SAR op. PC119 at 1313 clg Glucksburg (D). SRD 040 at 1834 in r/check w/Kinloss. (AG) RESCUE 115 wkg Kinloss Rescue at 0206, posn is 52.? N/10.? W at 0200Z. This is my 1st log for RAF Rescue. Rescue 11 was also heard, then "Valencia Radio," Ireland w/radio ck's w/both Rescue 115 & 11. Then all QSY'd to 4718 at 0211. (HF) *(nice catch — Ed.)* SAR Hokitika & Methven Bases, South Island, New Zealand at 0440 w/Search Team 4 & RNZAF IROQUOIS 309. Had Search Team 2 onboard w/RTB. Search Team 4 had located the body of a missing American Tourist on the bank of the Arahura River. Hokitika would phone police about the recovery. (IJ) All were in USB.
5687: Shadow 91 wkg "Op's" in USB at 0200 UTC. Didn't catch "Op's" name but I think it was SEMINOLE. Shadow 91 adv has good status on Ranch 51 & was op's normal & on schedule. (HF) *(MC-130P "Combat Shadow" of 9th Special Op's Sqd, Eglin AFB, FL; Seminole, as in Florida Seminoles, is Hurlburt Field Command Post in Fl. — Ed.)*
5691: Khabarovsk Volmet, Russia, w/wx info in RR in USB at 1415. (TY)
5696: RESCUE 1500, USCG HC-130H, at 0157 in wkg CAMSLANT, is airborne from Elizabeth City, 7 POB enrt to Cape May area. At 0218, 1500 wkg CAMSLANT req pp to Rescue Coordinator, Atlantic Area Command Center. 1500 is enrt to SAR in vicinity of Cape May. Unid a/c is down, a 47' boat is in the area as well as a USCG HH-65 from Cape May. 1500 is to assume on-scene command upon arrival. (DW) Rescue 6009 wkg CAMSLANT re is RTB at this time. (HF) *(RTB is Returning To Base — Ed.)* Various USCG a/c wkg CAMSLANT Chesapeake at 0300 re search for capsized sailboat Suzie Darling w/5 persons missing, vsl capsized near Cape Hatteras, NC. (RK) All in USB.
5699: Rescue 115 (Irish S-61N helo) monitored at 1652 in USB clg Kinloss Rescue (G) for r/check. (AG)
5709: VDE, Enigma ID M29 numbers station, at 1902 in CW w/VVV DE VDE & 5FG. (AB)
5714: Caught tail end of RAF "Architect" msg in USB at 0332. (HF)
5718.4: Cape Radio net at 1354 in USB w/booster vsl Freedom Star wkg DoD Cape, carrier on 5717.4, another net on 4708.4 for STS-90 launch support. (AWH)
5746: Lincolnshire Poacher in USB at 2200, also noted on 9251, 6951 kHz. (TY)
5836: Poss phone link Papua New Guinea/Solomon Islands monitored at 0800 in USB, YL w/recorded msg "Please speak after the tone." (IJ)
5881: TELSTRA Katherine, NT, Australia at 0905 in USB, YL w/phone call. (IJ)
5885: North Korean numbers stn (R. Pyongyang) hrd in AM at 1000. Also noted on 4770 kHz. (TY)
5892: Christian Radio Missionary Fellowship Station, Papua New Guinea at 0900 in USB w/general chit-chat. (IJ)
5938: Unid French Forces at 2355 in ARQ-E 192/400, too weak to lock, maybe Corsican link. New freq for me. (AWH)
6200: NRPJ, USCGC Laurel (WLB-291) heard at 1919 in USB wkg CAMSLANT (on 6501) re new HFDL (High Freq Data Link) frequency. (*Ed.*)
6245: U.S. tactical w/ICEPACK at 1430 to 1530 on, frequent a/c track info as typical "ICEPACK (UPDATE/HOSTILE/FRIENDLY) TRACK NUMBER 2201 F43 30 HEADING 098 ANGELS 25," DEUCE on frequency also. (AWH)
6253.5: Crayfish boats around New Zealand at 2330 in USB w/chat re setting up cray pots,

