"Surfing The Web? Here's Help...page 50"

ICD0865

POPULAR COMMUNICATIONS

OCTOBER 1999

Y2K
Three Months And Counting–
Are YOU Ready?

Product Spotlights:

AOR's AR16B Pocket Scanner

ICOM's PCR-100 Computer-Controlled

HF ENTHUSIASM

Yaesu, Choice of the World's top DX'ers

MICRO MOBILE FT-100

Over 40 years of experience in HF transceiver design has firmly established Yaesu as the choice of the world's top DX'ers. The knowledge that produced unequaled RF technology and design that is found in the State of the Art FT-1000MP can also be found in the miniature FT-100. The FT-100 while small in size 6.3" × 2.1" × 8.1"(160 W × 54 H × 205 D mm :w/o knob) is large in features and performance. This is accomplished by using the most advanced manufacturing techniques and component mounting technology. High Dynamic range RF front-end technology and Advanced Digital technology such as DSP sets a new standard of receiver performance for miniature HF transceivers. The single piece die cast frame, dual cooling fan system and revolutionary RF high power design technique keeps the FT-100 running cool and smooth in the most adverse operating environments. (TX Power output=100W HF, 50W VHF/20W UHF) The TX Equalizer offers crisp, clear and clean TX audio reproduction that until now was only found in top of the line HF base stations. The optional ATAS-100 (active tuning antenna system) ushers in a new age of mobile and field day operation (from HF to UHF frequencies). Add the optional ATBK-100 base kit (Good for limited space, simple setup.) and you've got a base station that ranks among the best in the world.

Features

- Frequency coverage:
  RX : 100 kHz-961 MHz (cellular blocked)
  TX : 160-6 m/144-148 MHz/430-450 MHz
- Power output : 100 W (160-6 m), 50 W (144 MHz), 20 W (430 MHz)
- DSP Bandpass Filter, Notch Filter, Noise Reduction, and Equalizer
- IF Noise Blanker
- SSB, CW, AM, FM, AFSK, Packet (1200/9600 bps) operation
- Detachable Front Panel
- Two Antenna Jacks (HF/50 and 144/430)
- IF Shift
- VOX
- Dual VFOs
- Available IF bandwidths of 6 kHz, 2.4 kHz, 500 Hz, and 300 Hz (6 kHz, 500 Hz, 300 Hz filters optional)
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- Speech Processor
- Built-in CTCSS and DCS for FM operation
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- Smart Search™ Automatic Memory Channel Loading System
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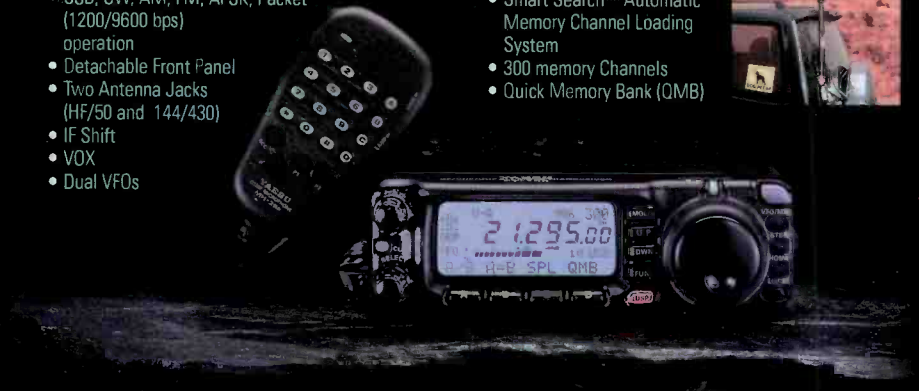
- Quick Memory Bank (QMB)

- Bright LCD with multi-function display
- Optional FC-20 External Antenna Tuner
- Compatible with ATAS-100 Active-Tuning Antenna System. Add the optional ATBK-100 base kit



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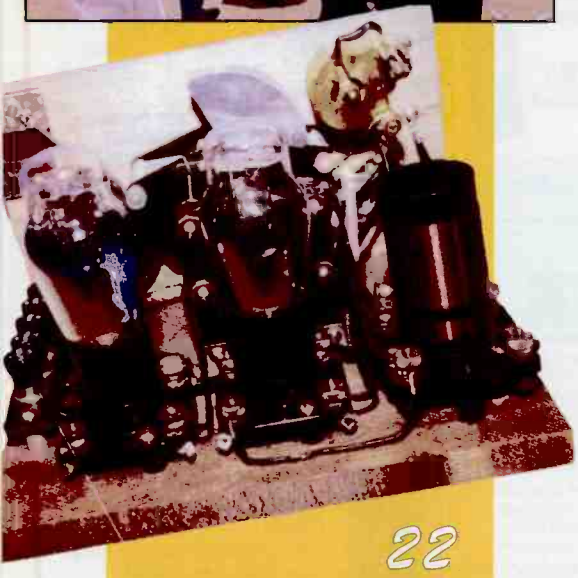

Departments

On The Cover

Cities and towns across America are testing their radio systems — repeater and simplex — in preparation for Y2K. Be sure to check out Gordon West's article "Scanning for Y2K Problems" on page 8 to learn more about the unusua comms you're hearing as the clock counts down to January 1.

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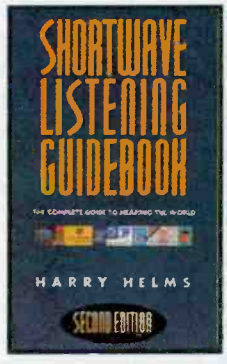
RADIO BOOKS



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Tuning In

AN EDITORIAL

BY HAROLD ORT, N2RLL, SSB-596

Electric Utilities Earn An "F" In Summer School

It's nearly fall and the crisp air, smells, and sounds of the season are enough to give any couch potato reason to get up, and take a hike. We've opened the windows and finally turned off the air-conditioning. Not so, just a few short months ago as millions of us in the northeast broiled in record-breaking heat and humidity. If you didn't have air, you went to places that did; malls, theaters, and restaurants — anyplace with less humidity and heat.

All over, public safety dispatch centers were overloaded with calls for assistance, as temperatures topped 100 degrees for several days; the excessive humidity was actually life-threatening, especially for the elderly and those with respiratory conditions. But for the hundreds of thousands who had air-conditioning and fans, there was no relief, just misery, and excuses from the power utilities. Consolidated Edison — ConEd — in New York and my own power utility, GPU, Inc. in New Jersey, was barely able to provide basic service during those early summer days. Rolling brownouts and even blackouts — one lasting more than eight hours — made an already blistering situation even worse. During the course of a single week, I pinched myself more than once thinking these repeated brownouts couldn't really be happening. How can it be that in a sophisticated time when a computer can spit out a projection of potential electrical supply trouble-spots, am I typing this on battery-back-up power because we've been without power for two hours?

You don't have to be a climatic expert, or meteorologist (heck, I still have trouble remembering what El Nino really is) to realize that summer comes along every year — always has, always will. (I stole that blinding-glimpse-of-the-obvious line from New York Mayor Rudy Giuliani). And with it comes heat and humidity — and increased use of air-conditioning which, granted, uses a great amount of power. But this past summer underscored a few critical points about our electric utilities. First, they haven't prepared for summer. Sounds dumb doesn't it? Anyone who owns a car has a spare tire, right? If you live in Watertown or Buffalo, New York, you own a shovel — probably two or three. So, it would seem logical and prudent that our electric utilities would be prepared for a few consecutive days of 100+ degrees and able to furnish their customers uninterrupted power, no excuses, no public relations bull. After all, that's their job. Maybe I'm oversimplifying the situation, but I look at it this way: They've got the knowledge, equipment, and skills to provide electricity. We pay them quite well to do their jobs. And part of their job is keeping a watchful eye on population increases, and housing and business trends in order to properly gauge electrical consumption.

I'm not a rocket scientist, and even without the benefit of those new over-the-counter brainpower pills, I figure that when my gas tank is getting low, it's time for me to fill up. And before the clothes hamper overflows into the hallway and bedrooms, we do laundry. You don't have to be the sharpest knife in the drawer to have adequate horsesense to realize that it's not 1950. Two-thirds of Americans have and use air conditioning. Even more will come home after a hot day at work and turn on the TV or stereo. And don't forget the power-hog microwave.

Yes, it's 1999 (this is probably news to the utilities) and as the Nation's population increases, it's only common sense that electrical consumption will be up, especially on a hot day. Unfortunately, the utilities are too concerned with the "bottom line" and are ill-prepared for the future. Like my math teacher once told me as I questioned an "F" on a test — she said I didn't just "get" an "F" — I *earned* it! And for the most part, so did the utility companies that did so poorly this past summer. New Jersey's GPU and other northeast utilities are not alone in their "wait to fix it until there's a problem" atti-

(Continued on page 77)

POPULAR COMMUNICATIONS

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Needs Trunktracker Help

Dear Editor:

Among the columns I really enjoy is "ScanTech" by Ken. It's easy to understand what he's talking about, and his tips are always great. I hope to buy a new trunktracker scanner soon and will go back and read my back issues to figure out how to use it. Any additional help you can give me would be appreciated.

Don Squidle
Maine

Dear Don:

Glad you like Ken's "ScanTech" column. So do we. Ken is full of — energy — and needs lots of work to keep him occupied seven-days-a-week. He also has a new book out called "Understanding Trunktracker Scanners," which is a good read and will help you figure out these radios. Check out our review of the book in the September issue on page 76.

What Issue?

Dear Editor:

I'm sitting here reading all the letters you've published and I'm trying to understand what it is about the Morse code issue that gets people all upset — upset enough to write to you with their opinions (right or wrong) and ask even your advice. Do you really think this is a issue or what?

Bob Bowler
Sacramento, California

Dear Bob:

Yes.

Remembering Don Patrick

Dear Editor:

Just wanted to pass along my condolences on the loss of Don Patrick. I always enjoyed his column. I think one of the hardest parts of losing one of these "Old Salts" is — and this is something I've experienced with a few friends that have passed away in the amateur radio community — all of the wonderful history that they experienced (stories about which, us "youngsters" used to be regaled with) are regrettably lost. I've lost count of how often I've suggested to any old-timer willing to listen that they should write down their stories. Nostalgia enthusiasts (like me) can never get enough of those, and (if anyone would ever bother to go to such an extent as to add them as part of a history book or curriculum) these personal anecdotes would certainly make the dry, hard facts of history books a lot more palatable. How about mentioning that last part in your magazine — it might be just the nudge a few folks need!

Sincerely,
Klaus Spies

Dear Klaus:

Your letter — and the many others we received about Don, are sincerely appreciated. Thanks for taking the time to let his family know you care.

Warren Breaks Out The Legislative Whip

Dear Editor:

You may publish at your discretion, especially since for once I'm agreeing with you. (grin) That was an interesting response to my letter "Calling All CBers" in the August edition. I agree wholeheartedly, especially with your reference to Inspector Gadget. Just the same, I have no love for 11-meter CB, but if someone else wants to beat himself over the head with a brick, he's welcome to it. Personally, I think my own head felt much better when I put down the brick. As for NOAA and related emergency alert systems, useless is better than nothing.

Here's a good one! The local authorities recently erected a large sign on a major highway instructing residents which station to tune when the siren sounds. Being a coastal area with a nuclear generator nearby, this sounds like a good idea, unless the station is a satellite-driven robot. All local news and information have gone bye-bye and they are notorious for missing local alerts. After reading several related letters, I concluded that we must indeed keep riding our legislators and whip them as needed, otherwise the horse will go where it wants to regardless of which way its rear end is pointed. "Cutting . . . Foolishness" and "Guns 'N Scanners" make a good point regarding backward legislation that threatens us all. Gestapo anyone?

73 de Warren, KB2VXA

Giving Up The Ship

Dear Editor:

I'd like to reply to the letter written by Randy L. Moyer, Pennsylvania. Every word of his letter is true. REACT is falling apart and for all the reasons mentioned and more. I'm no longer a member and the Tidewater Area of Hampton Roads is no longer available.

When I became a member, there were 13–14 of us, and little by little they all fell by the wayside. Some other reasons are I can not physically do with my radio what some people tell me to do. Channel 9, 27.065 MHz is for emergencies only. I've sat here by my radio and get overrun with some people running power. Here in this area, a lot comes from the south, Cuba, Haiti, Miami, and God only knows where else, all using linears that on my tuner and SWR meter buries the needle.

I got fed up with being told what to do. Some of the local police call and ask me why and I tell them why I'm not available. It's a shame, but it's like Randy says "For a cry of help is never answered when it falls on deaf ears."

I have about $4,000 worth of equipment, mainly used for REACT, that is now for sale, including a portable telephone. When I think of the hours a month I've spent sitting here, I'm sure over the years

there are thousands of hours built up. What is it called? Community service?

Sorry REACT, this is one 67 year-old man who knows when enough is enough. Thanks for nothing to the FCC for all the monitoring you never did. Promises, promises, promises. The government can't keep it's word.

By the way, there are some HAMS out there that are also giving up on REACT!

Sincerely,
Donald N. Aspinall
Virginia

Vern Makes A Good Point

Dear Editor:

I am certain that my follow-up to Mr. Hubbs' response will not be printed as Editor Ort seems intent on getting across only opinions falling within his agenda. It is clear that Mr. Ort sees the code requirement as an impediment to *Popular Communications*' subscription sales and he uses people like Mr. Hubbs to bolster his case. One need only to observe how he handles letters that differ from his point of view. His style appears to condemn those with differing viewpoints and accommodate those who agree with him. The bold caption above Mr. Hubbs' letter "Sid Makes A Good Point" is typical of his lack of journalistic objectivity. Here goes anyway: Mr. Hubbs, why so defensive? I did not personally attack you. In my letter to *Popular Communications*, I was referring generically to "those who might fit the description" I made. Don't be so paranoid, Mr. Hubbs and feel everyone is out to get you. How can you accuse me of deriding anyone when no one was mentioned?! Geez, Mr. Hubbs, you seem awfully sensitive.

As for Mr. Hubbs' plaintive cry about all the work he has to put in out at the airport working on his private pilot license, good for him. I am sure Mr. Hubbs does not know that I am an airline captain and fly a 106-passenger jet for one of the nation's leading airlines. Somehow, while acquiring my 15,000 hours, taking an FAA checkride every six months and flying 800 hours per year, I still don't find enjoying the simple Morse code so daunting.

Finally, Mr. Hubbs closes his letter insinuating that because I took the time to write a letter to a magazine that I surely have no life. Good grief, Mr. Hubbs, it only took me a few minutes to assemble my thoughts on paper; how long did it take you? And in view of your writing a letter to a magazine, what does it say about your life?

Vern A. Weiss
Burlington, Wisconsin

Dear Vern:

You see, I'm objective. I'm just not going to crank-start my car when a key will do, nor am I going to take a train to California when I can fly out West in a few hours (unless I've got two weeks for sightseeing). You wouldn't take your passengers from New York to Peru if your final destination were Mexico City, would you? The point I've been trying to drum home about the code is simple: Let it be a testable item for those that wish to use CW on specific "code frequencies," and let the rest of the world speak their messages so I can hear that European accent, and hear what a South African ham sounds like thousands of miles away. End of story.

And by the way, we'll give each of you one more shot at each other right here in the "Pop'Comm P.O." if you care to drop us a line. ■

Scanning For Y2K Problems

The Clock Is Ticking: Are YOU Ready?

by Gordon West, WB6NOA

Scanning the public safety frequencies has been getting *real* interesting lately. It's no wonder: We're only a few ticks of the clock from 2000. For those municipalities throughout the country that use colors to describe their operating channels, some readers have reported some new hues — "switch violet to test," and ". . .going white car-to-car," ". . .all county units, go amber."

Numerical channels are now popping up that you never have heard before — channel 100, channel 10, and the ultimate channel: Channel 2000.

What's going on, you ask? Contingency plans for the uncertainty of Y2K communications! You won't find many police, fire, and emergency rescue services dispatchers sitting in front of an old GE or Motorola radio, with that big chrome-polished Shure mike hanging in front of them on a boom. Today, our modern communications relies on computer-aided dispatch; and everything happens on the computer screen in front of them, plus they use tiny ear-bud headsets with toggles to transmit with a micro foot switch. It's the same with the regional public safety "control one" centers. They keep an ear and eye to ongoing city communications and pursuits within their jurisdiction, relying on powerful computers to inter-tie their state-of-the-art public safety comms.

Many public safety agencies throughout the United States keep track of their mobile and air units by the global positioning system. The global positioning system, run by the Department of Defense (DOD), and relied on heavily by thousands of civilian agencies throughout our country, has planned for zero Y2K problems on January 1. But all of the GPS receivers installed in thousands of public safety and public utility vehicles throughout the country, including that older portable receiver you bought for the kids eight years ago, indeed fall under Y2K scrutiny.

Ham operators send amateur TV pictures back to an emergency operating center on 434 MHz. ATV, along with other radio comms, could prove invaluable in January. (Photo by Paula, KF6WRJ).

Last August 22, some very old GPS receivers failed to negotiate their internal calendar rollover, and could no longer accomplish a fast acquisition of the satellites when turned from off to on. We have found that they finally start tracking after a "cold start," but several agencies throughout the country were mystified by their agency's older GPS sets that were slow to come on — real slow — actually about 20 minutes slow! And when 2000 hits in a few more months, an estimated five percent of older VHF equipment installed in city and county vehicles will also hiccup and take an exceptional amount of time to turn on and lock onto the GPS satellites. This means more headaches for dispatchers wondering where all of their mobile units went when looking at the GPS mapping screens!

"Our plan is to have all of our police and fire units capable of simplex operation in case of a widespread Y2K computer system failure," comments William Alber, a reserve communications officer in the San Francisco Bay area. "Many

Small handheld FRS units can help support local law enforcement buildings and schools from floor-to-floor.

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– *Passport to World Band Radio, 1998*

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*Cellular frequencies blocked; unblocked versions available only to FCC approved users.

Scanning the UHF police bands to detect a communications outage.

police departments, rescue squads, and fire units have been instructed on how to communicate simplex, unit-to-unit, in case of a trunking system failure," adds Alber. This is why we hear a lot of testing of radio units in the simplex mode. In fact, many agencies are installing additional simplex emergency units at their emergency operations centers just in case of widespread trunking failures.

"I have been listening to above-normal amounts of testing on car-to-car police and fire frequencies. This tells me our area police and emergency units are preparing for direct dispatch from base-to-mobile without going through their normal communications lines," comments Frank Andrews, a member of Scan America on Long Island.

Agencies Are Training — Are YOU?

Many public safety communications agencies throughout the country are re-establishing training programs with local volunteer ham radio operators. What has been an urban agency sentiment for years — "we have the best computer and trunked microwave system around and therefore really don't need any help from the hams" — is now turning around to be "professional amateur operators could very well work in our emergency operations center and handle simplex communications with their own independent equipment in case ours should go down on January 1." While hams have always provided a valuable role in working with agencies in rural areas, downtown cities have had little use for ham operators toting their little HTs, carrying programmable scanners, or driving around with a car loaded with big, ugly antennas.

In the city of Costa Mesa, their Disaster Preparedness Committee actively supports their own ham radio volunteer organization, MESAC. "We have a year 2000 contingency plan and our amateur group — MESAC — is a vital part of our overall Y2K communications preparedness plans," comments Gerald Verwolf, Acting Communications Director for the city of Costa Mesa.

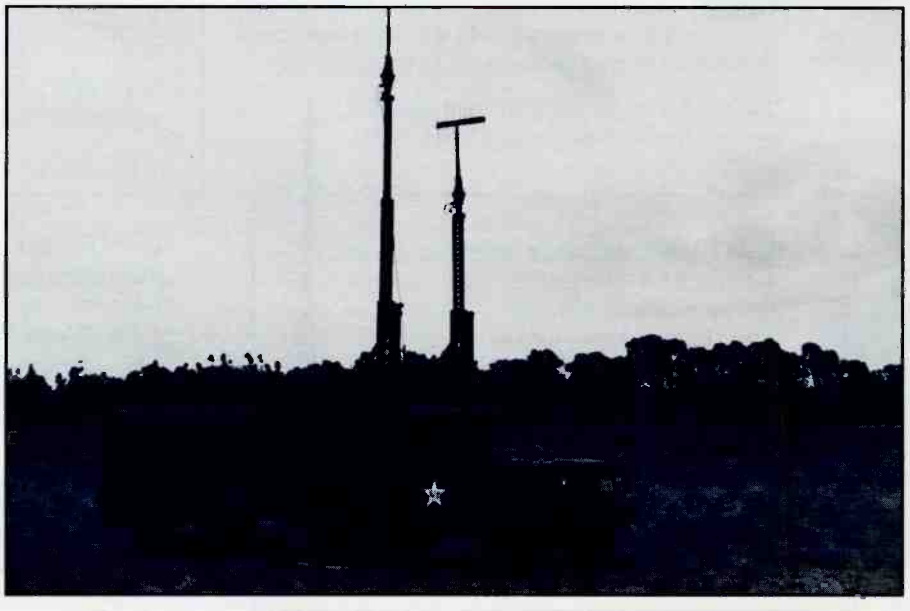
Communications Officer Tom Nunn described the importance of the ham radio service to monitor Y2K before the event hits the Pacific Coast saying "Hams at our emergency operations center can stay in touch with Europe in our afternoon to see how their systems have held up on their rollover." "We still have three hours to go when our hams talk to EOC's in New York and Miami to see how their computerized dispatch centers fared during the first few minutes of the New Year," adds Nunn.

The ham radio connection is absolutely independent of the computer link. Long-range calls will be off of the F-layer of the ionosphere, and short-range calls between cities can easily be accomplished on non-repeater national simplex frequencies.

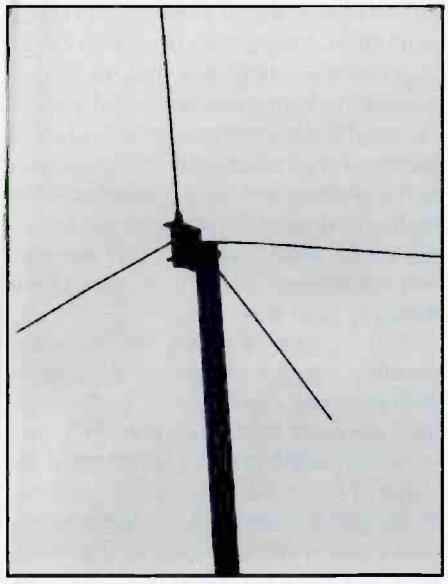
Scanner listeners will also be an important part of Y2K preparedness. Scanners, like ham sets, have no built-in clock microprocessors, so no matter what happens out there in radioland, portable and base scanners will continue to function as normal. The scanner listener might hear and indeed alert local officials to communication disruptions occurring in certain areas or within certain municipalities.

"It won't take but a few seconds for the professional scanner listener to hear a Y2K glitch in an emergency communication system," comments John Clark, a Southeast ham and one of the founders of the Radio Communications Monitoring Association (RCMA). "With scanners that track trunked radio systems, we can easily detect a computer problem controlling the trunked system where most mobile units will go into the fail-safe mode — simplex," adds Clark.

And here is where volunteers will play an important part in this Y2K preparedness plan. Strategically placed volunteer radio operators might be the only way to alert local fire stations that their normal communications — including phone lines — are out. Using simplex between individual fire stations and the emergency operations center, volunteer hams and



This ham-operated "Rambo" vehicle stands ready for ham support comms.

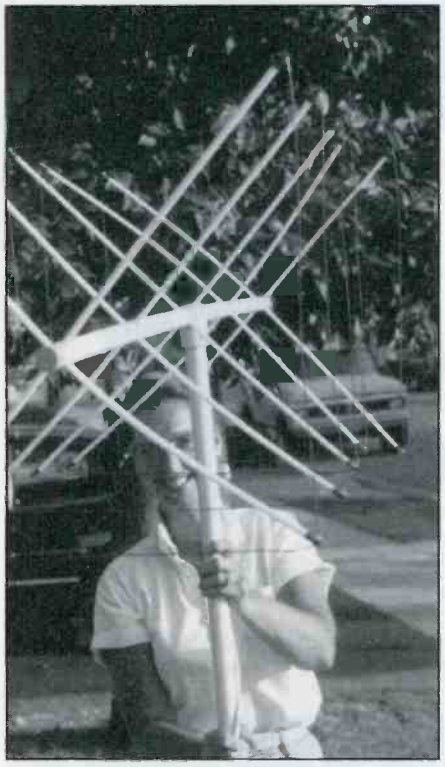


Simple ground planes will work well for simplex support communications.

scanner enthusiasts using GMRS simplex frequencies can help spread the word.

Not Just Computer Glitches!

It may not be computer glitches that take down the emergency communications system at the stroke of midnight. Think of the power surges when an entire city pulls their plugs on air conditioners and refrigerators at five minutes to midnight, and then simultaneously plugs back in 10 minutes later. This could certainly lead to a brown-out.

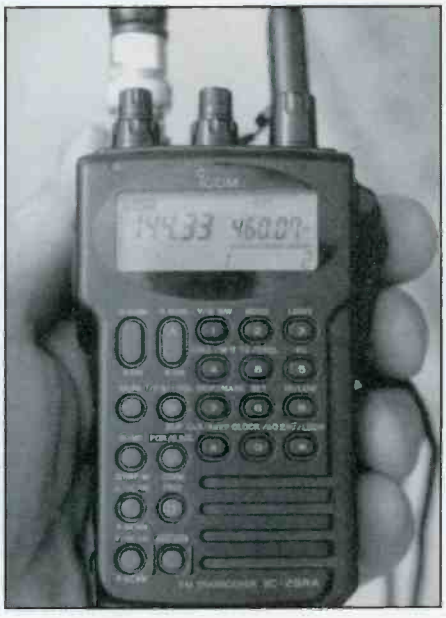


Hams may supply their own simplex antennas.

Think of the many cities that may coordinate radio communications checks at one minute past midnight, completely saturating their trunked radio system because they're all on the air at the same time checking the status of all of their units and stations.

And think about the amount of radio traffic that will be taking place at midnight when fireworks light up the sky, mixed in with live rounds coming in at 400 feet per second from above. In fact, many cities who ordinarily outlaw fireworks are ALLOWING fireworks in hopes that their citizens won't be tempted to crack off a round in the air. If you are a communications volunteer who will be stationed outside, go for cover and back up your uniform with appropriate helmets and goggles!

"Since ham operators don't rely on computers for emergency communications, and because hams don't necessarily need their local repeaters to talk medium and long range, and because hams are accustomed to talking great distances on simplex, nothing beats their capabilities to serve their local public safety communications division by standing by and being on the air over New Year's Eve," comments Paula Grams, KF6WRJ, a vol-



Monitoring public safety calls on an ICOM IC-2SRA handheld.

Hams and CBers can set up a mobile command post in minutes for great Y2K communications support. (Photo by Paula, KF6WRJ).

unteer communicator for the city of Costa Mesa's MESAC organization.

What Can You Do?

Your local city or county communications agency probably has a well-structured plan for New Year's Eve. This plan would hopefully include volunteer radio operators to back up city communications in case the big computer in the sky should fail. As a licensed ham radio operator, ask for the city communications coordinator and see what he or she has planned for their volunteer radio operators. Maybe they need inter-building communications that could be accomplished with low-power Family Radio Service (FRS) UHF equipment. Maybe they need intra-building communications that could be accomplished by ham microwave and packet. Or maybe the communications chief is looking for as much information on area radio systems and their performance at midnight as possible, and you with a scanner could easily indicate what agencies you are hearing, and what agencies have instantly gone down.

And if you're going to be using portable equipment, now is the time to upgrade your rechargeable batteries. If they are more than three years old, they very well could give up the ghost at the strike of midnight. A good alternative to rechargeable batteries is alkaline battery packs that work with ham radios, scanners, and small portable communicators. Have plenty of alkaline batteries on hand.

As the millennium rollover nears, nothing may be more important than two-way radio communications and the ability to receive radio calls independent of repeaters, computers, and remote base installations. The more that you can bring to the communications room that is absolutely *independent of everything else*, the more valuable your role may be when the clock strikes midnight. ■

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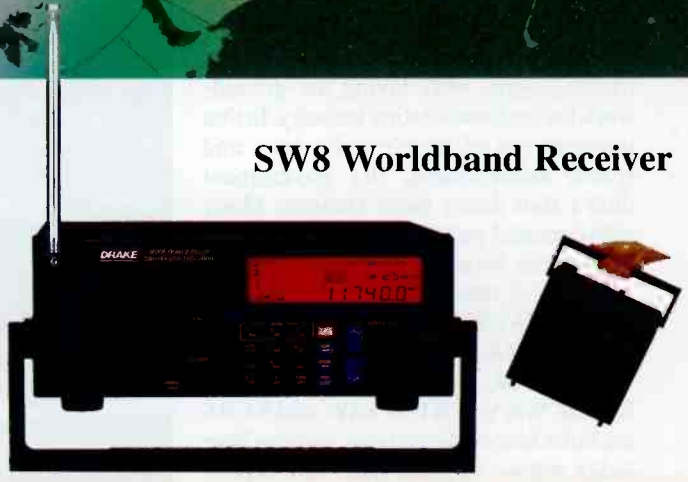

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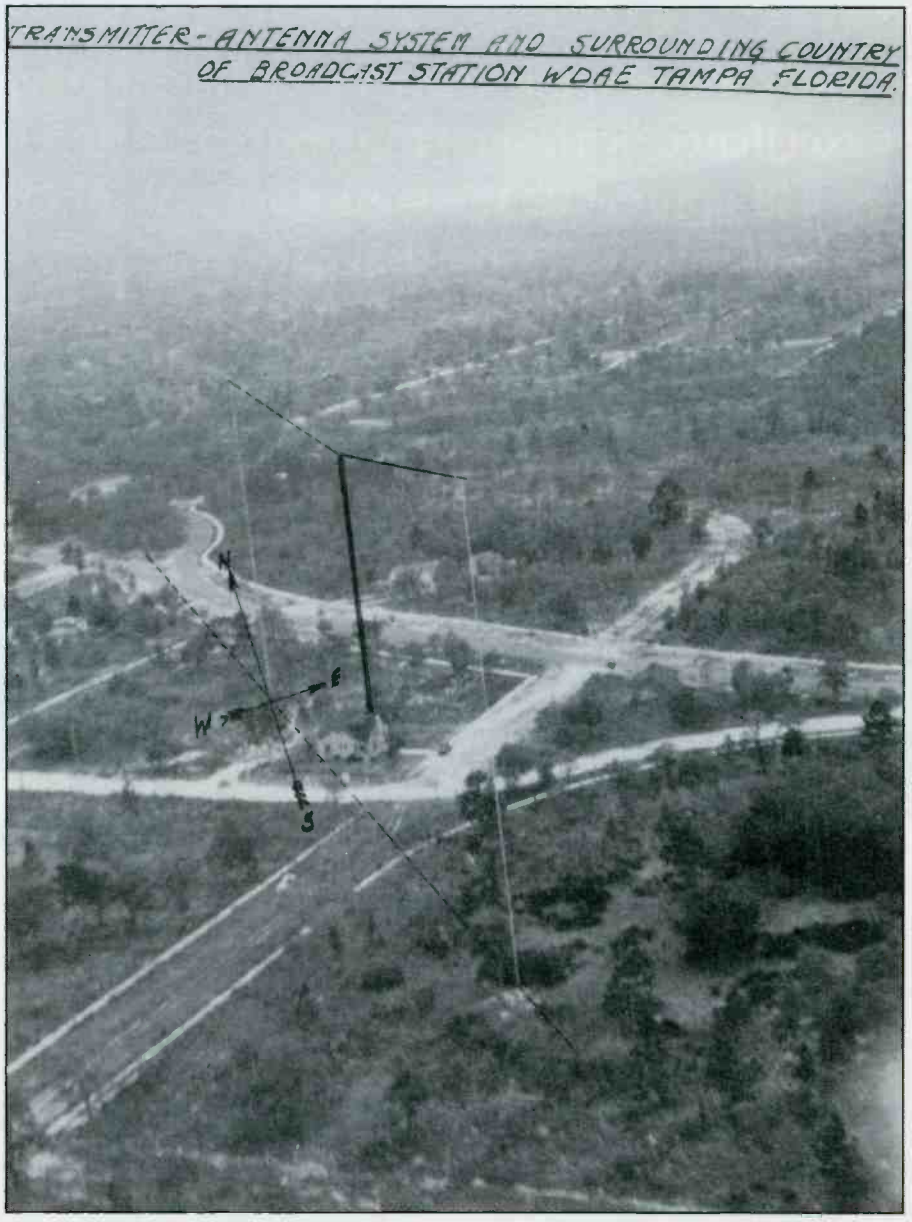
WDAE: Got An Edge On The Radio Craze

It Discovered The Most Efficient Way To Be An Instant Broadcaster

By Alice Brannigan

The first broadcasting licenses were issued by our government in September, 1921. But since at least 1909, informal and experimental transmissions of music and other broadcast-type programming intended for reception by the general public had been taking place. These stations became especially prevalent during 1920–21. Though their contributions have never been adequately acknowledged, hobbyists and experimenters like 6ADZ, 8XK, 9CNF, 5XT, 2XAP, 8CR, 8CO, 5YA, 9ZAF, 9YK, 8MK, and many others, intrigued with the concept of information and entertainment transmissions, were laying the groundwork for the broadcasting industry. In that innocent era of simple radio laws and sparse enforcement, the government didn't shut down these stations. Many who operated such transmitters eventually became broadcast licensees. Large numbers of those pioneer stations still operate. WLW, KNX, KLZ, WHAZ, WWJ, KDIA, WMT, WHCU, WSAJ, WHA, WOI, WSUI, WILL, WBAA, KKOB, WKY, WBT, WTAW, and KCBS are but a few of the stations you can hear today whose original ham and experimenter owners had become broadcast licensees by 1922. However, here's a novel variation on that theme.



A bird's-eye view of the WDAE antenna system at Forest Hills Country Club about 1929. Retouched photo highlights the 168-ft. tower and two poles supporting the vertical cage antenna. A rope attached to the end of each pole secures it. (National Archives photo courtesy Broadcast Pro-File, Calif.)

The Situation In Tampa

In early 1921, the Tampa-St. Petersburg area of Florida had two such stations. From St. Pete, ham operator 4BF, L.W. McClung, was broadcasting via the facilities of his home-built 250 watt transmitter at 1601 South 13th Street. Meanwhile, in nearby Tampa, 13-year old Henry "Fred" Frick, 4BN, was playing phonograph music over his own station, located at 1101 Swann Avenue in the

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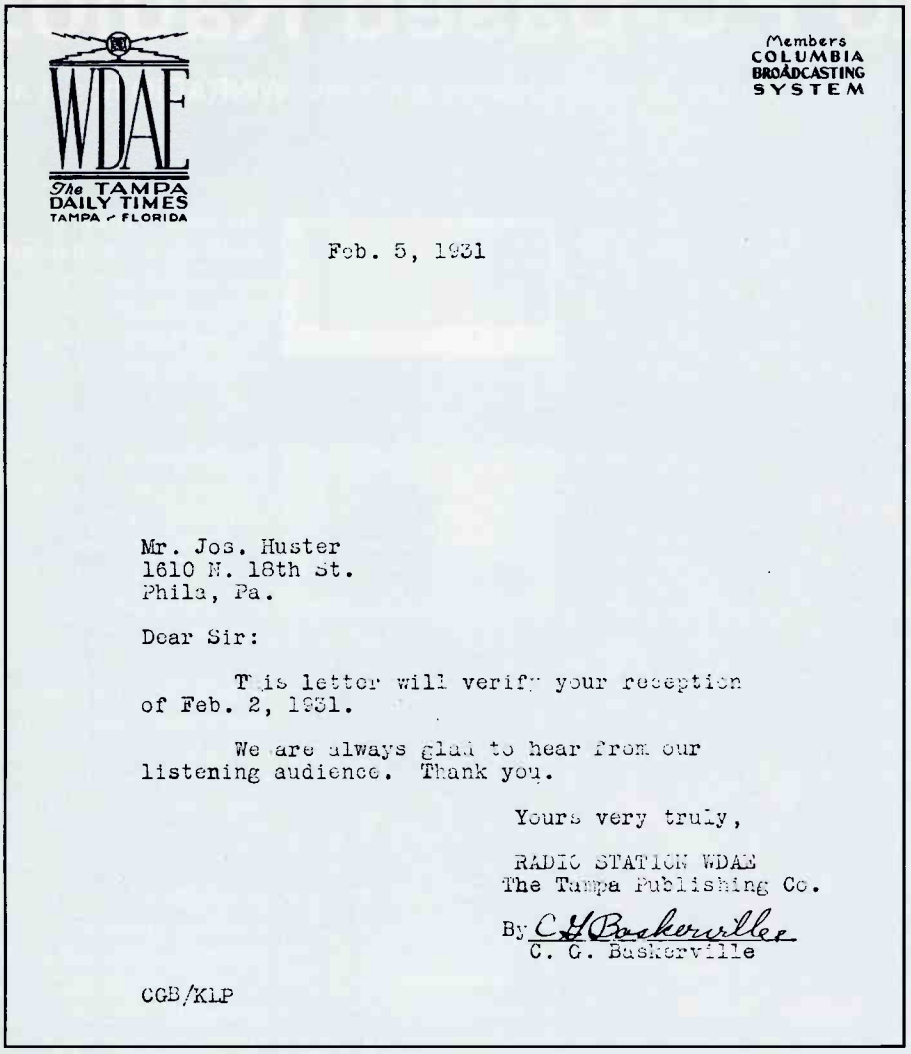


WDAE
The TAMPA DAILY TIMES
TAMPA ~ FLORIDA

Members
COLUMBIA
BROADCASTING
SYSTEM

Feb. 5, 1931

Mr. Jos. Huster
1610 N. 18th St.
Phila, Pa.

Dear Sir:

This letter will verify your reception of Feb. 2, 1931.

We are always glad to hear from our listening audience. Thank you.

Yours very truly,

RADIO STATION WDAE
The Tampa Publishing Co.

By C. G. Baskerville
C. G. Baskerville

CGB/KLP

In 1931, WDAE issued this simple, but adequate veri letter. (Collection of the late Joe Huster, now in the magazine's archives.)

Hyde Park section. Station 4BN was staffed by Fred, his brother Bobby, and a friend, Sol "Salty" Fleischman. Both stations had attracted and built a loyal audience of local wireless tinkerers. Between the two, they had the ear of every radio owner in the Tampa Bay area.

The Radio Craze

The government officially sanctioned broadcasting in late 1921. The initial 25 licenses issued that year included stations owned by Westinghouse, RCA (ex-Marconi Wireless Co.), DeForest Radio, Dr. Charles Herrold, and *The Detroit News*. Beginning with broadcasts from early licensees like KDKA, WJZ, WBZ, KYW, and KQW, radio acquired a new upscale image. The public stopped regarding broadcasting as a novelty pursued by kids and eccentrics playing with electricity in their garages. Immediately, broadcasting became nationally heralded as the miraculous new invention that would bring free entertainment and information directly into every home. Now, people were clamoring to be among the first in their neighborhoods to own a receiver. Furthermore, hundreds of individuals, schools, colleges, clubs, theatres, banks, manufacturers, newspapers, stores, hotels, public utilities, and churches rushed to be first in line to capture the attention of their area's residents by broadcasting to them.

With broadcasters coming on the air, and cardboard *Quaker Oats* containers already in use, nearly every man or boy made a crystal set, or bought one ready-made. Factory made crystal sets cost $5 to $10, complete. The first electronic receivers available for home use by the general public were the one-tube regenerative or *blooper* types. The *bloop* came when the set went into oscillation and the tuned station became audible. The radiation from these sets was naturally bad, so later the one-tube reflex type circuit became popular, and could be bought in kit form. The reflex set didn't radiate, and could drive a loudspeaker. The Crosley *Pup* and Kodel *P-11* were one-tube receivers that sold for only $10. Early tube sets were battery powered, allowing radio to be enjoyed even in rural areas that had no electricity.

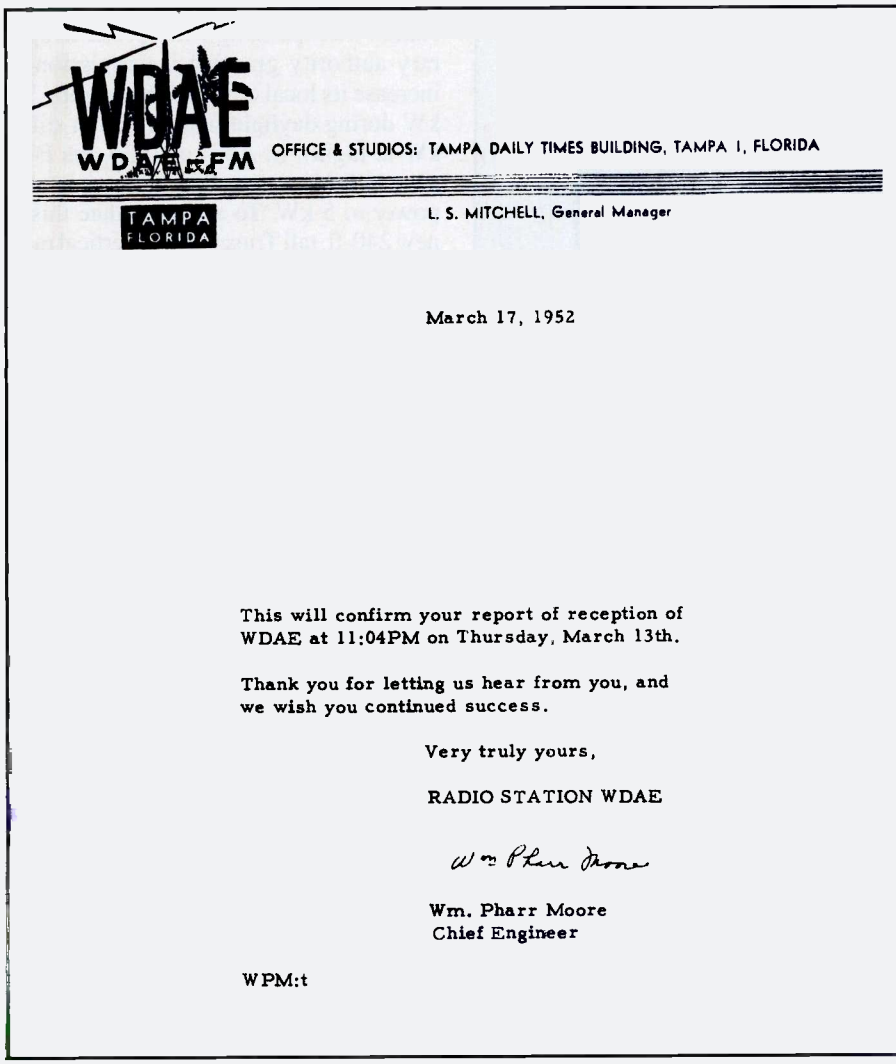
Whoa! Not So Fast!