sending divers down, mentioned poor crayfish catches. (IJ)
6357: SAA, Karlskrona Radio, S at 2250 in CW w/CQ QSX tape. (AB)
6485: Lincolnshire Poacher in USB at 2200. Also noted on 5422, 8464 kHz. (TY)
6625.5: Unid usual evening spook here at 0345 to 0413, running lots of RTTY 50/500 tonight, all old Soviet ZZZ crypto system w/no plain text headers evident. Some of the usual sloppy FSK morse between RTTY sessions. Has been on 2-3 random nights per week lately. (AWH)
6679: Hong Kong Volmet w/avian wx info in EE in USB at 0915. Also noted on 13282, 8828 kHz. (TY)
6693: Syktyvkar Meteo, RUS at 2330 w/ Volmet. At 2335, Ekaterinburg Meteo, RUS w/Volmet, both in USB. (AB)
6741.7: Unid Tunisian Navy at 0535 in ARQ idling into short chatter. (DW)
6754: Trenton Military, CAN at 0533 in USB w/aviation wx for Western Canada. (DW)
6823: Charlie Yankee & Sierra Echo, Tongan Defence Force, at 0735 in USB w/radio cks, primary channel used by their patrol boats. (IJ)
6866: Russian SVR, Cuba "Fast CW" testing 1435 carrier on/off, 1450 into 30 wpm "989," 1454 some 5FGs. (AWH)
6900: Lincolnshire Poacher in USB heard at 2000. Also noted on 10426 & 11545 kHz. First time I've ever encountered LP lady on this freq. (TY)
6902: Poss St John's Ambulance, Melbourne, VIC, Australia at 0840 in USB caught w/"VJ? Melbourne out," heavy RTTY QRM here, checked ACA records had the St John's Ambulance were the only ones listed in Melbourne w/a VJV series of callsigns. (IJ)
6912: AAA5MI, Army MARS at 0002 in 300 baud PACKET wkg AAR5KF, AAY5MI, & AAT4JF. (*Ed.*)
6971: The Counting Station at 2000 in USB w/Id 013, 10-count, dashes & 5FG. (AB)
6993: Executive 1 Foxtrot wkg Andy C/P in USB heard at 0129, departed 0110Z, estimates arrival 0205Z, reason for his delay was "ATC." (HF)
6995: Navy JM69 at 1441 in r/check w/ Kinloss Rescue, G. (AG) (*USN a/c of VR-24, Sigonella — Ed.*) Unid Pacific Island stns at 0725 w/comms in a Pacific Island language. (IJ) Both hrd in USB.
7002: "V" (Khiva)-Russian Navy single letter HF CW marker at 1326. (TY)
7038.8: "P," Russian Navy Kaliningrad, RUS at 1951 w/CW channel marker. (AB)
7038.9: "C," Russian Navy Moscow, RUS at 1910 w/CW channel marker. (AB)
7547: The Counting Station // 10529 at 1300 in USB clg 382, 1234567890 count, I noticed at 1252 a constant beep beep. (CT)
7633.5: REACH 1189 at 0028 in USB wkg AFA1TW, unid USAF MARS, w/pp tfc. (Ed.)
7643.3: RFLIG, French Forces Cayenne at 0521 in ARQ-E3 192/300 idling, presumed id. (DW) Same at 0205 w/5LG msg on C.I. "RTI" confirming it's RFLIG to RFLI. (*Ed.*)
7726: Cuban Numbers Station at 0507 in AM w/YL/SS 5FGs. (DW)
7740: Golf Kilo numbers station, D at 2100 w/CW Id 856 & 5FG. (AB)
7755: Lincolnshire Poacher hrd in USB at 1600. Also noted on 6485, 10426 kHz. (TY)
7767: Mike Bravo 12, Papua New Guinea Defence Force, at 0720 in USB in Pidgin EE w/wages details for crews on their patrol boats (primary channel used mainly for their patrol boats referred to as CH#7). (IJ)
7846: Cuban Atencion spook monitored at 1400 in AM, old style "963 01" call-up, very strong. (AWH)
7848: ZKG21, Dept of Conservation (DOC), Auckland, New Zealand at 0435 in USB trying to establish comms w/other regional DOC stns due to the Aurora Australis event, their usual 5123 freq was just about unusable due to strong warbling distortion. (IJ)
7880: DDK3, Hamburg Meteo, D at 0454 w/FAX 120/576 chart. (DW)
7890: ZME, Joint WX/DOC Station, Raoul Island, the Kermadecs at 2145 in USB, the link to NZ was left open for over 24 hours & a recorded msg was continually playing "This is a recorded message the person you're clg does not wished to be disturbed at the present time. Please call again later." (IJ)
8014: The CIA counting stn hrd in AM at 1500. Also noted on 9274 kHz. (TY)