The Radio Division of the Bureau of Navigation, U.S. Department of Commerce, which issued radio licenses in those years, was quickly buried under an avalanche of broadcast applications. The few manufacturers then producing broadcast transmitters and vacuum tubes suddenly found themselves unexpectedly overwhelmed with equipment orders. Many customers were placed on long waiting lists for broadcast equipment. To best grasp this situation, understand that at the end of 1921 there were only 25 licensed broadcasters, but by the end of 1922 there were more than 550, with most on 833 kHz. Moreover, during 1922 more than a million and a half radio receivers were snapped up by a very eager public.

About 70 newspapers were included in the initial 1922 stampede to become broadcasters. C.G. Mullen, Manager of the *Tampa Daily Times* newspaper had quickly seen the potential of this new medium, and was aware of the delays others were encountering obtaining transmitting equipment. He knew of 4BF and 4BN, the two local ham stations that had already created a viable start-up audience for Tampa Bay area broadcasting. Resourceful Mullen got an idea. In February of 1922, he purchased 4BF's transmitter from L.W. McClung, then applied for a broadcasting license on behalf of his newspaper. In those days, technical standards weren't very stringent, and home-built broadcast transmitters were acceptable. While the *Tampa Daily Times'* license application was being processed, Mullen went out and got ham operator William "Bill" Pharr Moore, 4IZ, to install the old 250 watt 4BF transmitter on the roof of the *Times Building* in downtown Tampa. He even hired Bill Moore as the station's chief engineer.

Presto! Instant Radio Station

On May 15, 1922, the government issued this station a license with the call letters WDAE, allowing for 250-watt



WDAE WDAE-FM
OFFICE & STUDIOS: TAMPA DAILY TIMES BUILDING, TAMPA 1, FLORIDA
TAMPA FLORIDA
L. S. MITCHELL, General Manager

March 17, 1952

This will confirm your report of reception of WDAE at 11:04PM on Thursday, March 13th.

Thank you for letting us hear from you, and we wish you continued success.

Very truly yours,

RADIO STATION WDAE

Wm. Pharr Moore

Wm. Pharr Moore
Chief Engineer

WPM:t

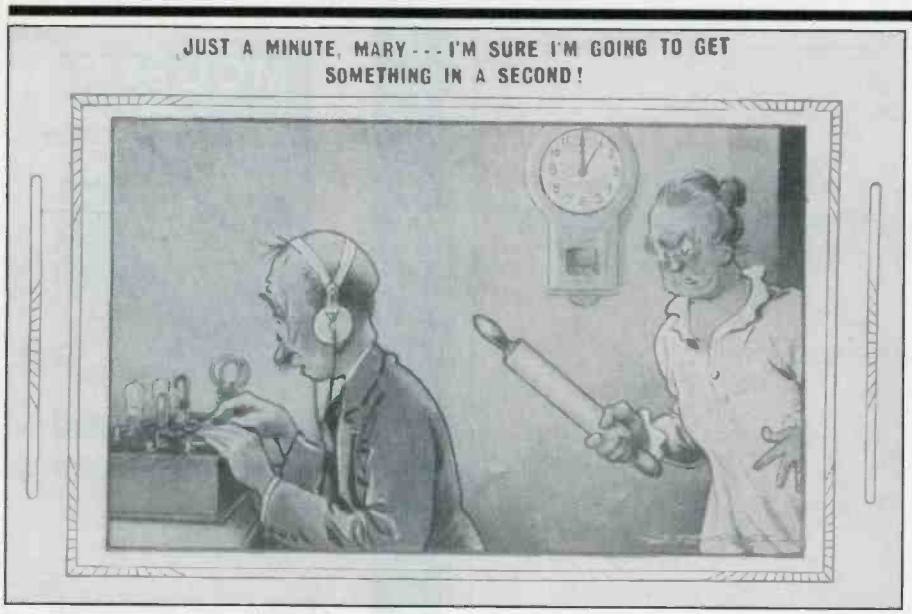
A veri letter from 1952 signed by WDAE's original Chief Engineer, Bill Moore, still there after 30 years!

operation on 833 kHz. The station went on the air two days later. Hired by Mullen for WDAE's original staff, were former local broadcaster Fred Frick, 4BN, and his friend, Salty Fleischman. Fourteen year old Frick sometimes announced, but mainly he worked as an engineer for his friend, Bill Moore.

Mullen had figured out a way to put his new station on the air without the need of losing time on a transmitter manufacturer's waiting list. He had removed two potential competitors from the airwaves, and without annoying them — before they applied for their own licenses. In doing so, his new station became heir to the Tampa Bay area audience created by 4BF and 4BN. Mullen became WDAE's first manager, a position he justly deserved!

WDAE's early programming was certainly innovative, reflecting its young staff's offbeat approach combined with the owner's eagerness to build an audience. There was coverage of a wedding conducted in a truck driving along a main street. This was upstaged by broadcasting the mass marriage of 16 couples at the Florida State Fair. To be sure, these were still not as provocative as the station's coverage of an electrocution at the Florida State Penitentiary. Audiences liked this station! For listeners with more conservative tastes, religious programs were also offered.

In late 1924, WDAE was told to shift to 1100 kHz. In February of 1926, the station left the air briefly so its transmitter could be located to a site at the Davis Island Country Club, on Davis Island (south of downtown Tampa). It returned to the air on March 23 from the new site. In April of 1927, it temporarily left the air again, but was soon granted a new 500-watt license and authorized by the newly-empowered Federal Radio Commission to reopen. In June of 1927, WDAE was



By 1922, the radio craze had hit hard. People stayed up all night twisting dials to try and pick up DX on crowded, noisy 833 kHz. As this 1922 cartoon postcard shows, enjoying the DX hobby had certain risky aspects. These have apparently never been fully resolved.

reassigned to 1120 kHz, and later that year, it adopted the slogan, *The Land of Wonderful Days and Evenings*.

More Moves

By November of 1928, the FRC was shifting around most frequency assignments, and WDAE was ordered to move to 620 kHz, but allowed to use 1 kW there. However, it also had to divide time on 620 kHz with Orlando's WDBO. In late 1929, the station's offices and studios were moved to 201-209 Allied Arcade Building, 114 South Franklin Street. The transmitter and towers had been moved to the Forest Hills Country Club, six miles northwest of downtown Tampa. A new transmitter was ordered and the old one sold to WSPA in South Carolina. While awaiting the arrival of the new equipment, a transmitter was borrowed from WFLA-WSUN and placed in service at Forest Hills.

The Forest Hills site was in a two-story residence. Nearby, two small-diameter guyed iron poles supported its 168-ft. high vertical cage antenna. The antenna was secured by two ropes, each 135-ft. in length, attached to the end of each pole.

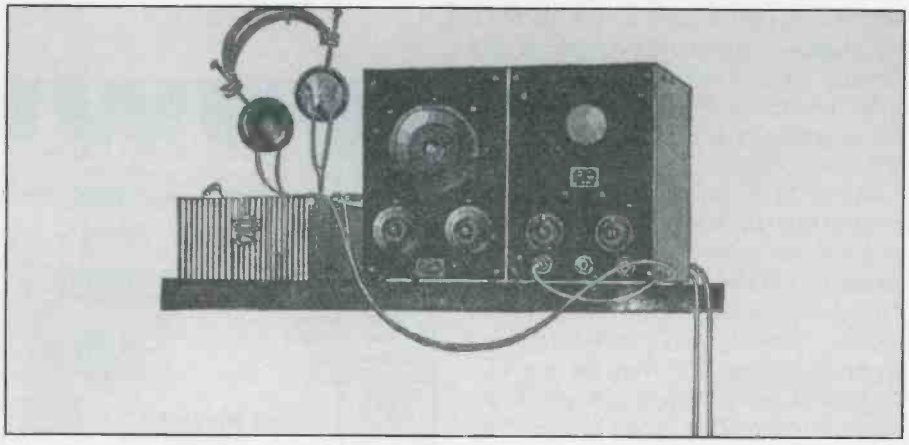
In May of 1930, WDAE moved to 1220 kHz, where it could enjoy full-time use of the frequency. A year and a half later, new studios and offices were opened on the 12th floor of the Tampa Terrace Hotel, and WDAE had already become a CBS network affiliate. As of January, 1935, the station was operating with special temporary authority granting it permission to increase its local coverage by running 2.5 kW during daylight hours (though still 1 kW at night). In April of 1936, the FCC gave WDAE approval to increase its day power to 5 kW. To accommodate this, a new 240-ft. tall Truscon steel vertical radiator was installed at Forest Hills. The daytime power increased to 5 kW in late 1936, and by 1939, the station had received the green light to also run 5 kW at night.

Full-time 5 kW operation required WDAE to use a directional antenna system with a single pattern. To accomplish this, in early 1940 a second 240-ft. Truscon radiator was installed. WDAE was required to shift to 1250 kHz on March 29, 1941 as part of a major North American frequency reallocation plan.

On A Steady Course

WDAE continued as a popular station in the Tampa Bay area. In 1959, the studios were moved to new quarters at 101 North Tampa Street, south of downtown Tampa. This was the transmitter site for WDAE's FM sister station and became a landmark because of the steel lattice FM tower directly above the two-story studio building. In 1960, David E. Smiley, passed away at age 81. In 1933, Smiley had purchased the *Tampa Daily Times* and WDAE from the paper's (and station's) founder, D.B. McKay. Smiley's interests were passed on to a corporation owned by his heirs. In 1964, the station was sold to Rounsaville of Tampa, Inc., which already owned local station WTMP.

FCC regulations at that time required Rounsaville to sell WTMP in order for this transaction to take place.



A 1922 Westinghouse single-circuit regenerative set, with detector, and two audio amplification stages. It was battery-powered.

Changing Times

At the end of January, 1965, WDAE ended its long affiliation with the CBS network. The CBS-affiliated station in the Tampa Bay area then became WINQ. WDAE subsequently switched to an Adult MOR music format. In 1973, the station joined the ABC Information Network. Also that year, the station received authorization to operate its transmitter by remote control from 101 North Tampa Street. In September of 1974, WDAE was authorized to identify as Tampa-St. Petersburg. Affiliation with CBS was restored in late 1974, replacing the ABC Information Network which was

discontinued at that time. The CBS affiliation was dropped again in 1978 as WDAE adopted a Top 40 contemporary music format and again joined the ABC Information Network.

WDAE was sold in 1979 for $5.5-million to the Taft Broadcasting Company. It then began an Adult Contemporary music format. In 1980, the owners moved WDAE to new quarters at 504 Reo Street. In July of 1981, the station debuted its Primetime Radio format, consisting of pre-rock era nostalgia/oldies music.

In the summer of 1984, Taft sold WDAE and its sister FM station to Gannett Tampa Broadcasting for $6,050,000. Two years later, a MOR music format was instituted. By 1990, WDAE and its sister FM station, WUSA-FM, began simulcasting an Adult Contemporary music format. This simulcasting arrangement lasted until January of 1994, when WDAE debuted a country music format the station called *Froggy 1250*. That format lasted only until early October when it was dumped and simulcasting resumed with an Adult Gold music format. In June of 1996, the format was changed to Hot Adult Contemporary.

Jacor Communications Inc. purchased WDAE and its FM sister station (plus other stations in Los Angeles and San Diego) in January, 1997 for $190 million. The new owners quickly instituted a Sports Talk format, with the station's slogan becoming, *The Sports Animal*. Jacor also relocated the studios from 504 Reo Street to 4002 Gandy Boulevard, the site of another Jacor-owned station, WFLA.

Historic? Yes, indeed! Tampa's WDAE stands out as Florida's oldest continuously licensed AM broadcast station. It operates from studios at 4002 Gandy Blvd., running full time on 1250 kHz with 5 kW and a directional (at all hours) signal pattern. The station continues its affiliation with the ABC Information Network. In all, an impressive career, especially when you consider its beginnings.

Epilogue: In February, Stephen Myers, of Valrico, Florida, sent us an obit from the *Tampa Tribune* stating that Henry "Fred" Frick, W4BN, had passed away a few days short of his 91st birthday. As noted here, while still a teenager, Fred Frick was one of the Tampa Bay area's ham broadcasting pioneers, and later worked at WDAE when it opened. In fact, he spent 10 years at WDAE, then moved to Miami where he worked with Thurow Electronics until his retirement in 1973. He remained active in ham radio throughout his life. This month's column was inspired by and is respectfully dedicated to the memory of Mr. Frick.

Fred Frick's friend, Sol "Salty" Fleischman, went on to become a leader in Tampa's radio and television industry.

This month's WDAE story was assembled from several sources. We want to thank Broadcast Pro-File for granting permission to excerpt portions of their highly detailed report on WDAE. B-PF is a professional research service that, for a reasonable fee, can prepare historic information on any American AM or FM station, past or present. A catalog of their services is $1, and available from Broadcast Pro-File, 28243 Royal Road, Castaic, CA 91384-3028.

I'm always seeking old time radio and wireless related input from readers in the form of picture postcards, photos, QSLs (good copies are OK), station directories, news clippings, anecdotes, column ideas, and comments. Our snail mail address is: Alice Brannigan, *Popular Communications*, 25 Newbridge Road, Hicksville, NY 11801. Our direct E-mail address is <Radioville@juno.com>. ■

The Radio Connection

A LOOK BEHIND THE DIALS

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

The "Boy's First Receiver" Grows Up

A special thanks to the readers who have kept me abreast of their one-tube receiver project's progress. It's really great to hear that some of you have started building or have finished the receiver! As promised, this month I will show how I've added a second stage for increased audio amplification. This involves adding one more tube, an audio interstage transformer, and a few other sundry parts. I'm writing this column over the 4th of July three-day weekend. The extra time off has given me a chance to build and experiment with the audio amplifier stage. Adding the stage is well worth the effort. I am able to hear much weaker stations, and the stronger ones require some throttling back on the regen control to save my ears! There still isn't enough audio to drive a loudspeaker, which would probably require at least two audio stages, with the last stage running a 90-volt B supply. I did try using a vintage Manhattan Electric horn speaker, and also a Bremer Tully cathedral speaker on the two-tube receiver. Both speakers are designed for use on high-impedance battery sets. The Bremer Tully delivered no audio, while the more efficient Manhattan Electric horn faired slightly better. For the truly adventurous, I am showing a schematic for a two-stage audio section; but remember, I haven't tried this circuit, it exists only on paper. In any event, please get the basic receiver working properly before adding the audio stage. If there are problems, it's much easier to troubleshoot one stage at a time.

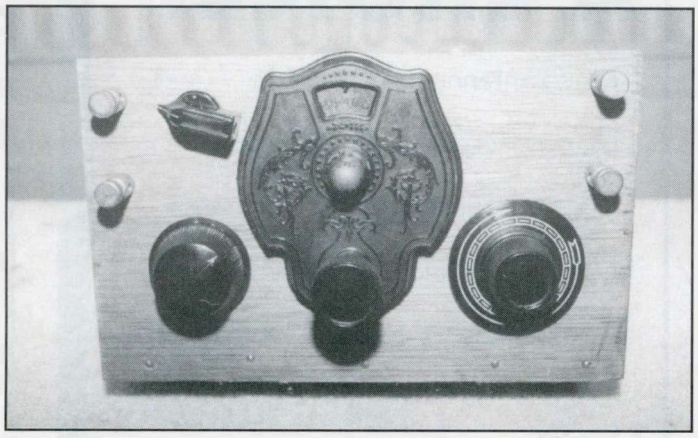
Using Low-impedance Headphones

I've received one or two E-mails asking about using low-impedance headsets, such as those used for stereos, on the receiver. You may do so, but this requires the use of a matching transformer on the audio output of the receiver or audio amplifier. A small output transformer from a defunct table set will do fine.

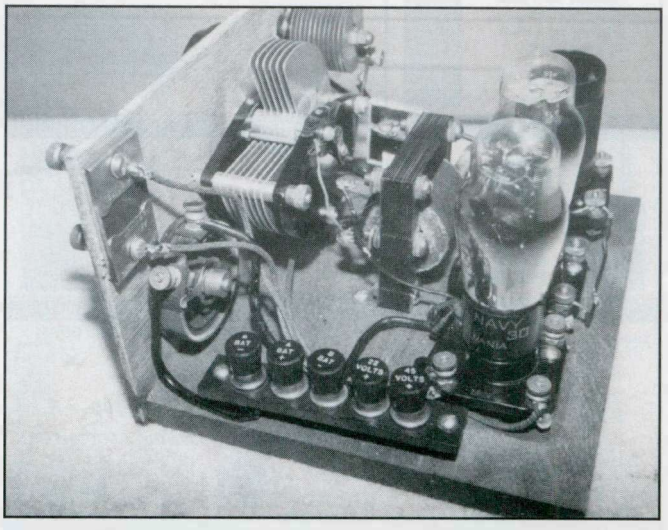
The little receiver featured in the past few issues is no more. It was reduced back to components and reincarnated into the one shown in the photos. The new set includes the audio stage and features a much more compact layout than the original.

Combined Receiver And Audio Stage

The set now sports a filament rheostat and four-pin tube sockets. These two changes allow using a single 3-volt "A" battery supply, allowing the use of either '99 tubes (3-volt filaments) or type '30 tubes (2-volt filaments), instead of the 1H4 and 1G4 octal-based tubes I had originally tried. The rheostat is set full-clockwise (no voltage drop) for the '99 tubes, and to a point marked on the panel to drop the voltage to 2 volts for the type '30 tubes. A 15-ohm rheostat is ideal, since the two paralleled tube filaments require about 11-ohms resistance to drop the 3-volt "A" supply to 2 volts. The four-pin tube sockets used in the set are interesting. I mentioned in the last issue how battery set tubes are microphonic and will produce a ringing noise in the headphones whenever the set is bumped or jarred. Although the mechanism can't



The front-panel view of the new two-tube regenerative receiver. Front panel controls are as follows: upper left, antenna coupling; bottom left, regeneration; center, main tuning dial; and at right, the filament rheostat. Metal binding posts at upper left are for the antenna and ground connections. The headset is connected to the metal binding posts in the upper right side.



In this right hand side-view of the receiver, the marked binding posts for the battery connections can be seen. The rheostat is visible on the rear of the front panel.

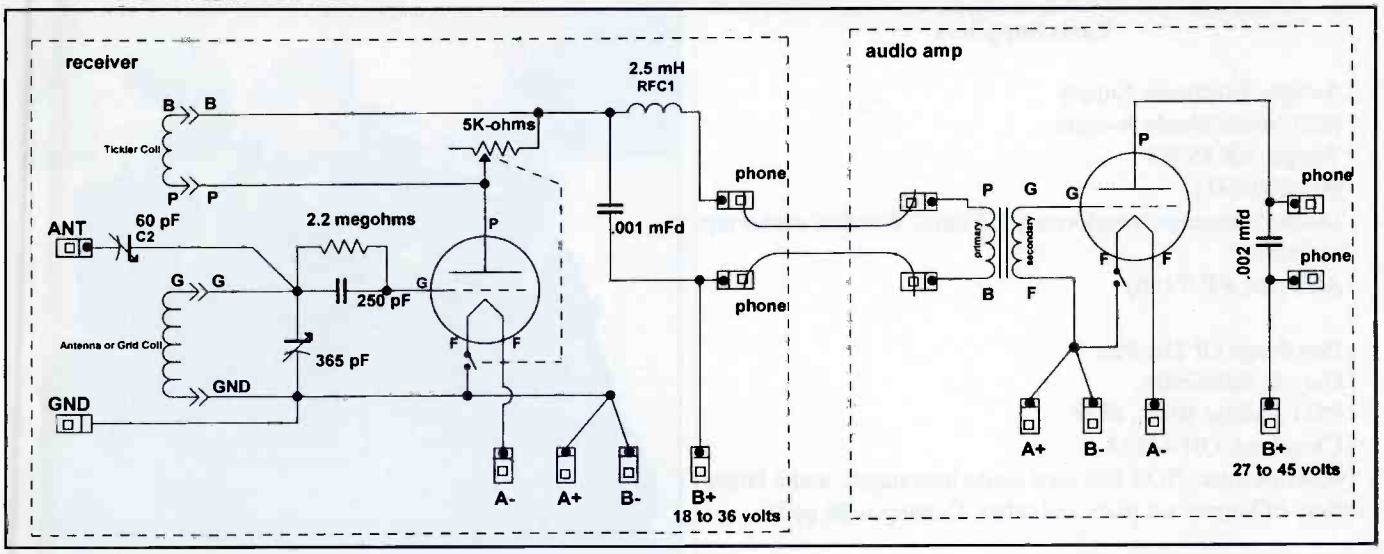


Figure 1. The receiver and companion outboard audio amplifier.

been seen in the photos, these particular sockets provide a clever spring-action shock mounting to reduce microphonics. I have some other sockets that have side arms with cork blocks which were commonly used to quiet the detector tubes in TRF sets. Don't worry, special anti-vibration sockets aren't really needed in this project. The 2.5 mH RF Choke (RFC) is not needed when the audio interstage transformer is part of the main receiver.

The first version of the one-tube receiver didn't have a fancy front panel. I had wanted to use something similar to the black material used for early battery set panels for this one. At one time, AES carried front-panel material, but it has been absent from their catalog for many years. A piece of 1/8" thick black Lexan would probably work well, or use 1/8" three-ply plywood as I did.