8026: Executive 1 Foxtrot wkg Andrews in USB at 0257, heavy interference & data so they QSY to F-005 (9120) at 0258 & then back to 6993 (F-117) at 0259. (HF)
8062: Unid Cuban net at 1420 in USB w/600 wkg 371, 350, 370, 379, 446, sounds like fixed net rather than Air Force which has appeared here rarely. (AWH)
8157: SVR Cuba testing at 1355 on, test tones up to 1400 into EE/OM voice (not usual woman) "989" repeated, some crackling on audio. Some 5FG tfc also including call-up for 567 19 at 1406. (AWH)
8231: CW numbers station (Enigma M53) at 2000 w/CW VVV CQ 747.077 & 5FG. (AB)
8240: NRPJ, USCGC Laurel (WLB-291) heard at 2316 in USB wkg CAMSLANT (on 8764) for posn, 37-52.3N/076-08.6W, op's normal. (*Ed.*)
8260: N.Korean Diplo at 0157 in CW w/sloppy chatter. Return link noted on 6852 in CW & RTTY 50/1000. (DW) *(reportedly may be from Cuba — Ed.)*
8279: 9HVG4, Volgabalt 1451, wkg Helsinki Radio for pp in USB at 0802, is ex Volgo-Balt 145, UBSF. (HOOD)
8297: AADT, USAV Aldie (LCU-2004) at 1106 in USB clg AAC2, Harbormaster, Ft. Eustis, VA. (DW)
8303.5: LOR, Argentine Navy, Puerto Belgrano, Argentina at 0735 in RTTY 75/850 w/5LGs, then went into a long msg in SS about various Terrorist organizations, and that the Argentine Armed Forces National Police were on alert due to a prediction made by an American Clairvoyant that there would be armed intervention in Brazil in the next 25 hours. Nothing happened. (IJ)
8320: Cherry Ripe at 1200 in USB w/47717 ID, 5FG's. (CT).
8398.5: Swedish vehicle carrier "Rigoletto" (c/s SFMN) w/ETA for Steenbank pilots via Global's Goeteborg Radio tuned in ARQ at 1653. (HOOD)
8401.5: Russian fishing vsl "Porechye" (c/s UHFQ) sending arrival msg to Faroe Islands thru UIW, Kaliningrad Radio using 50Bd RTTY at 0725. (HOOD)
8453: HWN, French Navy Paris, F monitored at 1320 in RTTY 75bd test tape to FAAA (general call). (AB)
8540: RUF9, Temryuk Radio, RUS, sending nav wngs (NAVIP) in RR CW heard at 1708, then QSX 8343 to be called by UGUX at 1716. (HOOD)
8682: NMC, USCG CAMSPAC Point Reyes, Ca, USA monitored at 1513 w/FAX 120/576 w/chart. (DW)
8752.5: CCM, Colombian Navy, Magallanes, Chile at 0625 in RTTY 100/425 w/5LGs. (IJ)
8761: YL w/ann "Govorit Novorossiysk Radio" in USB at 1743. (HOOD)
8764: NMN, USCG CAMSLANT Chesapeake, VA heard at 2017 in USB wkg USCGC Forward (WMEC-911) w/freq re CRATT. (*Ed.*)
8806: Monaco Radio w/ID in USB at 0731 & passing sea wx fcst to FQYF "Grand Bleu III" (all in FF), this was a St Lys channel. (HOOD)
8819: Alma-Aty Meteo, KAZ at 2315 w/ Volmet bdcast. At 2320, Tashkent Meteo, UZB w/Volmet. Both in USB. (AB)
8852: Fijian Military Forces at 0610 in USB tfc in Fijian. (IJ)
8861: Irkutsk Volmet, Russia, w/avian wx info in RR in USB at 0925. (TY)
8921: Qantas LDOC, Sydney, NSW, AUS at 0540 in USB w/Qantas 48 for a radio ck. (IJ)
8939: "GG," NDB Moscow, RUS at 2003 in CW, operates on 290 kHz, but audible on Volmet freq. "TQ," NDB Moscow, RUS at 1620 in CW, operates on 468 kHz, but audible here. (AB)
8942: Manila Air Radio wkg Japanair 710 in USB at 1733. (HOOD)
8957: Shalmon Volmet, Ireland, w/avn wx info in EE at 1630 in faint USB. Also noted on 13264 kHz. First time I've hrd European Volmet stn this year. (TY)
8968: BLUE STAR (P3 op's NAS Roosie Roads) wkg LIQUIFY, GOLDFISH, PASSPORT and PONY w/voice & ANDVT comms at 1830 in USB. (RK) *(maybe they thought they were on 8971?, bet GHFS stns were confused — Ed.)*
8971: U.S. Navy net at 1436 in USN w/ROCKFISH 08 wkg E0-?, req go green & into ANDVT comms, also SHADOW 31 on freq. (AWH) WOLF 02 wkg BLUESTAR at 0325, then into green for radio check. (HF) BLUESTAR w/FALCON 01 at 0710 req close down. (IJ) BIG BAD WOLF, as NCS wkg SIDECAR, GOLDILOCKS & SKUNK 02 w/voice & data from 0030 to 0042 in USB. (RK) *(SIDECAR is the Canadian NORAD*

Region East/West Sector Operations Control Center — Ed.)

8974: ZKX, RNZAF Auckland, New Zealand w/IROQUOIS 308 (UH-1) at 0610 in USB, is airborne over Big Bay. (IJ)

8982.5: S2Z at 2212 in USB wkg L1R, unid military. (DW)

8993: ZERO 1 & ZERO 2, poss Philippines Naval Stations at 0910 in USB in Tagalog & EE w/comms mentioning a warship, have heard various Philippines military activity here from time-to-time, these comms started after the USAF Clark AFB was closed. Looks like they've taken over the former Clark AFB freq). (IJ)

9001.6: USCG New Orleans at 0735 in USB clg unid CG cutter, couldn't get the name, then switched to ANDVT. (IJ)

9016: AUTHORIZE clg NIGHTWATCH 01 in USB at 0353 in USB no joy, then tries DEERSIGN at 0354 & again...no joy. (HF)

9018: SHADOW 91 wkg SHADOW 92 in USB at 0140 looking for the tankers, typical refueling chatter. (HF)

9022: JJO4, presumed Japanese Navy stn heard at 0930 in USB w/3 November Papa X-ray in JJ & EE w/radio cks. The Japanese SDF used to use 9021 as one of their freqs for comms w/their patrol a/c up until four years ago, the a/c would always sign as "Japan Navy **" then. (IJ)

9023: COURAGEOUS WARRIOR clg OKIE SAM at 1224 w/no reply, also clg RELENTLESS. (AWH) SIDECAR, Canadian NORAD SOCC at 1451 wkg Z8U. (DW) Both in USB.

9079.7: RFQP, French Forces, Djibouti at 0124 in ARQ-E3 100/342 w/controle de voie on C.I. "DJI." (*Ed.*)

9185: Unid North Korean Diplo at 2155 on in RTTY 50/1000 w/5FG, then quickly off, back w/CW fills on 9187. (AWH)

10046: 4XZ, Haifa, Israel, w/V marker in powerful CW at 1710. (TY)

10051: Gander Radio Volmet at 1159 in USB w/NY Radio following at 2000. (SW)

10075: Delta 695 at 1543 in USB wkg Houston Radio for sc check: EL-DP. (DW)

10720: YBU FARPSI Station tuned at 0930 in RTTY 75/500 w/RYRY, 1/11 NZU & 5LGs. (IJ)

10780: Cape Radio at 1120 in USB clg USS Philippine Sea during 2nd att launch of STS-90. (*Ed.*)

10869.3: RFVI, French Forces Reunion at 2135 in ARQ-E3 100/400 w/CdV on ckt "RUN." (AWH)

11021: Ansett Airlines LDOC, Melbourne, VIC. AUS at 0005 in USB, "Dispatch" w/VH-HYT, a A320-211 Airbus. Was inbound Darwin from Brisbane trying to find a passenger's missing cell phone onboard. Afterwards Dispatch called ANSETT 869 w/a request from ATC they change to 128.2 (IJ)

11030: AXM34, Melbourne Meteo. AUS at 1519 w/FAX 120/576 wx chart. (DW)

11175: REACH 9501, USAF C-17, at 1545 wkg MacDill w/pp to FURIOUS, SOUTHCOM AMC Theater Airlift Control, 9501's tail number is 96-0007. (DW) BOOMER 94 wkg Offutt w/pp BOOMER Op's at 0115 re IFE (In Flt Emer) due to bird strike on windshield, permission granted to divert to Grand Forks AFB. (RK) Both in USB.

11181: PATCOM 01 wkg Thule w/pp "Stanley Field op's" (Falklands?) at 0107 in USB, re has priority cargo on board, Stanley adv will hold all air traffic. (RK) *(probably PACOM 01, a/c w/CINCPAC Comm-in-Chief Pacific Command) aboard — Ed.)*

11217: RED DOG wkg BOOKSHELF in USB in 0317, one unit adv has "smoke in the cockpit" & will have to return." At 0317 KADS 63 (maybe Scads?) is wkg RED DOG adv is on the ground at Ft. Smith. (HF)

11244: LIGHTFALL wkg ASHES w/signal ck at 0107 in USB. (RK)

11279: Tbilisi Volmet ID & wx by YL heard at 1200, Aktyubinsk Volmet ID & wx by YL at 1205 all in RR &. (HOOD) Tashkent Volmet, UZB, w/avian wx info in RR at 1320. (TY) Both in USB.

11297: "PK" NDB St.Petersburg, RUS at 1405 in CW, operates on 342 kHz, audible via St.Petersburg Meteo. (AB)

11494: WAR46, Alternate National Military Communications Center, at 1857 in USB clg NIGHTWATCH 01 no joy. At 1904, NIGHTWATCH 01 clg MARIGOLD on Z205, no joy, then wkg WAR46. (DW)

11565: EZI2, Mossad, Israel, hrd in USB at 1530. Also noted on 13533 kHz. (TY)

12056: Cherry Ripe at 2000 in USB w/Cherry Ripe tune, 33842 ID, 5FG's. (CT)

12196: "MIG," Russian FAPSI, Lourdes, Cuba at 2300 w/RTTY 75/500 RYRY to "WFO," then 5LG's on link 00125. (*Ed.*)

12201: Air Europe 749 wkg Stockholm Radio for private pp to Italy in USB at 0740. (HOOD)

12269: Russian vsl "Aleksandr Popov," c/s UDUN, clg 9AR, Rijeka Radio, for USB pp at 1708. This is a cargo and training vsl owned by the Volgotanker Co. (HOOD)