The new front panel is too cluttered and asymmetrical for my liking, but it certainly looks as nice as many original 1930s homebrew sets that I've seen. I'll probably redo it at some future date. Looking at the front panel, the upper left control is for the antenna coupling capacitor. The antenna and ground connections are made to the two nearby metal binding posts. Immediately below it is the knob for the regeneration control. The vernier tuning dial is in the center. The control at the lower right is for the filament rheostat; in the full counter-clockwise position this control removes the filament voltage permitting it to act as an off/on switch. The two metal binding posts seen in the upper right provide the headphone connections.

The rear view photos show how the battery connections are now made using

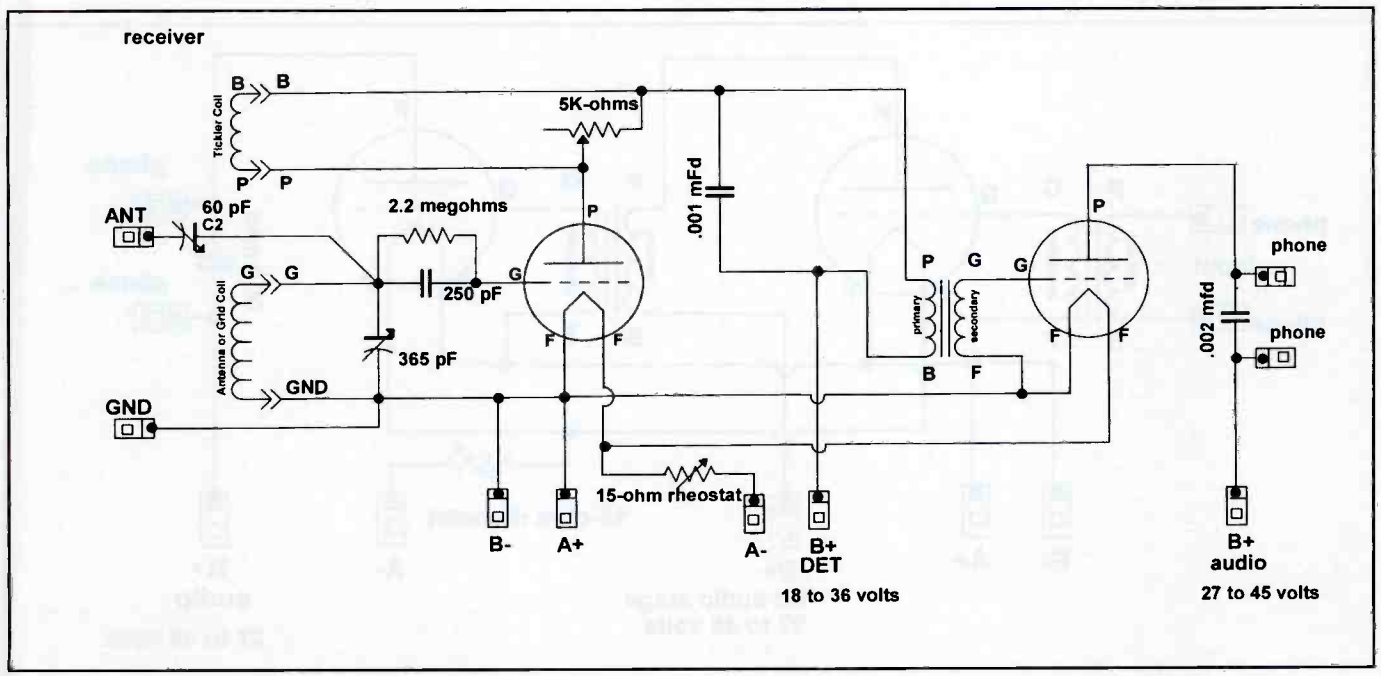
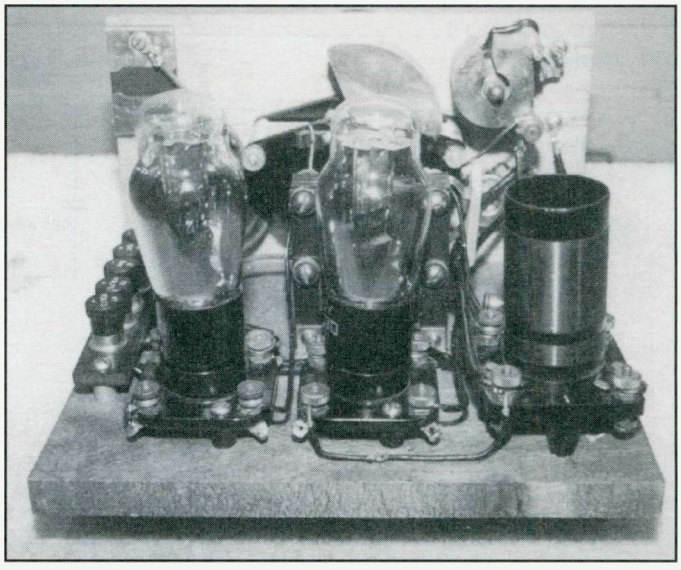


Figure 2. My latest version of the Boy's Receiver now sports an integral audio amplifier stage.

Parts Suppliers

Antique Electronic Supply
6221 South Maple Avenue
Tempe, AZ 85283
602-820-5411
(Audio interstage transformer, 1:3 ratio. Winding center tap not used.
AES part # P-T156)

Playthings Of The Past
Gary B. Schnieder
9511 Sunrise Blvd., #J23
Cleveland, OH 44133
(Carries misc. NOS and used audio interstages, and a larger variety of battery set parts and tubes. Catalog is $6 ppd).



Rear view of receiver. The set was made for four-pin triodes such as the '30 or '99. With a 6-volt "A" supply, 01A or 01AA (100 mA) tubes could probably be used. Type 30s are shown.

binding posts marked "A Bat -," "A Bat +," "B-," "B 22 Volts," and "B 45 Volts," instead of the Fahnestock clips I used in the single tube version. These are original 1920s items and really dress-up the sets appearance. Playthings of Past carries similarly marked binding post caps in their catalog. Most of the wiring was done using old tinned square buss wire with black slip-on insulation salvaged from scrapped battery sets. Antique Electronic Supply carries reproduction square copper buss wire and black sleeving. The new antenna coupling capacitor is a bit larger than needed, but it was the closest value found in the junkbox.

Add-On Version Of The Audio Stage

As you can see in the schematic, the audio stage isn't very complicated. The major components are the tube and audio interstage transformer. You'll need a few other items: Fahnestock clips or binding posts, a tube socket, a .001 or .002 mica capacitor, mounting board, and some assorted hardware. The tube should be the same as used in the receiver. I recommend using 1H4, 1G4, or type 30 receiving tubes.

The primary of the transformer is connected via jumper wires and Fahnestock clips to the headphone connections on the receiver. The audio stage will work with as low as 18 volts, but running with between 27 and 45 volts gives best results. However, 27 volts is ideal for the regenerative detector. Four batteries in series will give the 36 volts for the audio stage B supply voltage, and the connection between the 3rd and 4th batteries may be

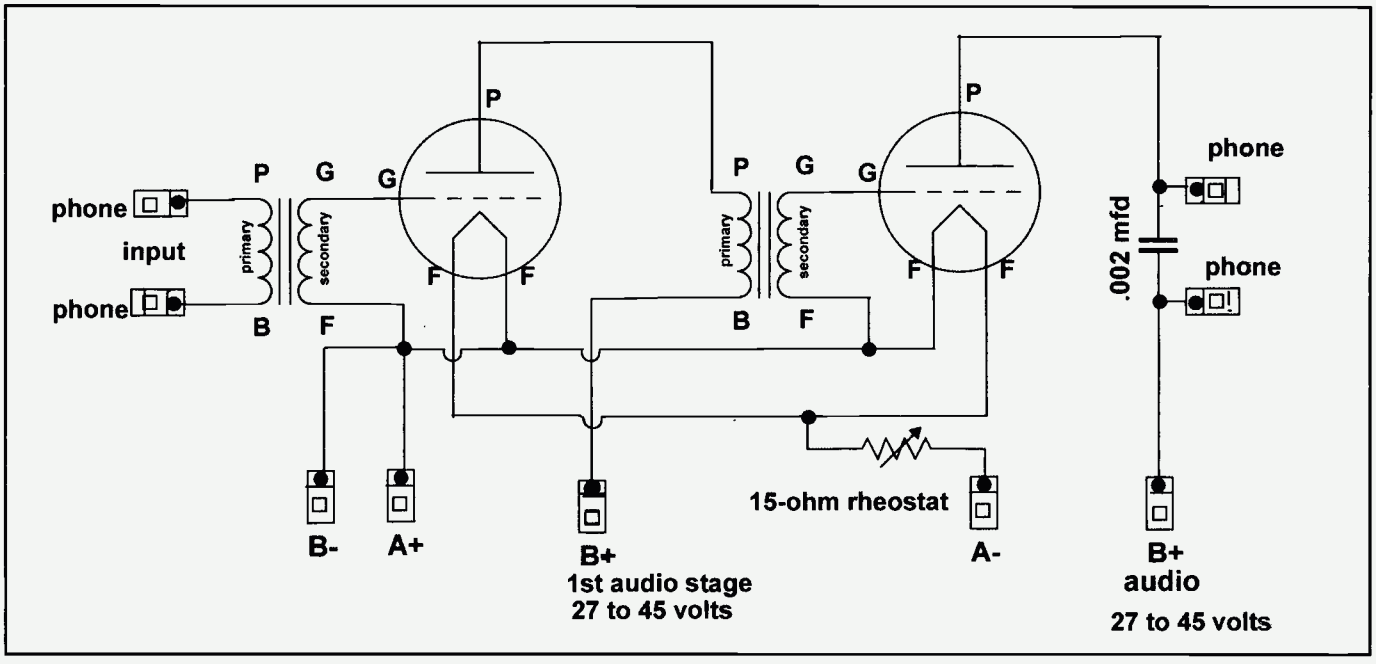
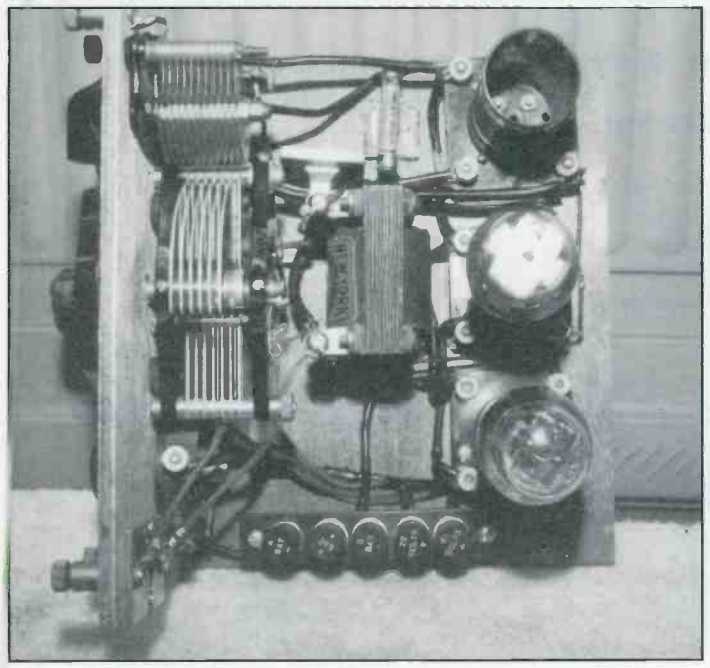
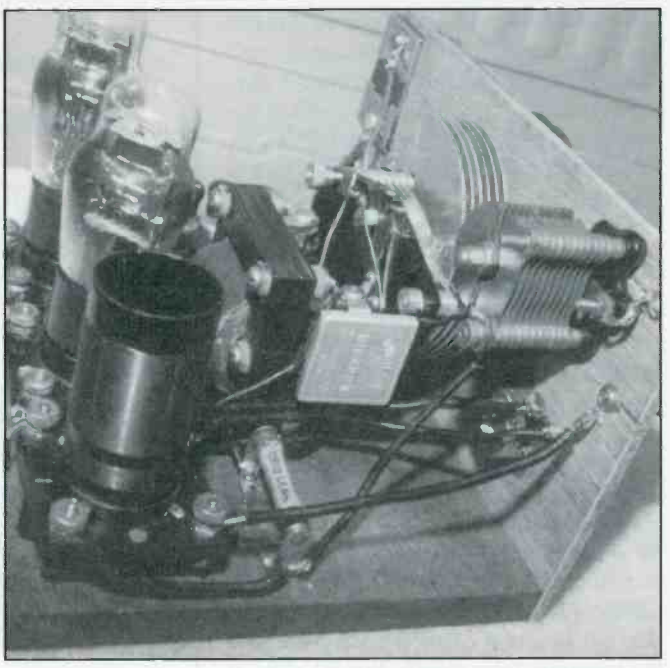


Figure 3. Two audio stages can be combined for even greater amplification.



Top view of receiver. The audio transformer is mounted in the center of the breadboard. Although compact, the sets layout is symmetrical. Grid leak resistor and capacitor is mounted in front of the band coil.



Left-handed side view of the receiver. Coil is commercial 1920s made for the lower end of the current broadcast band. Note the .001 bypass capacitor is installed right at the transformer primary windings. The antenna coupling capacitor at the upper right is bigger than needed for the receiver.

tapped for the needed 27-volt B supply for regenerative detector voltage. For 27 volt operation, simply jumper the 27 and 36-volt binding posts together and run the set on three 9-volt batteries.

The audio tube filament is paralleled with the "A" battery supply used for the receiver. The polarity is important; these are directly-heated tubes and the filament voltage affects the biasing. If a dropping resistor or rheostat is used, it must be placed in series with the A- battery connection! Below 45 volts, these tubes don't require any more biasing than is provided by the "A" battery supply. Many early battery sets ran the last audio stage with "B" voltages of 90 volts or higher. At these levels, additional biasing would be needed, and would typically be supplied by a "C" battery (typically 4.5 volts or so) in series with the "cold" side of the audio transformer secondary. The "C" battery normally lasted for its shelf life since the audio stage is class A and draws no grid current. Note that if a dropping resistor was used, and placed in the A+ side of the filament, it would act as if additional biasing was being supplied; but please don't try using more than 45 volts on the audio stage, it isn't needed! A .001 or .002 mfd mica is across the headphone terminals. The exact value isn't critical, but going much larger that .002 mfd will probably start rolling off the highs. You may try eliminating this component if you desire.

The Audio Transformer

To keep things authentic, my receiver sports a vintage 1920s audio interstage transformer made by New York Audio. These interstage transformers were sold with different primary-to-secondary winding ratios; ratios between 1:2 to 1:8 were fairly common. The exact ratio is not critical for our application. Early vintage audio transformers are plentiful and cheap. The bad news is that in 60 or more years, many of them have developed open windings! The solder fluxes used to make connections to fine wire used in the windings is corrosive, and erodes away the wire until an open circuit develops. As with the vintage tube sockets, capacitors and other parts, connections to the transformers were most often than not made using screw or binding post terminals.

Gary, at Playthings Of The Past offers an excellent selection of NOS and used audio transformers. If you want to keep things "vintage," check his catalog for a suitable candidate. Make sure the vendor checks the vintage transformer primary and secondary for continuity before you close the deal! The primary winding is normally in the 1000-ohm range, and the secondary winding will usually measure around several thousand ohms. Many vintage battery set components have markings showing the connection points. For example, the tube sockets I used are plainly marked "G," "P," and "F" to show the grid, plate, and filament pins. Vintage transformers are usually marked with a "B" and "P" on the primary winding to show the plate and B plus connections, while the secondary is marked "G" and "F" to show the grid and the filament connection. Note this "F" refers to the A+

side of the filament, which is normally the "ground" reference for the receiver! Antique Electronic Supply carries a new audio interstage that will also work in the receiver. The AES part number is P-T156. The center tap on the AES transformer is not used.

The Two-Tube Audio Amplifier

I'm showing this circuit for the experimenters in the group. It should work, but since I haven't breadboarded and tested it on the workbench, you will be on your own if you build it. I suggest keeping the plate "B" supply voltages between 27 and 45 volts. If you do decide to try for higher voltage on the second stage, you will need to add a "C" biasing battery between the "F" terminal of the transformer and the common buss return. For 90 volts, a 4.5-volt battery should suffice. The negative battery terminal would go to the transformer "F" terminal, the positive to the common return buss of the set. The battery can be left in circuit as no current is drawn from it. There is no reason to run more than 45-volts on the first stage. This two-stage audio amplifier should be able to drive an efficient horn speaker.

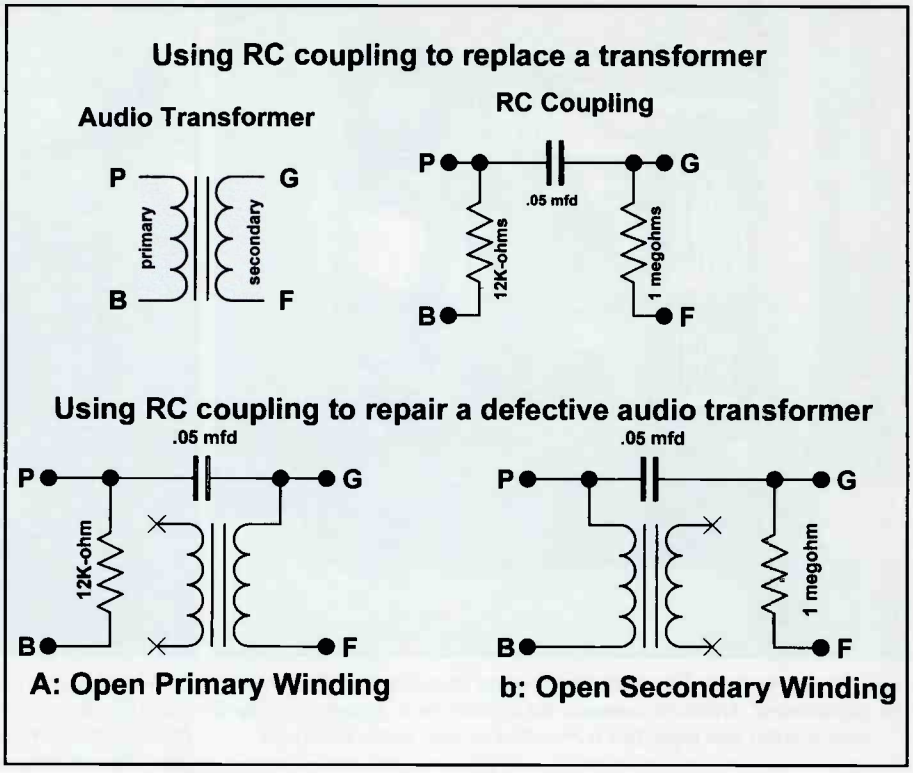


Figure 4. Using Resistance-Capacitance (RC) coupling to replace an audio interstage transformer. An open winding in an audio interstage can be effectively bypassed by using the good winding and a resistor and capacitor for coupling. The resistor supplies the DC feed needed for either the plate or bias voltage, depending on which winding is open. The capacitor provides a low-impedance path for the audio. Gain will be slightly degraded in all cases.

RC Coupling Versus Transformer

The audio interstage transformer is an impedance matching device used between the relatively low-impedance plate output and the very high grid impedance of the audio amplifier. We are going from a low impedance to a high impedance. The transformer is basically a voltage step-up device. For a 1:3 turns ratio, the voltage would be increased by three times. However, the impedance "transformation," or change, is three times the turns ratio. In other words, an audio transformer with a 1:3 turns ratio would provide an 1:9 impedance ratio.

Do we really need the transformer? Early battery sets used low-mu triodes and transformers improved the efficiency of the set enough to warrant the cost of the devices. Later sets seldom used interstage audio transformers for several reasons. They were costly, high-gain tubes worked fine without them, and early audio transformers weren't exactly hi-fi or cheaply priced. Since many early battery sets now have open transformers, some restorers use a little cheat circuit to get them quickly back into operation. You might want to try this circuit instead of using the interstage transformer if you're experimentally inclined. It should work. The receiver will exhibit a little less gain than if a transformer were used. Remember, I haven't tried Resistance-Capacitance coupling in this receiver. The 2.5-mH RFC must be used with the RC coupling circuit to keep RF out of the audio stage.

If you find a defective vintage transformer with one open winding, it is easily bypassed using a simple RC coupling circuit made up of one resistor and capacitor. This Band-Aid fix will get an otherwise inoperative set going until the transformer can be repaired or replaced. The RC circuits shown here are for interstage coupling only! You can not use these circuits to couple a plate output to a loudspeaker.

Well, I'm running out space for this month. Hopefully, these new projects will keep you busy until next time. I haven't forgotten about the AC supply — it is in the works. I also want to talk a bit about alternate methods of controlling feedback for regenerative sets. That should pretty well wrap the "Boy's First Receiver" project. Woodworkers might want to consider making an enclosed box to hold the receiver and batteries, with a small storage area for the headphones and a simple longwire antenna. If I get time, I will do so and show the results in a later column. Please write and let me know how you're doing. ■

ScanTech

BY KEN REISS
<armadillo1@aol.com>

TRUNKING, TIPS, TECHNIQUES, AND MODS

Getting Started In Scanning

We get letters all the time. And there are a lot of letters that are asking beginner questions; things we all know after scanning for a while, but things that are a mystery to someone just starting. Some folks are just joining the hobby, while others have decided to find out why their shortwave receiver dial stops at 30 MHz. Let's take a few minutes and answer some of those basic questions. Sometimes, it's a good idea to review, even if you've been scanning for a while.

Two questions top the list: 1. I want to get a scanner— what kind of radio I need? and 2. I have the radio, now where do I find frequencies and how do I fill up 200, 300, 400, or 1,000 (pick one) channels?