12572.5: Russian trawler "Sovetskaya Konstitutstiya," c/s UBHR, w/hull #AB-0034 using rare 100Bd RTYY for msg to RKLM, Arkhangelsk Fisheries Radio monitored at 0750. (HOOD)

12735: URL, Sevastopol Radio, UKR at 1316 w/CW CQ marker. (AB)

12745.5: JJC, Kyodo Tokyo at 1622 in FAX 60/576 & 120/576. Weak chart. Seemed to switch to 120/576 for blank portions then back to 60/576. (DW)

12781.5: 9MB5, Malaysian Navy, Pinang Island at 1627 in CW w/"VVV" mkr. (DW)

12804: YQI5, Constanta Radio, ROU at 1313 w/CW "QSL BLIND" msg. (AB)

13113: PCG51, Scheveningen Radio monitored at 0842 in USB to P3GN2 M/V FERARA for pp. (HOOD)

13116: UQB, Kholmsk Radio at 0705 in USB wkg various MVs w/simplex pp's. YL operator wkg OM's in RR. (DW)

13146: 3AC12, Monaco Radio at USB wkg UQJD, TKH Ruza 5 for pp from Black Sea (vsl is a sea-river cargo ship of the Moscow River Shipping Company). (HOOD)

13505: AA6USA, US Army MARS Ft. Sam Houston, TX at 1557 in PACKET 300/200 wkg AT5TMN: US Army MARS Sta. (DW)

13533: EZI2, Mossad, Israel, hrd in USB at 1530. Also noted on 11565 kHz. (TY)

13550: ZKLF, Auckland Meteo, AUS at 1507 w/FAX 120/576 wx chart. (DW)

13857.8: Cuban MFA net at 2000 in Packet 300/200 w/ORAR & NORA, NORA sent "adt" command text, ORAR responded w/ 5FG tfc. Haven't heard them since. (AWH)

14402: AAT3USP, unid Army deployed MARS stn at 2343 in USB wkg AAR3CB, USA MARS stn, for pp tfc. (*Ed.*)

14451.7: Egyptian MFA (tent) at 1750 in ARQ w/carrier staying on & alternating mark/space between packets, ATU80 text. (AWH)

14469: Cherry Ripe in USB at 1100. Also noted on 9263, 13386 kHz. (TY)

14681: V5G, MFA Bucharest, ROU at 1235 in ROU-FEC 164bd, Radiograma circulara to many embassies. (AB)

14708: HUTANG at 1625 in USB wkg "HOME OFFICE" re is underway from Anchorage, heading towards rendezvous point. At 1634, BENDIAR wkg HOME OFFICE re their cargo is to be taken into port of diversion, port is unknown at this time, have been instructed to maintain course & speed, boarding party is leaving, but they will inform them as to destination port. At 1640, adv have been diverted to "Country of Green," w/one member of the boarding party onboard. USN comms (maritime interdiction) related to JTFEX off of California. (DW)

14753: Spook stn "Boris Badanov" at 1236, OM/EE w/5FGs, fair sig but low audio, fluttery. (AWH)

14823: FAPSI, RUS at 1430 in RTTY 75bd clg POU, 11177 00190 00000 25232 01091 & 5FG's. (AB)

14890: GKX, Portishead Air, G at 2115 in USB passing wx to Western 940. (IJ)

15013: Navy JM69 at 1322 in USB wkg Kinloss Rescue (G). (AG)

15016: MacDill at 1533 wkg ADMQ, USAV Fort Donelson (LCU-2019). (DW) LOOK 35 (RC-135, 55th Wing, Offutt AFB) wkg Offutt GHFS re landing wx. (RK) Both in USB.

15624: Cherry Ripe in USB at 1000. Also noted on 17499, 10452 kHz. (TY)

15804: Poland? Unid stn at 1900 to 1918 in POL-ARQ 100/100, mostly beta idle, at 1905 Polish text, at 1908 "KOINIEC" & idle to 1918. (AWH)

16101: HBD20, Swiss MFA Berne, SWZ at 1420 in ARQ w/5LG msgs to HBD46, Havana, Cuba. (*Ed.*)

16198: CIA Counting Station at 2345 in USB, YL w/numbers. (IJ)

16322: "C" (Moscow), "P" (Kaliningrad), "S" (Arkhangelsk) — single letter HF CW marker at 1324. Three SLHFM stns hrd simultaneously on this frequency. (TY)

16352.8: CLP1, MFA Havana Cuba at 2100 in RTTY 50/500 w/nx in SS. (IJ)

16436: The Counting Station at 0100 in AM, YL/SS w/5FG's, strong signal. (RK)

16832: RLO, Russian Navy St.Petersburg,

RUS at 1253 in RTTY 50 bd On-line encrypted messages. (AB)