What Kind Of Radio Do I Need?

What kind of car should you buy? It's about as complicated a choice, although the cost of the radio (particularly scanners) isn't quite as high as a car. Just like cars, there are a lot of choices, and a lot of things to consider.

Probably the first question you should ask before you ever go shopping is what you're going to do with this radio. Do you want a portable that's convenient to carry around, or would a base or mobile unit serve your needs better? All factors being equal, you should get slightly better performance from a base or mobile. Key word there is "should." In theory, because of the additional power available, and a steadier source of power, as well as the possibility of better performance from the antenna system, it "should" work that way. Having said that, the reality is that there are many handhelds that can perform just as well or better than their base/mobile counterparts. It probably shouldn't be much of a factor in your decision making process. Concentrate on *how* you want to use the radio, and then make your selection accordingly.

Probably the next question you need to answer is about trunking. If you live in an area where the things that you want to listen to use a trunking system, you'll want a trunking scanner. Trunking is a way of managing frequencies with a computer system to give an agency the appearance of having many more channels than it actually has. But they are very difficult to listen to unless your scanner can follow that particular type of system.

How can you tell? The best way is to ask an experienced listener. If you can't find anyone to ask, there are a couple of ways to get indications at least of whether or not you should be worried about having a trunked scanner. The first thing to get is a list of frequencies (buy a copy of Police Call at your local RadioShack if you can't find a proven list from a local source). Look up the city that you are interested in listening to and then have a look at the frequencies. Police Call can sometimes tell you which frequencies are used for police/fire/ambulance activity, and sometimes it does not have that information. If the frequencies are in the 861 to 869 MHz range (designated as output frequencies for trunked systems), there is a strong possibility of trunking in your area. Right now, if the frequencies are in other ranges, you're probably safe — for now anyway. If they are in the 800–900-MHz range, and if there are a group of them, (5–60 will be listed in Police Call), there's a very good chance that the system is trunked. Now you will have to find someone to ask, or make sure you buy your scanner that will accept a return if it's not compatible with your local system.

The most common systems in use are the Motorola (type I and II), and Astro, Ericson's EDACS system and Johnson LTR. Johnson LTR is very rarely used for public safety, although that may change with an upgrade to the LTR system. EDACS can only be followed with the Optocom computer-controlled scanner from Optoelectronics (for off-the-shelf equipment there are other solutions if you want to build your own decoder). But if the system is running EDACS digital modulation (the voices are scrambled and sent as digital information), you'll need to find something else to listen to.

Even handhelds run quite a wide range. On the right, the two-channel, VHF-only TigerScan, and left, the 300-channel BC-235.

Motorola type I and II can be followed with a number of radios, but still a limited number. They include the Bearcat 895 and 235, the RadioShack PRO-90 and 2050 and 2066, and the Optocom system. There are other combinations of radios, computer interfaces, and software that will also accomplish the task, but you'll have to know enough to assemble all the pieces and make it work. The systems I mentioned above are self-contained and complete from the manufacturer. Astro is a system that can also carry digital modulation, and can't be monitored with today's equipment.

If you don't have a trunking system to contend with, your choices are much more extensive. Don't rule out the trunk-tracker scanners just because you don't have a trunking system in your area yet. They are all above average conventional scanners as well, and if a trunking system ever arrives, you'll be all set. One final

Advanced features like this trunktracking handheld from Uniden may or may not be necessary in your area, but it's best to find out before you buy the radio.

piece of bad news is that the trunking scanners from Uniden and RadioShack can not scan both conventional channels and trunked systems at the same time. So if you have both to deal with, you may eventually need two radios. This too could change very shortly, but in the meantime, it will give you the opportunity to have both a base and a portable to cover all the bases.

Other Features

If you live in an urban area that is likely to have a lot of radio users around you, or as it is often referred to, "an RF rich environment," then the *selectivity* and *dynamic range* of the radio will be important considerations. What all this means in English is that if you don't want to listen to a bunch of interference from pagers, commercial users, and cell phones, you'll want a radio that's fairly high-end. On the extreme, you'll need something called CTCSS or DCS to cope with the interference.

How high-end? Well, that's a very difficult question to answer. In fact, while the high-end scanners tend to be built a little better and be more resistant to interference, it might be that in your particular situation, some other radio works better for some reason. If you're unsure, it's best to buy from someone who will let you return it in a few days so that once you get it home, you can do some actual scanning and find out how interference prone your area really is. If that radio doesn't work quite right, try another model. Design differences often allow one model to perform in one place while another model might be much better only a few blocks away.

Of course, the more expensive the radio, the less likely you are to have the problem in the first place. It's also worth noting that there is no "perfect receiver" that won't get interference at any time on any frequency. Don't waste your time looking — just find something that's acceptable to you on the frequencies you listen to and enjoy the hobby.

Generally speaking, more memories are a good thing, but there is a point of having too much. Really, it's not memories we need as much as banks. Banks help to organize groups of things that belong together. All the police, or all the fire channels, or perhaps all the south side and all the north side could be arranged in your scanner's banks. Most scanners on the market today (except for the very few that have less than 100 channels) will be divided into at least 10 banks. A 200 channel scanner is likely to have 10 banks of 20 channels each. That's probably enough for most applications. Twenty banks of 10 channels would be more versatile than the 10 bank system we were discussing, but you can't always have everything at a price we're willing to pay for a scanner.

Frequency coverage is another thing to watch, particularly on the introductory models. Most of the high-end radios will include the standard VHF-Lo, High, UHF, and 800 MHz ranges. Some offer continuous coverage from the shortwave bands through one or two Gigahertz.

Advanced computer-controlled radios like this new Optocom receiver offer many advanced features, and all the advantages of computer control at a reasonable price since the computer handles most of the hard stuff. This particular unit is quite well-equipped and an excellent choice for getting started with computer-controlled scanning in either a trunked or non-trunked area.

High-end base units include radio things like this AR-5000 from AOR. This is probably not recommended as a beginner's radio, but it's something to look forward to after you get bitten by the bug.

However, some of the introductory models leave out an area or two, usually at the high or low end to cut costs.

One particular radio that comes to mind (and now is discontinued) is the RadioShack PRO-23. On the surface, it looked like a great introductory radio and included the 800-MHz range. It wasn't until a week or so later when I decided to add the state highway patrol frequencies to a bank that I found out it did not include the VHF-Lo range. Oops.

It's also worth noting that we will begin to see some public safety frequencies being assigned in the 700-MHz, 754–806 MHz range in the not too distant future. I believe the allocation has been approved by the FCC, and is waiting only for equipment to be made available, and the existing services to relocate. Currently, only the continuous coverage scanners include this range. It is also likely that trunking will be the normal mode of operation in this range, although conventional operation is also permitted. No doubt, new models will appear as soon as the band becomes common, but if a service you're interested in moves, that won't be much help,

You might find a mobile unit like this works great in your car, but you might also like a smaller unit like this for your base radio. This model from RELM includes tone squelch to reduce interference in high traffic areas.

Some of the newer radios include the ability to store an **alphanumeric label** (or alpha tag, as they're called) with some or all of the memories. This feature tends to appear mostly on the higher end models, but can be well worthwhile in a larger scanner. Remembering what frequency goes with what over five hundred or one thousand channels is downright difficult, even if you have a good memory. It's also

available on computer systems for any of the computer-controlled scanners, which makes data entry much easier.

Another extremely useful feature is **selectable delay**. Almost all scanners today have a delay function that will cause the radio to pause for a few seconds before continuing the scan to see if a reply is received on that same channel. On many radios, this feature is either on for all channels or off. Again, on the high-end units, you can turn this feature on and off per channel, so you can customize your scanning to the agencies you're listening to and your preferences.

Antennas

Once you've got the radio, don't forget the other important piece of the radio puzzle. How "much" antenna you need depends largely on where you are located and what you are trying to listen to. It's beyond the scope of this article to explain much in the way of antenna theory or even specific recommendations, but we can give you a few things to experiment with. We'll take a much more detailed look at antennas in an upcoming "ScanTech."

If you're located in an "RF rich environment" and already having trouble with overload or interference, increasing the antenna performance will only make things worse. The first thing you should do, particularly if you are just getting started in scanning, is to see what the radio can do right out of the box. Almost all scanners, even base units that are intended to be used with larger antennas, come with some sort of small, easily attached antenna. Sometimes, these mount right on the back of the radio and are easy to set up. Give it a try. You can always upgrade your antenna situation later if you're not hearing everything you thought you would.

Of course, most handheld radios come with an antenna from the manufacturer. And on most radios, you will do well to replace it. The manufacturer includes the antenna as a convenience, not as a performance enhancement, and the antenna is likely to work across the range of frequencies that the scanner covers... equally poorly. If you only listen to frequencies in one or two of the bands, you will do well to replace the antenna with something more specific to those bands. Or with a better grade of "all band" antenna. I put "all band" in quotes because there is no such thing as a truly all band antenna. You'll have to do some experimenting and see what works best on the frequencies you listen to and on your radio. Once in a great while, you'll find out that the antenna that came with the radio does in fact perform better than the aftermarket ones on a particular radio.

Finding Frequency Information

Once you have the radio, the next issue is how to fill up all those memories. My first piece of advice is don't. Don't feel that you have to fill all two hundred, four hundred, or thousand memory positions. For one thing, you won't be able to keep track of that much information at once, and you'll miss way too much on the channels that truly interest you because the scanner is hung up on the dog catcher's channel. Particularly if you are just getting started, listening to less stuff is better so you can get to know how things work, and learn what is of interest to you and what's boring as heck.

Having said all that, why do they put that many channels in scanners? Well, mostly because it sounds good. From a marketing standpoint 1,000 channels is much better than 200, right? And because the more channels you have, the larger the banks will be, and the more likely that you'll be able to fit large systems into a single bank. Over time, you may collect enough frequencies to fill one up, but my guess is that you won't ever have them active at the same time. It's simply not practical.

So where do you find frequencies? The best and most reliable source is to find a friend with a list. Some scanner retailers have a list of sorts of their local area, or any RadioShack will sell *Police Call* for your region. These can be excellent resources, but are only as good as the information that was available at the time.

Police Call, Monitor America, and many of the "official" published frequency references have a lot of frequency information, but not a lot of detail about how the frequencies are used. You may have to be willing to do some detective work to figure out what's important and what's not. Plug some channels into your scanner and see what you get. You'll know within a few days what's worth listening to and what's not.

There are also some channels that are simply not published for one reason or another. Perhaps the license has expired, or wasn't renewed in time to make it into the book. Perhaps after the book or list was published, the agency moved, added or otherwise changed how they use their available frequencies. You may have to do some searching to find what you're after.

Searching with your scanner can be time consuming and frustrating, but it can also be quite rewarding. Search small areas of the spectrum. And, if you know that the rest of the police department's operations take place in the 155-MHz range, it's a good bet that the channel you're looking for will be somewhere not too far from there also. It's not guaranteed, but it's a good bet. And you may turn up all sorts of things you didn't know about.

Finally, ask around a bit. See if there's a local club for scanner listeners. If not, perhaps there's one for shortwave listeners (many of them moonlight in the VHF/UHF bands, so don't hesitate to go check it out). If you can't find one, consider starting one. Local clubs are a great way to share information of all sorts.

Scanning The Mail

John Michaels from Saint John, New Brunswick, writes "It's great to see an international magazine such as *Popular Communications*, requesting and most of all, wanting input from some of us scanner junkies."

"I am in the process of trying to get a photo of my shack and all its gear. (Send it in when you get one, John) At the present time, scanner monitoring is in the growing or infancy stages up here in the province of New Brunswick, Canada. People are now finally starting to realize, after the great ice storm of '98, and the recent oil refinery explosion back in June here in Saint John, that in order to know what's going on in their community, having a scanner is better than having to rely on the news media, to know what's happening as it's happening."

"I was a professional broadcaster until 1990 when I became physically disabled and had to retire due to degenerative osteo arthritis. Since then, I have been monitoring for news stories which I pass on to various forms of the media so they can be abreast of what's happening. Some of the owners of the radio stations here don't even equip their newsrooms with the required scanner equipment needed to keep the public in tune as to what's happening on a 24-hour-a-day basis."

It always amazes me how little people understand of the communications process, and how little most of them

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understand the job that the public safety officials do. That's a great service you're performing for your local media, but I should point out that for readers in the U.S., there are legal issues that would be associated with a similar effort. Make sure you're not getting yourself in trouble by trying to help others!

John continues "I also have a back-up power source of a 12-volt DieHard battery which will run my scanners for a fairly long period of time, in the event of a power outage. [I also] have two handhelds which are capable of running themselves from their built-in NiCds."

"My main external antenna is just a Comet dual-bander antenna. For trunking and cellular monitoring, I use two, 800 MHz antennas; one a mobile antenna and the other an external 800 MHz base antenna."

Comet makes some great antennas. It's worth noting that any antenna built for the ham 146, 220, and 440 MHz bands are very close to the main public safety frequencies that we scanner listeners are interested in, and since we aren't transmitting through them, the antennas built for these bands should perform quite well for us. And it's also worth noting that John has discovered another problem: You really need a special antenna for 800-MHz if you're very far from the transmitter. Cellular antennas work here because they are relatively close to our 800 MHz public safety band. And having a back-up power supply is a great idea no matter where you live!

John concludes with "Great publication you have there, and keep up the great column that you've put together. [By the way,] I have been reading *Popular Communications* since back in the mid to late '80s."

Gee, John, you really need to read faster, it's not that thick of a magazine. Just kidding, but seriously, thank you for the kind words. I sincerely hope everyone is enjoying both the column and the hobby of radio listening, no matter how you choose to participate. Remember, it's a hobby and we're all supposed to be having fun.

Y2K Comes To Scanning?

It's been everywhere — the news, online, TV — you name it, and it's hard to find a place where they haven't discussed Y2K or the year 2000 bug in computer systems. At this late stage in the year, it's hard to even think about starting a Y2K campaign, but Ben Biegler from Baltimore, Maryland, writes "Will the Y2K affect scanner listening? If so, what can we do about it? Can we change chips or just buy a new radio?"

Well, Ben, there's good news and bad. The good news is that Y2K itself will probably not have any effect on your scanner whatsoever. In order to have a problem, the device must store the date, and most scanners, even the ones with clocks, don't have calendars in them. They won't realize that the Century has changed, and won't break down.

The bad news is that there are technologies on the horizon that *will* affect scanning considerably. As the year 2000 approaches, the FCC is interested in using newer technology systems to increase the efficiency of the radio spectrum. These include re-channelization to narrower signals (so you'll hear two channels at the same time on your existing scanner) and digital techniques. These developments do have the potential to affect scanning in some dramatic ways.

I've been in this hobby for 20 years (yikes, I'm getting old, but thankfully not as old as Harold "Manual Typewriter" Ort, our — ahem — esteemed editor.). The entire time I have been involved, there was always some technology just around the corner that was going to eliminate scanning and scanners forever. I'm still listening and having fun, what about you?

"Don't feel that you have to fill all two hundred, four hundred, or thousand memory positions."

Your Turn

What have you found in your area that's not published? Have a question related to scanning? Send them in. I should point out that I do not maintain a nationwide frequency database because there are too many changes and too much information for one person to keep up with, and the availability of products on CD-ROM like Percon's Spectrum and Scanner Master's database make that impractical. However, I'd be happy to share your finds that may be of interest to our readers, and I welcome your general questions. Send them to Ken Reiss, Box 309, 9051 Watson Rd., St. Louis, MO 63126-2220 or via E-mail to <armadillo1@aol.com>. Until next time, good listening! ■

CB Scene

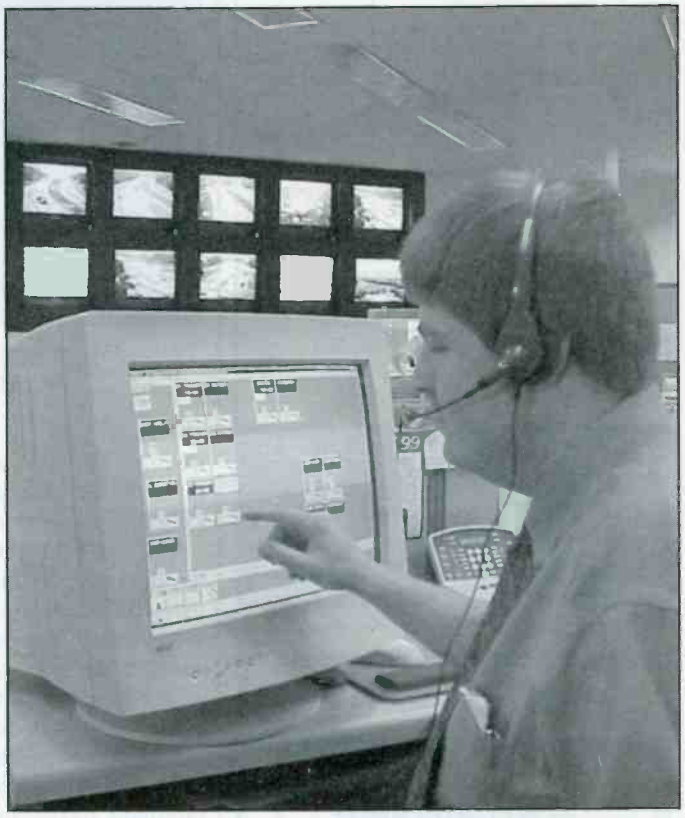
BY JOCK ELLIOTT

27-MHz COMMUNICATIONS ACTIVITIES

An Opportunity For U.S. CBers And Thunder From Down Under

If you've had the nagging suspicion that traffic is more congested than ever before, that there are more cars on the roads, and that drivers are more aggressive than ever before, you're not crazy — it's all true.

Those facts were confirmed by the head of the New York State Police at the opening of the Capital District Transportation Management Center in Albany, New York. The Transportation Management Center is an outgrowth of nearly two decades of rather informal cooperation between DOT and the State Police that reflects the growing travel demands that are being placed on the area's highways. In 1982, for example, there were 2,400,000 vehicle-miles traveled every day in the Capital District; by 1996, that number had doubled. It continues to rise. And, as the number of vehicle-miles of travel in New York's Capital District increases, so does the potential for delays or incidents. The same is true for virtually every urban area in the country. What's more, the people in charge of transportation on our nation's highways have realized that, in many places, we're simply running out of room to build new roads or new lanes on existing roads. Oh, sure, we could demolish buildings to do it, but the cost would be prohibitive.



Dan Howard, Operations Engineer, Capital Region Transportation Management Center, uses the state-of-the-art equipment at the Center.

What Is The Solution?

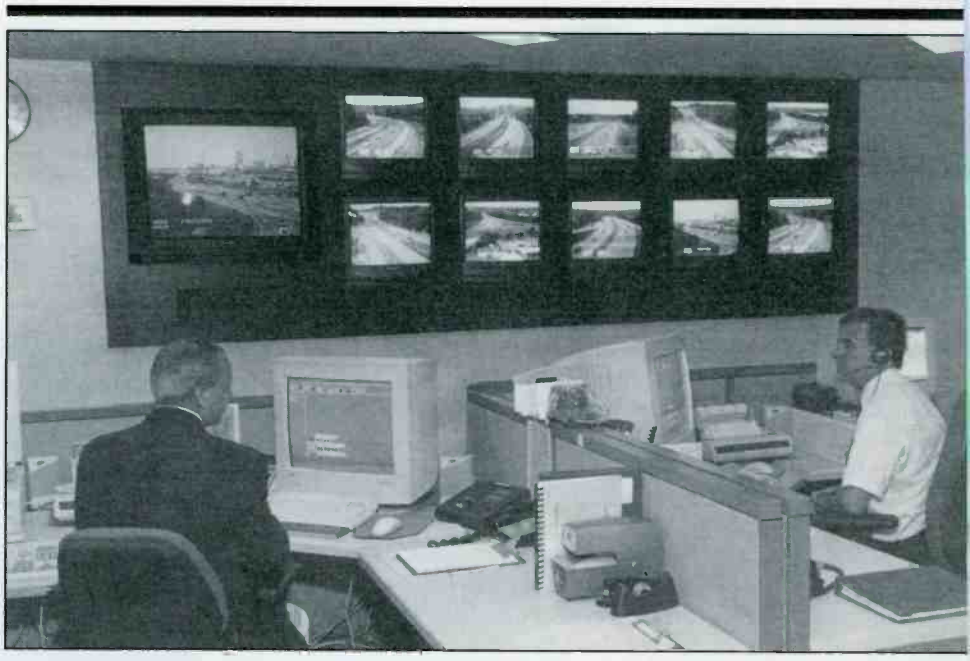
How do we turn the tide of rising accident rates? The best answer is to manage the highway system, through Traffic Management Centers like the one opened recently in Albany.

Two years ago, the New York State Police and DOT began to formalize, consolidate, and expand their cooperative traffic management efforts that were benefiting Capital District motorists. The result is this fully integrated Transportation Management Center. The State Police and the Department of Transportation operate the TMC, train the staff, and provide television cameras and variable message signs to enable them to detect, respond to, and help with incidents, such as car fires, cargo spills, or vehicle crashes, as quickly and safely as practicable.

The Federal Highway Administration, the State Police, and the Department of Transportation shared the $3,600,000 cost of renovating the building and outfitting the TMC with the requisite high-end technology. As part of the development of the TMC, the Department of Transportation has installed electronic traffic management systems hardware at critical traffic locations on the Northway (I-87), Route 7, I-787, and I-90 in the Capital District. Eight tapeless cameras have been installed to enable TMC staff not only to confirm reported incidents but also to dispatch the most appropriate emergency response equipment. These smarter, faster, and more efficient responses will reduce congestion and the potential for associated secondary crashes. The real-time images shown by the cameras will result in more timely variable message signs and travel advisories. The cameras have pan, tilt, and zoom features. When an incident is reported to the TMC, the State Police and DOT staff can see if it (or its affects) can be viewed by one of the cameras.

Once the incident has been confirmed, the DOT dispatcher at the Transportation Management Center determines whether emergency services are recommended at the scene. If the incident is a disabled vehicle, a Department of Transportation HELP (Highway Emergency Local Patrol) service van can be dispatched directly by the TMC to do such things as change a tire, jump-start a vehicle, or refuel a gas tank.

Traffic cameras are integral elements of the Transportation Management Center's traffic control toolbox. The cameras cannot look off the highway right-of-way onto private property. They have physical stops that prevent anyone at the TMC from looking into buildings. The Department of Transportation has also a strict policy to video record only for incident-response training or for transportation-maintenance purposes. In other words, there will be no stored records to be used as evidence for enforcement purposes. The State Police at the TMC have access to the cameras, and of course the Troopers would not



Traffic Management Centers, like this one opened recently in Albany, New York, give CBers a new opportunity to work with authorities to ease the flow of traffic.

ignore a crime in progress. But the purpose of the cameras is traffic control rather than law enforcement.

The electronic traffic management system also includes loop detectors and radar detectors as part of its monitoring equipment. Loop detectors are imbedded in roadway surfaces to detect vehicles; radar detectors are mounted on poles to measure average speeds. Neither detector can measure the operating speed of an individual vehicle; again, each is designed to facilitate traffic management, not law enforcement. The TMC also monitors several Department of Transportation weather information stations that are strategically located adjacent to major highways around the Capital District.

A State-Of-The-Art System

The new 4,000 square-foot, state-of-the-art Transportation Management Center is designed to operate 24 hours-a-day, 365 days-a-year; it is capable of running under its own emergency power. The Communications staff from Troop "G" Loudonville, New York, is housed at the Transportation Management Center. This staff manages the calls for service for Zone One (Albany and Rensselaer Counties) of Troop "G." The Department of Transportation dispatchers are at the TMC weekdays between 7 a.m. and 7 p.m. The TMC is equipped with five computer workstations, each with 19-inch monitors. The State Police Communications staff, wearing headsets, simply touches the screens of the monitor to access radio calls and to answer incoming telephone calls. This system is backed-up with digital tape loggers giving the administrative staff the capability of searching the 911-call archives.

Now, I can almost hear what you're thinking: "Gee, this is all real swell, but what does it have to do with CB radio?" Good question. And the answer is that the creation of Traffic Management Centers in urban areas across the country presents an opportunity for CBers. Years ago, my co-columnist Ed Barnat started a commuter network that operated on CB Ch. 9. The purposes of the network were to detect problems on the roadways and to report them to the proper authorities and to share information about traffic problems with net participants and the media. Ed ran the network for years and eventually expanded it to include two-meter ham radio.

About three years ago, a change of jobs forced Ed to give up the traffic network, and I began running it. Every morning at 6 a.m., I fire up the CB on Ch. 9 and the two-meter ham radio on a local repeater, and for the next two hours and fifteen minutes, report on what's happening during the morning commute. As part of the net, we're in direct radio communication — via CB — with the CVS Samaritan van, which provides roadside assistance to motorists in distress.

During my first year of operation, I discovered that Metro Traffic, a company

that provides traffic reporting services to 90% of the Albany area radio and TV stations, was monitoring our net transmissions on the two-meter repeater. I, in turn, was monitoring the transmissions between Metro's traffic spotter plane and their ground station. So I gave Metro a call and suggested that we share information a little more formally. They agreed. We still monitor each other's transmissions, but now we also share information through phone calls. A similar arrangement has been put in place with the Traffic Management Center — we share information. Now, it is common for Metro to call and ask, "What have you got on I-90 westbound near Exit 6?"

The same is true of the TMC. Their cameras do not always give them the angle or sufficient detail to make sense of what they see. On one recent morning, there was a bad crash involving an 18-wheeler and a car on 787. The cameras could only see a jumble of stopped vehicles. The Metro plane couldn't get the full picture because part of the accident was beneath an overpass. The TMC called and asked if the Commuter Network had any additional details. Within minutes, we were able to tell them which lanes were open, which were closed, and what the situation was.

Getting Organized Where YOU Live

What this incident clearly demonstrated is that cooperation is the way to go. The TMC cameras had one viewpoint, the Metro plane another, and the ground-based spotters from the Commuter Network had yet another, and each viewpoint was limited in its own way. But together, we could combine information and make sense of the situation. And that's where you can help to make things better for everyone else. You can organize or take part in a similar commuter network. You can help to make sure that people in trouble on the highways get the assistance they need, and you can share that information with your local law enforcement authorities, Traffic Management Center, and any organization that reports on traffic through radio or television.

Having said that, I must, with sadness, report something else. The plain truth is that many people in authority at these Traffic Management Centers, view CBers with suspicion. That's because some operators take advantage of the anonymity offered by CB to report false

information. My Commuter Network has been scammed a couple of times by CBers who have reported personal injury accidents or vehicles stalled in the traffic lane that simply did not exist. You can bet that these dimwits think they have pulled a Really Cool Joke — they faked us out with false information. But the problem runs deeper than that. When resources are dispatched to an accident that doesn't exist, that means those resources are not available for another accident where someone's life may depend on seconds that are ticking away.

It makes you wonder: if one of those false-alarmers suddenly found himself upside-down, trapped in a crushed car, listening to the sound of gasoline dripping onto a hot engine, wouldn't they want help right away? Or maybe they would find it screamingly hilarious if someone turned in a false report and sent emergency equipment the other way.

The bottom line: The authorities know that CBers sometimes turn in false reports. So that means if you decide to approach your local Traffic Management Center to work with them on providing roadway incident information, you will have to earn their trust and respect. It may take a while, but I can tell you that it is immensely rewarding to help provide assistance to people who are in trouble on the roads.

Alpha Delta's Outbacker Force Antenna

When I reviewed Alpha Delta's superb Delta-4 antenna switch, they mentioned that the company that makes their highly-rated Outbacker ham antenna also makes antennas for Australian CBers. Would I like to take a look at them? Sure, I said.

Now, CB is a big deal in the land down under because it's a huge continent with roughly the same population as New York State. So the Australians want their CB gear to work reliably and well.

The first of these antennas to arrive is the Outbacker Force. The first thing that I noticed is that the outside of the shipping carton says, "Made with pride in Western Australia." Inside, the antenna is encased is a cloth "sock" that helps protect it from getting banged up in transit (the cloth case also works well for fishing rods). Nearly four feet long and almost an inch in diameter at the base, the Force is a brute of an antenna. Made of rigid fiberglass, the bottom half is bright blue and the top is bright yellow. The fit and finish on this antenna are simply outstanding. And the performance is as good as its looks — the Outbacker Force beat every other mobile antenna I've ever tested — not by a huge amount, but enough that I can state categorically if you want the best mobile antenna I've ever tested, the Outbacker Force is it.

The Outbacker Force is $119.95, and you'll need a mount to go with it. If you go with a magnetic mount, get a super heavy-duty one, because the wind load on this antenna is substantial, and it will blow off with a lesser mount. Alternatively, use a hard-fastened mount. For additional information about the Force Antenna or to order one, call 606-598-2029 and be sure to mention you read about it in *Pop'Comm.*

Until next time, keep those cards, letters, and shack photos coming. Write to me at *Pop'Comm* or E-mail me at <lightkeeper@sprintmail.com>. ■

How I Got Started

Congratulations To Noel Burton Of Virginia!

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

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

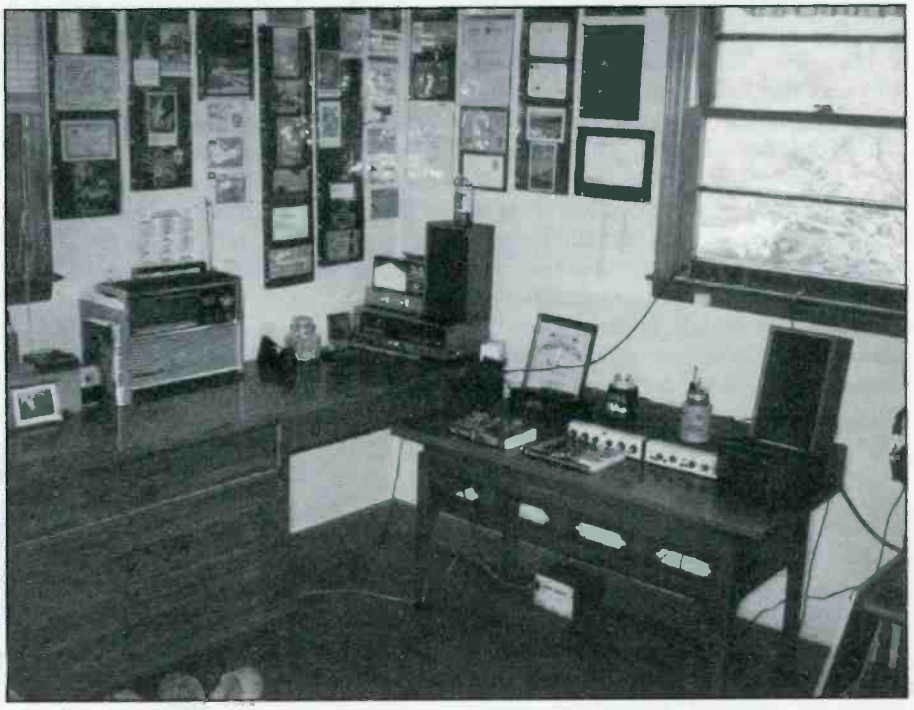
The person whose entry is selected will receive a one-year gift subscription (or one-year subscription extension) to *Popular Communications*. Address all entries to: "How I Got Started," *Popular Communications*, 25 Newbridge Road, Hicksville, NY 11801 or E-mail your entry to <popularcom@aol.com>, letting us know if you're sending photos.

Our October Winner

Pop'Comm reader, Noel Burton of Danville, Virginia, writes "My first stereo was a Grundig with an AM/FM/Shortwave radio included. When I first tuned in the shortwave bands, I was fascinated by the worldwide stations I could hear. My first QSL card was from the BBC and I was thrilled to receive it. In the process of raising five children and earning a living for us all, I got away from pursuing my hobby until an ice storm in 1996 left us without electricity. Wanting information from the outside world, I put fresh batteries in my old National Panasonic and discovered the world of shortwave listening again. I now enjoy it more than even since I have more time with all my children grown.

Visit my Website at <http://www.geocities.com/heartland/ridge/8296 to see my radio room or E-mail me at <neburton@gamewood.net> to share experiences in radio or to just chat." ■

Noel Burton of Virginia at his well-equipped monitoring post.



You don't find many radio rooms that look as neat and organized as Noel's!

Clandestine Communiqué

BY GERRY L. DEXTER

TUNING IN TO ANTI-GOVERNMENT RADIO

Colombian Confusion!

Last month, we passed along reports that the Colombian army had destroyed the facility housing the ELN's **Radio Patria Libre**. If that was the case, the rebels certainly got things up and running quickly, because someone has now reported hearing Patria Libre again. It's been heard up to 2230 closing on **variable 6210**, down a ways from **6250** where it used to hang out. This reappearance, if it really is such, marks at least the third re-birth of this station after the government army supposedly put it out of business.

Meantime, the other Colombian clandestine, **La Voz de Resistencia**, is still occasionally heard, sometimes on **variable 6170** and sometimes in the area around **6240**, closing around 2200, which is much too early for most of us in the U.S, except perhaps in the dead of winter. It also tends to be active around 1130. Both of the Colombian clandestines have unstable frequency usage, probably use quite low power, have broadcasts which last less than an hour, and broadcast times which are not ideal for reception in North America, and do not QSL.

The ever-fascinating **New Star Broadcasting Station** has been noted recently around 1130 on its seldom-reported **15388** channel. This one also uses **8300, 9725, 11430, and 13750**. Mornings are the best reception times in North America. It takes a regular monitoring effort in order to find this one because the station doesn't broadcast on a continuous schedule, not to mention the challenges of propagation and interference. It is on the air for just part of the hour, often just a few minutes at a time. Sign-on is usually at the top of the hour or on the half-hour. The broadcasts consist of announcements and coded messages. There are competing theories as to whether this station is based in Mainland China or is a Taiwanese operation. Not surprisingly, this one has never been QSL'd, nor has an address ever been discovered. Nonetheless, it's a fun station to listen to, even if everything is in Mandarin Chinese.

Radio Rainbow, the Voice of Peace and Brotherhood, is on the air Thursdays from 1600 to 1700 on **15105**, Saturdays from 0100–0200 on **9855**, and Sundays from 0900–1000 on **5995** — all via official German government transmitters. An organization calling itself the Research and Action Group for Peace in Ethiopia and the Horn of Africa is apparently the group behind the broadcast. The group opposes the current government in Ethiopia. The sponsoring group can be reached at RAGPEHA, P.O. Box 140104, 53056 Bonn, Germany.

The Voice of Democratic Eritrea, Voice of Truth/Voice of the Eritrean Islamic Jihad Movement now uses **8020**, instead of the former 9230. The Voice of Democratic Eritrea is operated by the Eritrean Liberation Front and airs in Arabic and Tigrigna from 1428 to 1458. The Voice of Truth broadcasts in Arabic from 1500 to 1530. Both stations have the same address: ELF-RC Foreign Information Department, Postfach 200434, 53134 Bonn, Germany.

Another clandestine station aimed at that area is the **Voice of Oromo Liberation**, operated by the Oromo Liberation Front and broadcasting in Arabic. It's scheduled on Thursdays, Fridays, and Sundays at 1700 to 1800, currently on **15715**, via Germany.

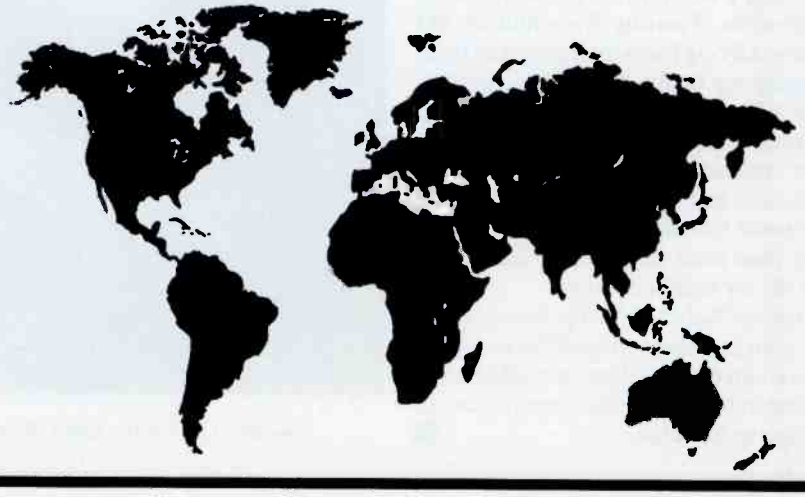
The Voice of the Islamic Revolution in Iraq operates in Arabic from 0330 to 0530 on **9670, 9885, 11730, and 13700**. It's sponsored by the Shii Supreme Council of the Islamic Revolution of Iraq and has an address of 27A Old Gloucester St., London WC1N 3XX, England. This one probably broadcasts via Iranian government transmitters.

The Voice of the Palestinian Islamic Revolution, which (obviously) targets Israel, is scheduled from 0930 to 0430 on **11800 and 13660** and from 1845 to 2030 on **9870, 11815, 11965, and 13645**. One clandestine quite easily heard in North America is the **Democratic Voice of Burma**. This one is aired via government transmitters in Norway and Germany, and is currently scheduled from 1245–1345 and 1430 to 1455 on **5945, 118500, 15600, and 17750.**

The Korean Workers Union sponsors the **Voice of the People**, a North Korean clandestine pitching its views southward. It is scheduled daily from 0300 to 0600 on **6518 and 6600** and 0900 to 2100 on **3881 and 3912**, all in Korean.

That wraps things up for this month. We'll greatly appreciate any informational input you can pass our way regarding clandestine broadcasting, whether it's notes on stations you've heard over the past month, background on stations or their sponsoring organizations (or governments!), mailing addresses, transmitter locations, and the like. Thanks for your continued interest!

Until next time, good hunting! ■



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Turn mysterious signals into exciting text messages with this new MFJ MultiReader™

MFJ-462B **$179.95** Plug this self-contained MFJ MultiReader™ into your shortwave receiver's earphone jack.

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

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

Monitor Morse code from hams, military, commercial, aeronautical, diplomatic, maritime -- from all over the world -- Australia, Russia, Hong Kong, Japan, Egypt, Norway, Israel, Africa.

Printer Monitors 24 Hours a Day

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

Printer cable, MFJ-5412, $9.95.

MFJ *MessageSaver*™

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

High Performance Modem

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

Easy to use, tune and read

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

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

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

Use 12 VDC or use 110 VAC with MFJ-1312B AC adapter, $12.95. 5¼x2½x5¼ inches.

No Matter What Warranty

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

Try it for 30 Days

Order an *MFJ-462B MultiReader*™ *from* MFJ and try it in your own setup -- compare it to any other product on the market regardless of price.

Then if you're not completely satisfied, simply return it within 30 days for a prompt and courteous refund (less shipping).

Order today and try it -- you'll be glad you did.

Super Active Antenna

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

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

Receives strong, clear signals from all over the world. 20dB attenuator, gain control, ON LED. Switch two receivers and aux. or active antenna. 6x3x5 in. remote has 54 inch whip, 50 ft. coax. 3x2x4 in. 12 VDC or 110 VAC with MFJ-1312, $12.95.

$129.95 MFJ-1024

Indoor Active Antenna

MFJ-1020B **$79.95**

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

Tuned circuitry minimizes intermod, improves selectivity, reduces noise outside tuned band. Use as preselector with external antenna. Covers 0.3-30 MHz. Has Tune, Band, Gain, On/Off/Bypass Controls. Detachable telescoping whip. 5x2x6 in. Use 9 volt battery, 9-18 VDC or 110 VAC with MFJ-1312, $12.95.

Compact Active Antenna

MFJ-1022 **$39.95**

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

Also improves scanner radio reception on VHF high and low bands.

Detachable 20 in. telescoping antenna. 9 volt battery or 110 VAC with MFJ-1312B, $12.95. 3⅛x1¼x4 in.

Eliminate power line noise!

MFJ-1026 **$169.95**

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

MFJ Antenna Matcher

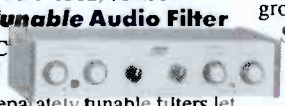
MFJ-959B **$99.95**

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

Preamp with gain control boosts weak stations 10 times. 20 dB attenuator prevents overload. Pushbuttons let you select 2 antennas and 2 receivers. Cover 1.6-30 MHz. 9x2x6 inches. Use 9-18 VDC or 110 VAC with MFJ-1312, $12.95.

Dual Tunable Audio Filter

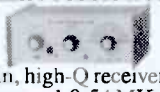
MFJ-752C **$99.95**



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

High-Gain Preselector

MFJ-1045C **$69.95**



High-gain, high-Q receiver preselector covers 1.8-54 MHz. Boost weak signals 10 times with low noise dual gate MOSFET. Reject out-of-band signals and images with high-Q tuned circuits. Pushbuttons let you select 2 antennas and 2 receivers. Dual coax and phono connectors. Use 9-18VDC or 110 VAC with MFJ-1312, $12.95.

Receive *CW, RTTY, ASCII, Weather Maps, News Photos*

MFJ-1214PC **$149.95**

Use your computer and radio to receive and display *brilliant full color* FAX news photos and incredible WeFAX weather maps. Also RTTY, ASCII and Morse code.

Animate weather maps. Display 10 global pictures simultaneously. Zoom any part of picture or map. Frequency manager lists over 900 FAX stations. Automatic picture saver.

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

High-Q Passive Preselector

MFJ-956 **$39.95**

The MFJ-956 is a *high-Q* passive LC preselector that lets you boost your favorite stations while rejecting images, intermod and other phantom signals. Covers 1.5-30 MHz. Has preselector bypass and receiver grounded pos. 2x3x4 inches.

Super Passive Preselector

MFJ-1046 **$99.95**

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

Easy-Up Antennas Book

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

MFJ-38 **$16.95**

MFJ 12/24 Hour LCD Clocks

MFJ-107B **$9.95**

MFJ-108B **$19.95**

MFJ-105C **$19.95**

MFJ-108B, dual clock displays 24 UTC and 12 hour local time *simultaneously*. MFJ-107B, single clock shows you 24 hour UTC time. *3 star rated* by *Passport to World Band Radio*!

MFJ-105C, accurate 24 hour UTC quartz *wall clock* with large 10 inch face.

MFJ Antenna Switches

MFJ-1704 **$59.95**

MFJ-1702C **$21.95**

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

MFJ-1702C for 2 antennas.

World Band Radio Kit

MFJ-8100K **$59.95** *kit*

MFJ-8100W **$79.95** *wired*

Build this *regenerative* shortwave receiver *kit* and listen to shortwave signals from all over the world with just a 10 foot wire antenna.

Has RF stage, vernier reduction drive, smooth regeneration, five bands.