16930: UVA, Gelendzhik Radio w/CW at 0902 "CQ DE UVA QSW 6459.5/12729/16930 TFC LIST NIL QSX 6279.5/12553/16737." (HOOD)

17145: LZW72, Varna Radio, BUL at 1218 w/CW "DE LZW72." (AB)

17414: France? Unid at 1745 in ARQ-6-90 200/400, mostly IRS mode, off w/out readable ID. (AWH)

17463: NAVY 50515, VP-3A BurNo 150515, a/c of CINCAFSE at 2246 in USB wkg Andy w/pp tfc. (*Ed.*)

18391.5: MFA Jakarta, Indonesia, at 0140 in ARQ w/msg to Washington DC, had PRESIDENT WILLIAM JEFFERSON CLINTON among the Indonesian text. (IJ)

18993.5: SPW, Warsaw R. Poland, Rptng "DE SPW QSX 12750 kHz AZIM 09" per 30 sec in CW at 0552. (TY)

19109: OZU25, MFA Copenhagen Denmark at 0725 in TWINPLEX w/msgs. (IJ)

19715: EZI, Mossad, Israel, hrd in USB at 1830. Also noted on 17410 kHz. Just readable signal. (TY)

20556.5: RFGW, MFA Paris, F at 0725 in FEC-A 192/400 w/long list of a/c sorties. One of them included a flt for President Jacque Chirac. (IJ)

20975: P6Z, Paris, F at 1600 in FEC-A 192/400, tfc to Y9L, D7A. (AWH)

21964: San Francisco Air at 2140 in USB w/WORLD 371 for pp to dispatch. (IJ)

21985: San Francisco Aeradio wkg various a/c in USB at 0949. (TY)

25950: Program feed of KIRO 710, Seattle, WA, USA at 2300 in AM w/phone-ins, slogan, nx & traffic reports, been powerhouse of a signal all week. (IJ)

27880: VMR405, Australian Volunteer CG, Noosa, QLD, AUS at 2105 in AM w/LAURA MAY reporting it had crossed the bar. VH2ATH, Nora Head SAR, NSW, AUS at 2110 in AM clg Nora Head 20. (IJ)

27900: Royal volunteer Coastal Patrol, Port Stephens, NSW, AUS at 2113 in AM w/MADELINA reporting going on a three-day cruise. (IJ)

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Tuning In *(from page 4)*

erty damage, we *can*, and *should* be concerned about saving lives. And these little inexpensive radios are just the ticket! But what else can be done? As it turns out, plenty!

If all this sounds too good to be true, it is. Wouldn't you know it, there's a catch. The single most important factor in getting the radios to work isn't the fancy technology or installing long-life alkalines, it's *people*. It's like those smoke and carbon monoxide detectors in your house; no battery, no alert. And when the alarm sounds, do you assume it's defective or do you heed the warning? For the SAME technology, or even basic NOAA weather radio to work properly, we've got to pry ourselves off the couch and follow the instructions given on the radio. But according to Barry Reichenbaugh at NOAA's public affairs office, too many people dismiss the warnings until it's too late. And to make matters worse, *most of us don't even own a weather radio!* So, like shutting the barn door after the horse runs out, human nature takes over and, guess what? That's right, the fortunate folks who just *experienced* a destructive tornado in central Florida, and many others who lost everything they had in the floods in the Midwest, and those who survived Hurricane Andrew and dozens of other disasters, ran out to RadioShack and picked up a NOAA weather radio. Smart move, but just a little late, wouldn't you say? Those in the tornado-stricken south reported being awakened by flying glass and the sound of their homes coming apart as the high winds ripped them to shreds. One of the many of those that miraculously survived the fury and were injured by flying debris said "it all happened so fast . . . the house shook, and there was glass everywhere. In seconds it was all over. Everything we own is gone." It seems to me that if *every* home had been equipped with an operating NOAA weather radio with the SAME feature, lives could have been saved, and many injuries would have been prevented.

If manufacturers can add NOAA capability to our CB rigs, why haven't more amateur manufacturers incorporated this technology in ham transceivers? We see more and more rigs with extended receive and enough bells and whistles to turn on James Bond, but the one simple, basic lifesaver — NOAA reception — is absent. And where have car manufacturers been burying their heads in the sand? Their sleepy ho- hum attitude and dollar-driven bottom line mentality should make us cringe. I'd gladly give up one of the buttons on my car radio for instant access to NOAA weather radio, wouldn't you?

And what about the general availability — or perhaps more accurately, *unavailability* — of SAME-equipped consumer NOAA-type weather radios? I'm told by NOAA that RadioShack is currently the only manufacturer of the new receivers. So, here we are in 1998, at a time when vehicle passenger and side airbags are becoming commonplace, lifesaving medical scans detect pre-cancerous tumors, "black boxes" for vehicles are being developed to speed emergency help to accident scenes, GPS receivers guide us through unfamiliar territory, and computers are being installed in every school room around the country. But what good is it if we haven't spent $40 on shoes? ■

For More Information

For questions about the NOAA network, contact: National Oceanic and Atmospheric Administration, National Weather Service, 1325 East-West Highway, Silver Spring, Maryland 20910. Also check out their Web site at <http://www.nws.noaa.gov/nwr>.