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Pop'Comm's World Band Tuning Tips

October 1999

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	5960	Radio Canada Int'l	
0000	6055	Radio Exterior de Espana, Spain	
0000	11620	All India Radio	
0020	11905	Sri Lanka Broadcasting Corp..	vern.
0030	4472	Radio Movima, Bolivia	SS
0030	6025	Radio Amanecer, Dominican Republic	SS
0030	6726	Radio Satelite, Peru	SS
0030	9022	Voice of the Islamic Rep. of Iran	
0030	13695	Radio Thailand	
0100	3300	Radio Cultural, Guatemala	
0100	4955	Radio Nacional, Colombia	SS
0100	5030	Adventist World Radio, Costa Rica	SS
0100	5077	Caracol Colombia	SS
0100	5770	Radio Miskut, Nicaragua	SS
0100	5905	Radio Ukraine Int'l	
0100	6200	Radio Prague, Czech Rep.	
0100	7105	Radio Tashkent, Uzbekistan	
0100	7450	Voice of Greece	Greek/EE
0100	9735	Radio Nacional de Paraguay	SS
0100	9965	Voice of Russia via Armenia	SS
0100	11690	Voz Cristiana, Chile	SS
0130	3210	Radio Exterior de Espana, Spain, via Costa Rica	SS
0130	3250	Radio Luz y Vida, Honduras	SS
0130	7205	Radio Ukraine Int'l	
0200	3250	La Voz del Napo, Ecuador	SS
0200	4825	Radio Cancao Nova, Brazil	PP
0200	4980	Ecos del Torbes, Venezuela	SS
0200	5025	Radio Rebelde, Cuba	SS
0200	6155	Radio Canada Int'l	
0200	6170	Radio Cultura, Brazil	PP
0200	7495	Reshet Bet, Israel	HH
0200	9475	Radio Cairo, Egypt	
0200	9885	Swiss Radio Int'l	
0200	11705	Radio Havana, Cuba	
0200	11710	RAE, Argentina	SS/EE
0200	11765	RAI, Italy	II
0200	11780	Radio Nacional Amazonia, Brazil	PP
0200	11800	RAI, Italy	II
0200	17675	Radio New Zealand Int'l	
0230	3340	Radio Altura, Peru	SS
0230	5950	Voice of Vietnam, via Russia	
0230	6020	Radio Budapest, Hungary	
0230	6115	Radio Tirana, Albania	
0230	6120	Radio Vilnius, Lithuania via Germany	
0230	9495	Radio Sweden	
0230	9605	Vatican Radio	FF
0300	3306	Zimbabwe Broadcasting Corp.	EE/vern.
0300	4819	La Voz Evangelica, Honduras	SS/EE
0300	4830	Radio Tachira, Venezuela	SS
0300	7110	Radio Free Iraq, USA, via Greece	AA
0300	7345	Radio Prague, Czech Rep.	
0300	7375	Radio Bulgaria	
0300	9525	Channel Africa, South Africa	
0300	9715	Radio Portugal Int'l	PP
0300	11815	Radio Brazil Central	PP
0330	4885	Radio Clube do Para, Brazil	PP
0330	6940	Radio Fana, Ethiopia	vern.
0330	9820	Radio Havana, Cuba	
0330	9895	Merlin Network One, England	
0330	15170	Radio Tahiti	FF
0345	11620	Radio Tajikistan	
0400	3270	Namibia Broadcasting Corp.	
0400	4915	Radio Cora, Peru	SS
0400	4985	Radio Brazil Central	PP
0400	5990	Radio Romania Int'l	
0400	6010	Voice of Turkey	
0400	6115	Radio Union, Peru	SS
0400	6165	Radio Netherlands via Neth. Antilles	
0400	6265	Radio Zambia	EE/vern.
0400	9505	Radio Austria Int'l, via Canada	
0400	9560	Voice of Ethiopia	vern.
0400	11940	Radio Romania Int'l	
0430	4919	Radio Quito, Ecuador	SS
0500	4770	Radio Nigeria	
0500	7255	Voice of Nigeria	
0500	7465	Kol Israel	
0500	9560	China Radio Int'l, via Canada	
0500	11585	Kol Israel	HH

UTC	Freq.	Station/Country	Notes
0530	4815	Radio Burkina, Burkina Faso	FF
0530	4850	Cameroon Radio TV	FF/EE
0530	4870	ORTB, Benin	FF
0530	4996	Radio Andina, Peru	SS
0600	4775	Radio Liberal, Brazil	PP
0600	4845	Radio Mauritanie, Mauritania	FF
0600	4915	Ghana Broadcasting Corp.	EE
0600	5047	Radio Lome, Togo	FF
0600	5100	Radio Liberia	
0600	6185	Radio Educacion, Mexico	SS/EE
0630	3985	Italian Radio Relay Service	(SSB)
0630	5011	Radio Cristal, Dominican Republic	SS
0630	9375	Voice of Greece	Greek
0630	9715	Radio Oman	AA
0700	5020	Solomon Islands Broadcasting Corp.	
0700	5054	RFO, French Guiana	FF
0730	3290	Voice of Guyana, Guyana	
0800	6010	Radio Mil, Mexico	SS
0800	6150	Radio Record, Brazil	PP
0830	4960	Radio Vanuatu, Vanuatu	FF/EE/vern.
0830	9940	Radio Vlaanderen, Belgium	
0930	4950	Radio Baha'I	SS
0930	11635	Far East Broadcasting Corp., Philippines	
1000	4970	Radio Rumbos, Venezuela	SS
1030	9700	Radio New Zealand Int'l	
1100	3313	Radio Manus, Papua New Guinea	
1100	3360	La Voz de Nahuala, Guatemala	SS
1100	4770	Centinela del Sur, Ecuador	SS
1100	4800	XERTA, Mexico	SS/EE
1100	4835	Radio Tezulutlan, Guatemala	SS
1100	4890	NBC, Papua New Guinea	
1100	5055	Faro del Caribe, Costa Rica	SS
1100	5850	Sunrise Radio, via Germany	
1100	6195	BBC via Antigua	
1100	7295	Radio TV Malaysia	
1100	9325	Radio Tampa, Japan	JJ
1100	9915	Merlin Network One, England	
1130	3220	HCJB, Ecuador	SS/QQ
1130	4754	Radio Republik Indonesia, Ujung Pandang	II
1130	5965	BBC via Canada	
1130	9525	Voice of Indonesia	II
1200	3325	Radio Maya, Guatemala	vern.
1200	5975	Radio Tashkent, Uzbekistan	
1200	6050	HCJB, Ecuador	SS
1200	9345	Radio Pyongyang, North Korea	KK
1200	15700	Radio Bulgaria	
1230	6015	Radio Singapore	
1230	9165	Radio Dada Gorgud, Azerbaijan	vern.
1230	9810	Radio Thailand	
1230	12085	Voice of Mongolia	
1230	21510	Radio Ukraine Int'l	
1300	6020	Radio Australia	
1300	7365	KNLS, Alaska	
1300	9515	BBC, England, via Canada	
1300	12020	Voice of Vietnam	
1300	17745	Radio Romania Int'l	
1300	21530	Channel Africa, South Africa	
1330	9580	Radio Australia	
1330	17660	Radio Finland Int'l	
1330	17715	Radio Canada Int'l	
1330	17730	Deutsche Welle/Voice of Germany	GG
1330	17815	Voice of Turkey	
1330	17860	Radio Japan/NHK World	JJ
1350	13765	Vatican Radio	
1350	15500	Vatican Radio	
1400	11595	Radiophonikos Stathmos Makedonias, Greece	Greek
1400	15465	Radio Pakistan	
1400	17680	Voz Cristiana, Chile	SS
1430	11930	Radio Marti, USA	SS
1430	13740	Radio Sweden	
1430	17870	Radio Sweden	
1500	9505	Radio Japan/NHK World	
1500	11705	Radio Japan via Canada	JJ
1500	15400	Radio Finland Int'l	FF
1500	17630	Merlin Network One, England	
1530	9495	KFBS, Saipan, No. Marianas	CC
1530	15160	Broadcasting Svc. of Kingdom of Saudi Arabia	AA/EE
1530	15640	Kol Israel	
1600	9705	Radio Mexico Int'l	
1600	11615	Radio France Int'l	FF
1600	11690	Radio Jordan	
1600	11705	Far East Broadcasting Assn., Seychelles	vern.
1600	11750	Qatar Broadcasting Service	AA
1600	15160	Radio Algiers Int'l, Algeria	EE/AA
1600	15435	Radio Jamahiriya, Libya	AA
1630	9770	UAE Radio, Dubai	AA
1630	15395	UAE Radio, Dubai	
1700	9200	Radio Omdurman, Sudan	AA
1700	9580	Africa No. One, Gabon	FF
1700	15715	RTBF, Belgium, via Germany	FF
1700	18910	Radio Norway Int'l	NN
1730	12130	Adventist World Radio, via South Africa	
1800	9780	Republic of Yemen Radio	AA/EE
1800	15345	RTV Morocaine, Morocco	AA
1800	17870	Channel Africa, South Africa	
1830	11570	Radio Pakistan	vern.
1830	11734	Radio Tanzania - Zanzibar	AA
1830	11990	Radio Kuwait	AA/EE
1830	15150	Voice of Indonesia	
1900	7535	Icelandic State Broadcasting Service	II (SSB)
1900	15120	Voice of Nigeria	EE/others
1900	15485	Voice of Greece	Greek
1900	17820	Radio Canada Int'l	
1930	9510	Trans World Radio, Swaziland	EE/vern.
1930	11635	Radio Denmark, via Norway	DD
1930	15115	HCJB, Ecuador	
2000	11910	Swiss Radio Int'l, via Germany	
2030	11715	Radio Algiers Int'l, Algeria	
2130	7105	Radio Minsk, Belarus	
2130	12085	Radio Damascus, Syria	
2200	9990	Radio Cairo, Egypt	
2200	11815	Voice of Africa/Radio Jamahiriya, Libya	
2200	15345	Radio Nacional, Argentina	SS
2230	9985	Radio Taipei Int'l, Taiwan, via USA	
2300	7300	Voice of Turkey	TT
2300	7520	Radio Moldova Int'l	
2300	9900	Radio Minurca, Central African Republic	
2300	11335	Radio Pyongyang, North Korea	
2300	15130	Radio Pyongyang, North Korea	
2330	5975	BBC, via Antigua	
2330	11975	China Radio Int'l, via Mali	CC

Product Parade

BY HAROLD ORT
AND R.L. SLATTERY

REVIEW OF NEW, INTERESTING AND USEFUL PRODUCTS

It Bends, Twists, And Flexes

No, it's not the title of a new Hollywood movie, but MFJ's new TeleFlex High Gain HT duck antenna! The new dual-band 144/440 MHz HT antenna blends telescopic and flexible features into a single great antenna. It extends to improve your range, plus it takes all the bending, twisting, flexing, and tugging you can dish out.

The new MFJ-1817 is precisely tuned at the MFJ factory for low SWR. It's nine inches retracted and acts like a rubber duck. When extended to 14.5 inches, you get a super range extender at the maximum radiated power that's hard to beat. On 2-meters, you get an efficient full-size antenna with superb gain over a plain old rubber duck. On 440, it's a 1/2 wave that gives you 2.15 dB gain. The SWR is reported to be less than 1.5:1 on all bands.

The dual-band antenna's radiator is protected by a durable synthetic rubber compound and has a hard protective safety tip. The antenna comes with a sturdy BNC connector.

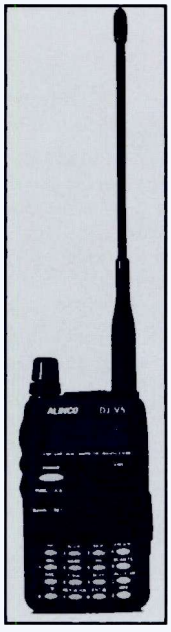
MFJ's new 1816 Econo Dual-Band TeleFlex HT duck antenna is the same as the MFJ 1817, but doesn't have extra gain. It is six inches retracted and 8.5 inches extended.

For more information, contact MFJ Enterprises, Inc., P.O. Box 494, Mississippi State, MS 39762 or call 601-323-5869 or toll-free at 800-647-1800.

Alinco's New DJ-V5T With Wide Receive

Alinco USA has just announced a new addition to its product line — a compact HT designed to operate on the 2-meter and 70 cm bands. The new HT features alphanumeric display, up to five watts output, 200 memories, an expanded receive capability offering coverage from 76–999.995 MHz (less cellular), narrow and wide FM receive modes, and CTCSS encode and decode.

This compact radio includes four scan modes, five programmable scan banks, automatic internal temperature protection, cable cloning SMA antenna connector, 13.8 Vdc direct input, four different European tone bursts, autodial memories, input voltage display with over-voltage warning, MARS/CAP capability, and more.



The new DJ-V5T dual-bander carries a MSRP of $315 for the two-watt output battery and $345 for the five-watt battery model (DJ-V5TH). Doug Wynn, KB6YZD, sales manager for Alinco added that individual dealers often set the "street price" of Alinco radios lower than the MSRP.

For more information, contact Alinco at 438 Amapola Avenue, Suite 130, Torrance, CA 90501 or phone 310-618-8616. Visit the Alinco Website at <http://www.alinco.com>.

Van Eric Antennas New MW-1812 Loop Antenna

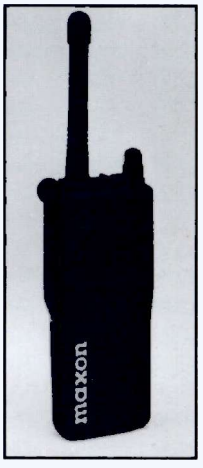
The company has already announced a 15 percent price reduction on their new MW-1812 Medium Wave DXing Loop Antenna effective immediately! Eric Force, responsible for production, explains, "Our goal continues to be to provide the MW DXing and listening community outstanding performance at the lowest possible price. The increased popularity of the MW-1812 has enabled us to purchase our materials and components in larger quantities, resulting in decreased costs. Consequently, we're passing along those savings directly to our customers."

The MW-1812 loop covers the frequency range 540–1700 kHz and represents a unique departure from other, high gain, non-amplified, inductively coupled loop antennas. Instead of the typical square frame, it utilizes a heavy-duty rectangular design fabricated from half-inch PVC pipe and wound with strong, #20 AWG double-coated, magnet wire. The frame and winding is designed to present a small, 12-inch wide footprint, while providing the capture area of a square 18-inch model. Unlike most loops requiring the radio be placed adjacent to the antenna, the MW-1812 incorporates a large platform base which will accommodate virtually all "portable" type radios, permitting the radio to sit inside, and be rotated with the loop itself.

Additionally, the radio can be adjusted on the platform for optimal coupling. Tuning is accomplished via a high-quality, metal frame air-core, variable capacitor attached to the platform. An included turntable enhances the loop's selectivity by providing easy rotation for signal gain of desired stations and the nulling of unwanted signals. Combined with the unconditional money back guarantee, we believe the MW-1812 to be one of the best values available to a MW DXer or listener.

Current price of the MW-1812 is $59.50. Shipping within the U.S. is $9.50. Shipping to Canada is $16.50. International orders are accepted pending customer's acceptance of increased shipping costs. Additional information is available at <http://www.dobe.com/vea/van/mw1812.htm>.

New Maxon GMRS Radio



Maxon's extremely popular GMRS product lineup just got larger. The newest GMRS offering from Maxon is the GMRS-21X. It provides one watt RF output and two-channel operation in the UHF frequency range.

The new 21X is compatible with existing GMRS radios and offers automatic squelch and a dual-color LED for identifying transmit "TX" and busy conditions. The compact radios are a perfect size for hiking or tucked into your vehicle's glovebox. The radio

includes antenna, belt clip, and a desktop charger with power supply and two battery packs: a rechargeable NiCd and an alkaline shell (four "AA" alkalines are required, not included). Optional GMRS-21X accessories include an ear bud speaker with in-line push-to-talk and microphone, a lapel speaker/microphone with ear jack, and a 1/4 wave UHF magnetic-mount mobile antenna.

The GMRS-21X replaces one of Maxon's most popular radios — the GMRS-21A — and retails for $199.95.

For more information on the new GMRS-21X by Maxon, contact them via E-mail at <consale@maxonusa.com> or FAX 816-891-8815. You can also visit the Maxon Website at <http://www.maxonusa.com>.

Midland 14-Channel FRS Radio With VOX

Midland's SpeakEasy™ Micro II Model 75-507 FRS handheld not only offers clear, crisp communication, it's now even easier to use with the addition of two-level VOX for hands-free use. This feature lets you use the 75-507 even when your hands are busy; fishing, biking, or driving.

The Midland 75-507 FRS radio is a state-of-the-art 14-channel two-way radio that also features Midland's new "Stealth Squelch," which eliminates that annoying popping noise at the beginning and end of transmissions. The pocket-sized FRS radio requires no license. The bright LED indicator lets you know which channel you're on, and the call button alerts other units. A five-note end-of-transmission/power-on tone can be user disabled for extremely quiet operation, and a dual watch allows you to monitor two FRS channels.

The new Midland 75-507 is powered by three "AA" batteries (not included). A convenient jack is provided for in-unit charging of optional NiCd batteries, when used with the optional wall charger, and an accessory jack makes it easy to use an optional speaker/microphone or headset.

The radio measures (HWD) 4" x 2" x 1 1/4" and retails for $69.99. For more information, contact Midland Consumer Radio, Inc., 1670 N. Topping Avenue, Kansas City, MO 64120-3865 or phone 816-241-8500 or E-mail Midland at <midlndcb@tfs.net>. You can also visit their Website at <http://www.midlandradio.com>. Be sure to tell them you read about it in *Pop'Comm!*

New Super Cells From MFJ

MFJ proudly announces their new super high-capacity NiMh "AA" batteries that have twice the power of standard NiCds. The new MFJ-92AA1 sells for $2.99 each or the MFJ-92AA10 10-pack for $24.95.

For more information, contact MFJ at 800-647-1800 or write MFJ Enterprises, P.O. Box 494, Mississippi State, MS 39762. Tell them your read about it in *Popular Communications*!

BY GORDON WEST, WB6NOA

Radio Resources

INTERESTING THOUGHTS AND IDEAS FOR ENJOYING THE HOBBY

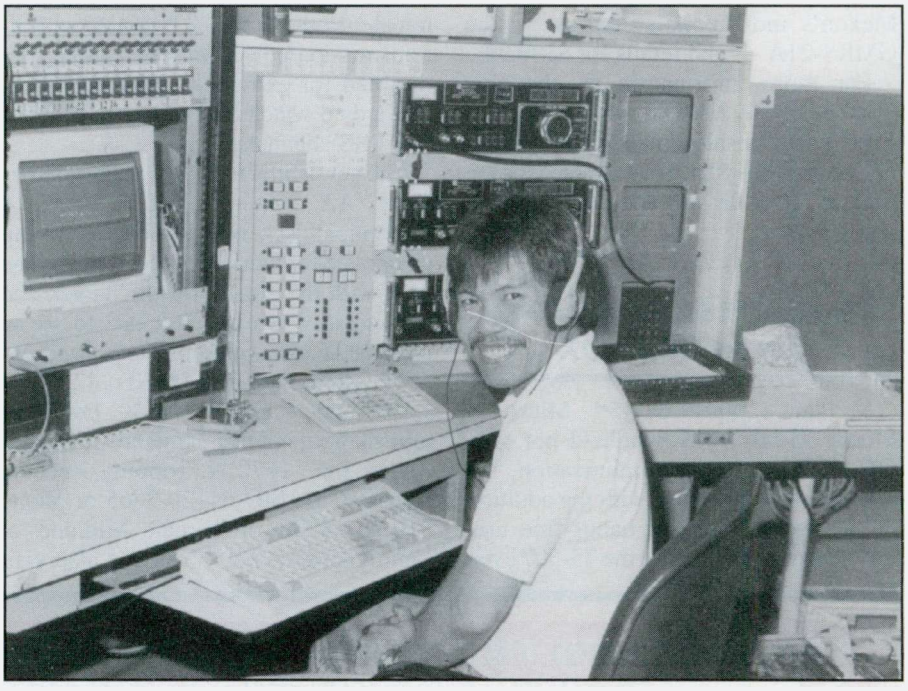
Monitoring The Millennium Rollover

Ninety days, and counting. Have you set up your radio system to monitor midnight in the outgoing and incoming century?

Shortwave radio will give you the first clue on the excitement going on around the world. On New Year's Eve, you may be able to pick up ham stations and shortwave stations on the 14-MHz and 15-MHz bands proclaiming the new millennium. Shortwave bands will certainly carry the festivities of what's happening Down Under. Of course, the ham bands to watch are 20, 17, and 15 meters which may propagate into Australia, New Zealand, and Japan with their announcement of how Y2K problems are dealt with in their own countries. Ham radio may be one of the first communication paths to get through in case computers go whacko, and satellite links go off. Since the ham connection is from the ionospheric F-layer, there is no dependency on anything with a computer clock to keep their circuit open.

The only problem is the communications path with stations to our west in total darkness during the wintertime, making radio communications very unreliable. If you have a major-sized ham radio system, including a monster beam, chances are you'll get through on 15, 17, or 20 meters. But if you are running a relatively simple dipole or high-frequency vertical, you can just about forget hearing anything coming in from the west at noontime on New Year's Eve.

In the afternoon, ham operators and shortwave listeners will begin to pick up European signals coming in from the east. Conditions will continue to improve with phenomenal signal strengths in our late afternoon corresponding with their midnight millennium. On shortwave broadcast channels, try frequencies on the 9-MHz, 31-meter band; 11 MHz, 25-meter band; and 13-MHz, 22-meter band. On the ham bands, tune into European festivities on 15 and 20 meters, with the beam heading east or over the North Pole. Pay particular attention to those ham operators describing what's happening with their phone systems, their local TV channels, and most importantly, their computer set-ups. Are they going into the new millennium without Y2K bugs?