For information on the *technical* aspects of the network, please write: NWR Program Manager, National Weather Service, 1325 East-West Highway, Silver Spring, MD 20910.

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The Loose Connection

RADIO COMMUNICATIONS HUMOR

BY BILL PRICE, N3AVY

Words To "Live" By

Many of you, including my mother, have written to say how wonderful it must be to earn a good living writing a communication-humor column for a magazine like *Pop'Comm*. Before some former friend of mine releases the tapes of many months of phone conversations, I thought I'd better go public with some facts.

I don't earn my *entire* living by writing this column. Oh, I'm paid handsomely for my words, my experiences, my friends' experiences, and the adventures of Norm (which regular readers will know is not his real name). I have a day job, and it's in communication, so it's not as if I'm an accountant or zookeeper during my non-writing hours. I am what's called a "television engineer" — an inflated title: I turn screws and push buttons at a major university. It's a job which now has me working side-by-side with the younger of the Bradley Boys, the inventors of the famous "series-parallel lemon cooker" and owner of Flatto, the Pug dog. Even more important, this job has placed me in situations which could bring a tear of laughter to the eyes of readers — particularly those whose daily lives revolve around communication systems.

One event which Dave still remembers fondly was my eviction of a family of squirrels from the upper reaches of our satellite uplink dish. They had built a nest near the top of the mount, and I waited until the younger squirrels were mostly grown. I climbed a too-short ladder, and gently roused them with a stick, which they climbed, all in a row, then scurried up my arm and down my back, from which they leaped to the base of the dish mount for their escape. Dave tells me I yelled "Aaaaaaaaah," for about 10 seconds until the father squirrel — last to leave — went back for the family's luggage and their "nut reserve."

Dave still flashes a picture of a squirrel at me now and then, to "see if he can make me make that funny noise again." Lest you think we torment one another, here's an example of how the curly-headed one looks after me.

"As soon as I was too high up the ladder to jump — on an 18-story-high roof! — the wasps surrounded me."

Late last summer, I had to aim a four-foot microwave dish toward a given point on the horizon, using only visual information (no signal to peak on a receive-meter). A riflescope carefully mounted to the short side of a drywall T-square, held with the long side across the antenna's mounting ring, let me aim the dish toward a tower some 20 miles away with amazing precision. Once the circuit was energized, we "peaked" the dish by sweeping horizontally and vertically for maximum signal strength, which Dave measured in the transmitter room several stories below me, watching the meter and waiting with a walkie-talkie to guide my movements. This event has become known as the "wasp" incident.

Until this day, I had always avoided things which could sting me, because "a hundred-million hornets" had once stung me repeatedly on the back of my neck when I was very young. Somehow I thought this was the day to overcome my fear of wasps the way I'd overcome my fear of high places: by dealing with the problem head-on instead of swatting at them the way King Kong swung at the biplanes that harassed him as he hung on the Empire State Building. As soon as I was too high up the ladder to jump — on an 18-story-high roof! — the wasps surrounded me. I thought I could handle them the way a professional wasp-herder might, so I spoke nicely to them, and when they were on a nut or bolt where I needed to put my wrench, I merely pushed them gently away with the back of my fingernail. I was more shocked than anyone when it actually worked and they didn't sting me.

I stood with my head and upper body surrounded by about a hundred wasps, and I realized that the audio gain on my walkie-talkie was "pegged" at full volume because I'd been using it while I stood near the ventilation equipment and cooling pumps. I knew if I didn't turn the thing down before Dave called to ask if everything was OK, everything wouldn't be. He had no way of knowing that the volume on my walkie-talkie was pegged when he keyed up his and said, "Uhhhhhhhhhhhhhhh, Bill, you wanna let me know how you're doin' up there?"

Well, Dave's "Uhhhhhhhhhhhhhhh" must have sounded just like the "ATTACK! ATTACK!" call of an alarmed wasp-sergeant or whatever they call their field-leaders, and when he didn't hear me respond, I'm glad to say, he decided to put aside his fear of heights to climb two long, iron ladders to find me immersing my arm in a puddle near a corner of the roof. Once he calmed me down and made sure I was OK, Dave gradually realized that he was less than two feet from a 186-foot drop to the concrete below, and his well-earned fear of heights quickly locked up his arms, legs, and vocal chords.

Eventually, "the stung led the paralyzed" back to the center of the roof where I licked my wounds, and Dave's motor functions returned. We climbed down the iron ladders to some stairs and a first-aid kit from which all but the four-by-four gauze pads and adhesive tape had been made-off with. Sensing my pain, Dave dragged me into an elevator to the commissary kitchen where he pointed to my arm and asked the cook for some powdered meat-tenderizer. The wide-eyed cook, not from our culture, looked at Dave and asked, "You gonna *eat* his arm?" We eventually made up some ammonia-water for my arm and a grain derivative for Dave's nerves, and took the rest of the afternoon off.

From that incident, we developed yet another safety protocol to prevent a similar incident from recurring: Never stick your arm into a bunch of wasps till you check the volume on your walkie-talkie. We understand that OSHA is considering immortalizing that phrase in a warning label which will be placed on roofs and other known wasp hangouts. ■

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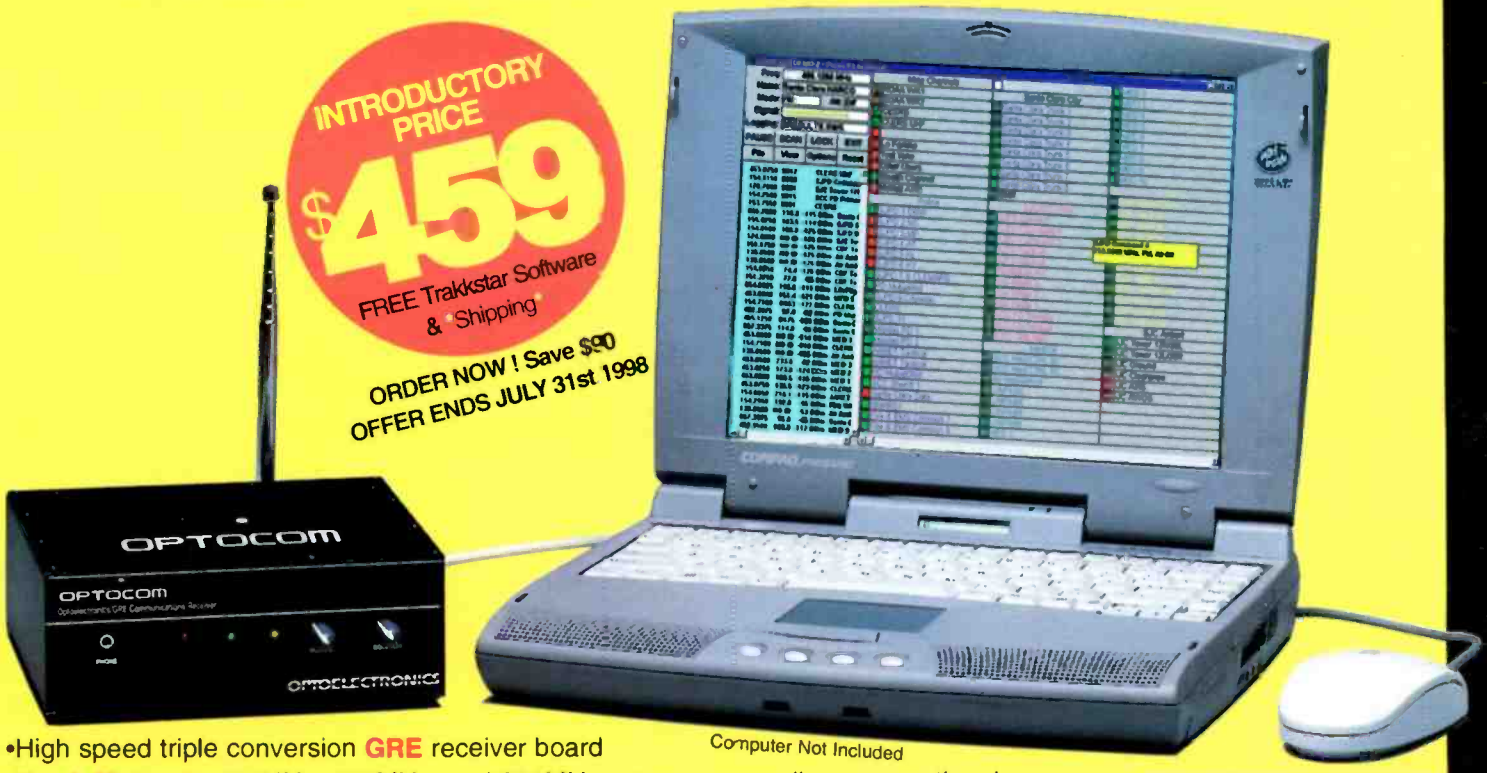

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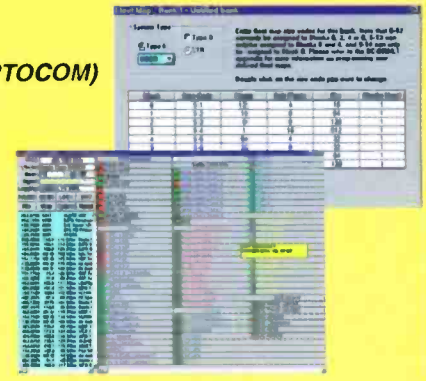

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