Dispatch centers could go down from Y2K bugs. Are you prepared?

"It is extremely important we know ahead of time what some of the other countries are experiencing when it comes to a particular Y2K problem," comments Julian Frost, N3JF, a communications officer for the city of Costa Mesa MESAC organization. "Finding out ahead of time a major glitch in Europe will give us advanced warning what could occur over here about eight hours later," adds Frost. (And even in less time if you are in the Midwest or on the East Coast).

If we hear that the transit system in London comes to a complete screeching halt because of some obscure computer glitch, it could give the New York subway system a few extra hours to double-check that they, too, might not share the same problem at the stroke of midnight. And while a computer fix for a Y2K bug is just about out of the question in a few hours time frame, it could allow officials time to come up with contingency plans to avoid a slowdown, meltdown, or complete stop of a particular transit system. Or maybe, they'd close down the transit system before the stroke of midnight, and keep people out of any vehicle that could come to a grinding stop if the computer bug is over here, too.

East Coast Comes First

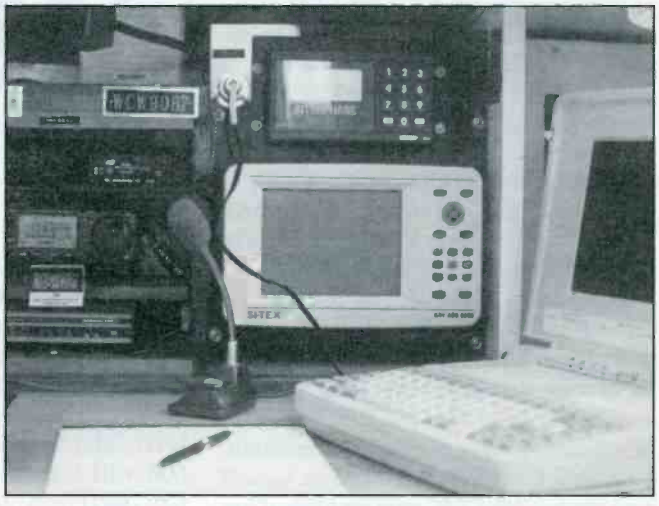
As the East Coast goes into the millennium, the West Coast will tune in on ham radio 7- and 10-MHz frequencies, plus shortwave stations at 5-MHz and 7-MHz. Scanner enthusiasts on the East Coast will probably have one hand on the party horn, and the other one holding a scanner up to their ear finding out what stays up, and what goes down, when the clock strikes 12 and the ball drops at Times Square.

And here on the West Coast, and to our west in Hawaii, we have all this extra time

Having power supplies with built-in battery backups on hand is a good idea.

Members of the National Disaster Medical System will be on the air for the Millennium rollover.

Older GPS equipment may take a lot longer to come up after January 1st.



Getting ahead of the game: Monitoring the shortwave bands for Y2K reports from Europe.

to hear what the rest of the world went through, and to do any last-minute preparations to combat any Y2K bug that may be fast approaching from the east.

Here on the West Coast, we'll have all sorts of radio traffic from Hawaii wanting to know how things went when both hands of the clock are standing straight up. Did our computer links fail? Did our trunked radio system go into a spin? Will GPS dispatch vehicles still show up on the screen? These will be questions that we have learned three hours earlier from those of you on the East Coast, and a few hours later that may ultimately happen to our friends in Hawaii.

The events will lead to an increased awareness of the importance of autonomous radio systems — ones that don't need a computer to work. Ham radios, scanners, CB radios, GMRS equipment, and the little FRS radio sets will shine in their importance of being able to keep us all interconnected, yet off of telephone lines or modems. After all, our equipment is truly "wireless."

Now is the time to double-check your emergency battery sources. Do you have alkaline cells to run in that scanner battery pack? Have you got plenty of gas in your vehicle to charge the big battery that could run the inverter to power some of your larger home electronics? Got flashlights? Is that little portable AM radio handy to tune into local stations for additional information?

Why not plan for the millennium as an exercise in emergency communication preparedness? Definitely go out there and celebrate. I wish I could be with you at Times Square (I'll be in New York a week later for the Boat Show and will probably see the aftermath). But keep in the back of your mind the importance of the portable radio equipment you are carrying with you to the celebration. If everything went black, are you able to provide emergency communications to someone else who might be next to a city communications center? Does your city know that radio volunteers may assist them if the system goes down?

If ever our hobby could be of more importance to our community, the upcoming rollover will surely put us to the test. Don't be caught with a dead battery — gear up for 2000 NOW! ■

Broadcast DXing

BY BRUCE CONTI
<BAConti@aol.com>

DX, NEWS AND VIEWS OF AM AND FM BROADCASTING

The End Of An Era

The Canadian Broadcasting Corporation (CBC) is now history at 740 kilohertz as CBL Toronto, Ontario has completed the transition from AM to FM. The last day of broadcasting consisted of a repeating message telling CBC listeners where to tune in for Radio One programs; "*Here's an important message for CBC radio listeners. As of tonight, CBC radio will no longer be available on 740 AM. To receive CBC radio programming, please tune your radio to 99.1 FM in the greater Toronto area. If you live in the Guelph-Kitchener-Waterloo area, tune to 89.1 FM. In London, tune to 93.5 FM. In the Owen Sound area, tune to 98.7 FM. If you live in the Wingham area, tune to 93.5 or 98.7 FM. In the Midland area, tune to 89.7 FM. If you live in the Orillia area, tune to 91.5. In southern Niagara, tune to 90.5 FM. If you have any reception problems, call 416-205-5949, or you can call toll-free at 1-877-300-5548.*" Then just before midnight Eastern Time on June 19, there was the following final sign-off announcement: "*This is CBC Radio One broadcasting from the Hornby transmitter at 740 AM. In the Toronto area, we will now move to 99.1 FM, with additional frequencies throughout southern Ontario. This transmitter has served the community well since 1937 and has been at 740 AM since 1941. This is the end of an era in Canadian broadcasting history. Now, signing off from CBL, adieu.*"

Unlike the rather uneventful last days of CBF and CBM, there was a celebration of sorts as CBC engineers gathered at the transmitter site for a final farewell. Northeast Radio Watch editor Scott Fybush was on the scene and captured the historic last few moments on tape for the National Radio Club's DX Audio Service (DXAS). It's part of the July DXAS audio magazine, available at <http://nrcdxas.org/>. The file requires about 5.6 megabytes in RealAudio to download. As mentioned in the final announcement, CBL first signed on in 1937, but was originally at 840 kilohertz before moving to 740 in 1941. The CBL signal will be missed by many distant listeners. CBC programs can still be enjoyed on CBA Moncton, New Brunswick, at 1070 and CBE Windsor, Ontario, at 1550 kilohertz.

CBC Radio logo.

The three former CBC clear channels won't be silent for long. CKVL Verdun, Quebec, will move from 850 to 940 kilohertz, and CIQC Montreal, Quebec, at 600 will take over 690 kilohertz. The CBC had planned to launch a new French-language all news service on one of these two frequencies, and is expected to appeal the CRTC decision to assign both to commercial broadcasters. It's likely that another commercial broadcaster will be granted approval to move to 740. CJBC at 860 kilohertz also broadcasts from the Hornby transmitter site and carries the CBC French-language service in Toronto. No word yet on whether CJBC will move to FM or give up its spot on the AM dial.

Radio Extremes

The recently reported format change for CBS-owned stations WNEW(FM) New York and WBCN(FM) Boston from rock music to "extreme" talk has yet to become reality. However, former WAAF personalities Opie and Anthony were seen giving away the supposed WNEW CD music collection outside the studios as a publicity stunt in anticipation of the change, in which Howard Stern, Steve Dahl, Tom Leykis, and Loveline were to become part of Extreme Radio on WNEW. Other stations carrying Howard Stern, including WBCN, were expected to follow suit. WBCN also presently carries Loveline, a point of contention with cross-town rival WFNX. Boston Phoenix Radio WFNX 101.7 FM had broadcast the syndicated talk show for over two years before WBCN took Loveline away along with it's listeners. WFNX intends to sue syndicator Westwood One and WBCN, citing unfair competition and the amount WFNX had invested in promoting the program. In an unrelated move, WFNX is seeking to expand coverage with the purchase of WCDQ 92.1 FM Sanford, Maine. The former home of classic hits from the imaginary Mount Rialto Elegante Ballroom now relays 101.7 FM. This seems to be a trend these days among lower power AM and FM radio stations. The twin towers of 940 and 1310 WORC Worcester, Massachusetts, La Mega 1150 and 1400 (WNFT/WLLH), 92.1/105.5 JYY (WJYY/WNHQ) New Hampshire, and Arrow 102.1/105.3 WXBB Maine are examples of relays heard in the Boston area. WHLI broadcasts nostalgia at 1100 and 740 AM on Long Island, New York, to hopefully attract former WQEW listeners over a wide area. However, both stations WHLI at 1100 and relay WGSM at 740 are daytime only, but you can continue listening at night via WHLI.com on the Internet.

Rather than sell a station to a competitor, Cumulus Media decided to donate a radio station to public broadcasting in order to meet the FCC legal limit for station ownership. WHQO(FM) Augusta was donated to Maine Public Radio. Cumulus owned or had interests in 14 stations in the region, including five pending FCC approval, which meant giving up one station. The acquisition of WHQO will expand public radio into areas of Maine previously not covered.

Last and probably least in the news this month, proof that radio extremes aren't

WCDQ now relays WFNX 101.7 FM to the beaches of Maine and New Hampshire.

limited to the East Coast. Billboards appearing across San Diego announced, "Sell your baby," along with a phone number. Within days, the advertising company that owned the billboards decided to remove the messages after receiving several complaints. The message was part of a publicity stunt for classic rocker KGB-FM in San Diego. Radio stations will apparently resort to just about anything to gain attention these days.

QSL Information

580 KTMT Medford, Oregon, E-mail QSL from: Todd D. Boss — PD one day after follow-up from January '99 reception report. Address: P.O. Box 159, Medford, OR 97501. E-mail address: kcmx@wave.net. (Martin, OR)

860 KBEE Salt Lake City, Utah, verification letter in 9 days, signed Rusty Keys — P.D. Address: 434 Bearcat Drive, Salt Lake City UT 84115. (Martin, OR)

880 KCMX Ashland, Oregon, E-mail QSL from: Todd D. Boss, P.D., from January '99 reception report. Address: Box 159, Medford, OR 97501. E-mail address: kcmx@wave.net. (Martin, OR)

1630 KCJJ Iowa City, Iowa, finally after several months of trying, I got an E-mail QSL, received in one day from: Tom Suter — Sales Manager. Address: suterman@iowacity.net. I now have 26 of the 27 x-banders QSL'd. The only holdout is KQXX-1700. (Martin, OR)

Broadcast Loggings

In this month's selected loggings, Mark Connelly provides the results of mini-DXpeditions to coastal Massachusetts sites. Thanks to sea-gain or the high conductivity of salt water, transoceanic DX on mediumwave frequencies can be relatively easy from the coast, but move just a few miles inland and the DX drops off dramatically. Mark takes full advantage of various coastal locations to log some rare ones along with those more commonly heard inland. Patrick Martin does the same from coastal Oregon, where he logs a few from down-under on the expanded AM band.

The best time to catch transatlantic DX is during local sunset or transmitter site dawn, while transpacific DX is best from transmitter site sunset to local sunrise. In addition, Gary Jackson reaches for a new milestone in TIS/HAR logs, and I list a few catches on the former CBC clear channels. All times are UTC.

530 TIS/HAR Roseville, California, just came on the air testing. If they verify, it will be my 99th from 11 states. (Jackson, CA)

531 RNE5 synchros, Spain, at 0148 parallel 855 kilohertz with folk vocal, 0307 Radio Nacional de Espana ID, over two others (likely Algeria and Madeira). (Connelly, MA)

549 Les Trembles, Algeria, at 0050 with an Arabic vocal; poor. (Connelly, MA) At 0325, loud with string music and Arabic vocal. (Conti, NH)

567 RTE Tullamore, Ireland, at 0322 excellent with talk about Irish rock bands including Thin Lizzy: "You know that 'The Boys Are Back in Town' was the real breakthrough." (Connelly, MA)

603 RDP Pico de Arieiro, Madeira, at 0345 parallel Azores 693 kilohertz with Portuguese version of Tom Petty's "Learning to Fly," poor, in mix with Spain. (Connelly, MA)

690 Caribbean Beacon, Anguilla, at 0045 fair after WOKV-Florida pattern change/power reduction, with Dr. Gene Scott parallel KAIJ 5810 kilohertz shortwave, with CBF off. (Conti, NH)

738 RNE Barcelona, Spain, at 0325 weak with telephone talk in Spanish through domestic interference from 730 and 740. (Conti, NH)

740 WMBL Morehead City, North Carolina, at 0400 fair, "Playing the best music from the '40s to today for the world's most beautiful listeners, we're AM 740 WMBL Morehead City. It's 12 o'clock and here's the latest news from CNN Radio," with CBL off. (Conti, NH)

920 WIRD Lake Placid, New York, at 0405, "You're listening to the best air in the Adirondacks, 105.5 from Lake Placid, 102.3 out of Tupper Lake, and 920 on your AM dial, and on the World Wide Web at <RadioLakePlacid.com>," over WHJJ. (Conti, NH)

940 WIDG St. Ignace, Michigan, at 0825 with IDs as "Classic KC Country 940" in reference to old call letters WMKC, and nostalgic country music, with CBM off. (Conti, NH)

940 WIPR San Juan, Puerto Rico, good at 0100 with "... por nueve cuarenta AM" promo and "Esta es WIPR AM San Juan" ID into fanfare and news, with CBM off. (Conti, NH)

940 XEQ Mexico City, Mexico, at 0830 fair with "La Tropi-Q" IDs and Mexican pop/salsa music, with CBM off. (Conti, NH)

1008 R. Las Palmas/RadioVoz, Canary Islands, at 0027 poor to fair with local Spanish talk show. (Connelly, MA)

1062 Danmarks Radio, Kalundborg, Denmark, at 0157 with a huge signal, mellow pop vocal in English by a group with a Scandinavian accent, then Danish talk by a man, followed by dance music. (Connelly, MA)

1215 Virgin Radio synchros, England, at 0209 excellent with a local-like signal, "Kiss Me" by Sixpence None the Richer. (Connelly, MA)

1296 Reba, Sudan, at 0250 good with a repeated 11 or 12 note interval signal came on and totally buried co-channel Spain, and at 0300 end of interval signal, march music (anthem), pips (five groups of two short beeps, then one long beep), then Arabic talk by a man. (Connelly, MA)

1620 KAZP Bellevue, Nebraska, is on the air, heard weakly with ID and ESPN radio. (Jackson, CA)

1638 2ME/3ME, Radio Lebanon, Australia, two stations listed probably

Seeking Permits To Construct New FM Stations

AR	Arkadelphia	91.9 MHz	
AR	Melbourne	90.3 MHz	
AZ	Kingman	90.1 MHz	
CA	Greenville	90.3 MHz	
CA	Viola	91.5 MHz	
CO	Durango	89.3 MHz	
CO	Leadville	90.7 MHz	
FL	Madison	91.7 MHz	500 watts
IA	Oskaloosa	89.5 MHz	420 watts
ID	McCall	89.9 MHz	220 watts
IL	Carpentersville	88.1 MHz	
IL	Crete	88.1 MHz	100 watts
IL	Woodstock	91.7 MHz	
IN	Lebanon	91.9 MHz	6 kW
KS	Independence	88.5 MHz	250 watts
KS	Oberlin	91.3 MHz	250 watts
KY	Auburn	88.1 MHz	
KY	Bowling Green	88.1 MHz	
MD	Severna Park	94.3 MHz	Experimental
MI	Adrian	88.9 MHz	
MI	Adrian	90.1 MHz	
MI	Bay City	91.3 MHz	
MI	Iron Mountain	91.5 MHz	
MI	Jackson	89.3 MHz	800 watts
MI	Marlette	89.7 MHz	100 watts
MI	Onstead	88.3 MHz	
MN	Worthington	88.1 MHz	250 watts
MS	Biloxi	88.1 MHz	
MS	Columbia	89.5 MHz	
MS	Columbus	90.5 MHz	
MS	Forest	90.5 MHz	
MS	Yazoo City	89.5 MHz	
MT	Billings	89.3 MHz	
MT	Billings	90.1 MHz	
MT	Billings	90.7 MHz	
MT	Billings	90.9 MHz	
MT	Black Eagle	93.7 MHz	KEIN booster
MT	Butte	90.5 MHz	3 kW
NC	Buxton	90.5 MHz	5.9 kW
NC	Lock Folly Twp.	88.1 MHz	250 watts
NC	Mateo	90.9 MHz	3.9 kW
NC	Ogden	88.3 MHz	100 watts
NC	Raeford	88.7 MHz	4 kW
NC	Scotts Hill	88.3 MHz	6 kW
ND	Jamestown	89.9 MHz	
NE	Grand Island	88.3 MHz	250 watts
NM	Grants	88.1 MHz	
NM	Hobbs	90.9 MHz	
NM	Las Vegas	88.7 MHz	
NM	Lovington	91.3 MHz	
NM	Mentmore	88.1 MHz	
NV	Jackpot	91.3 MHz	3.7 kW
NM	Santa Rosa	91.9 MHz	
PA	Chambersburg	88.3 MHz	
SD	Watertown	89.1 MHz	
TN	Benton	91.1 MHz	
TN	Johnsonville	89.3 MHz	300 watts
TN	Paris	90.9 MHz	
TN	Selmer	90.5 MHz	5.8 kW
TN	Union City	88.9 MHz	
TN	Waverly	90.9 MHz	1 kW
TX	Byrne	88.5 MHz	500 watts
TX	Crockett	88.5 MHz	
TX	Del Rio	88.5 MHz	
TX	Sealy	90.7 MHz	
VA	Mappsville	90.1 MHz	2.5 kW
VA	Nassawadox	90.1 MHz	25 kW
WA	Sequim	89.3 MHz	
WY	Laramie	98.7 MHz	

Approved To Construct New FM Stations

CO	Silverton	103.7 MHz
NE	Ralston	88.1 MHz
WA	Naches	99.3 MHz

Cancelled

KJFP	Yakutat, AK	103.9 MHz
KTRY	Bastrop, LA	

Seeking Changed AM Facilities

WKST	New Castle, PA	1280 kHz	Seeks to lower day power
WWRU	Elizabeth, NJ	1660 kHz	Seeks to change city & power

Changed AM Facility

WVNS	Claremont, VA	670 kHz	Added 220 watt night svc.

Seeking To Change FM Frequency

KBCM	Blytheville, AR	88.1 MHz
WPIB	Bluefield, WV	90.9 MHz

Changed FM Facilities

WYOO	Springfield, FL	101.1 MHz	Moved to 101.5 MHz

New AM Call Letters Issued

WTIR	Winter Garden, FL

Changed AM Call Letters

New	Old	
KAYO	KGHO	Olympia, WA
KEWL	KOWS	Texarkana, AR
KEXX	KRRF	Denver, CO
KEZY	KORG	Anaheim, CA
KGHO	KJET	Hoquaim, WA
KIKR	KAYD	Beaumont, TX
KKTL	KMCG	Casper, WY
KNCR	KAJK	Fortuna, CA
KYFV	KNAL	Victoria, TX
WBZQ	WPDJ	Huntington, IN
WDBE	WJBW	Jupiter, FL
WDLS	WNNO	Wisconsin Dells, WI
WFMF	WYNK	Baton Rouge, LA
WJOK	WSGC	Kaukauna, WI
WLKD	WMQA	Minocqua, WI
WMGC	WAPB	Murfreesboro, TN
WWTR	WSPW	Bridgewater Twp., NJ
WYGS	WMSK	Morganfield, KY

Pending FM Call Letter Changes

New	Old	
KKAL	KWEZ	Santa Margarita, CA
KSIT	KMKX	Rock Springs, WY

KZRX	KRRB	Dickinson, ND
WEMG	WRDR	Egg Harbor, NJ

New FM Call Letters Issued

KAYK	Victoria, TX
KBCM	Blytheville, AR
KBLW	Victoria, TX
KBMF	High Point, MO
KBMH	Holbrook, AZ
KBMM	Odessa, TX
KHTZ	Cameron, TX
KVFM	Beeville, TX
WAQB	Tupelo, MS
WAVI	Oxford, MS
WBJV	Steubenville, OH
WBJY	Americus, GA
WCBW-FM	E. St. Louis, IL

Changed FM Call Letters

New	Old	
KAXT	KIOL	Lamesa, TX
KBTU	KXDC	Carmel, CA
KCVJ	KBUG	Osceola, MO
KEWL-FM	KEWL	New Boston, TX
KFMY	KSWW	Raymond, WA
KJET	KFMY	South Bend, WA
KJMG	KLMB	Bastrop, LA
KKAL	KWEZ	Santa Margarita, CA
KKIA	KIDA-FM	Ida Grove, IA
KKME	KFRY	Manteca, CA
KKTL-FM	KKTL	Cleveland, TX
KLVB-FM	KPAT	San Luis Obispo, CA
KNBB	KBDJ	Ruston, LA
KPAT	KGDF-FM	Orcutt, CA
KSNJ	KBFE	Grand Junction, CO
KSWW	KAPV	Elma, WA
KTNT	KCES	Eufaula, OK
KXDR	KBEB	Hamilton, MT
WBRW	WVMJ	Blacksburg, VA
WCKZ	WGL-FM	Auburn, IN
WCTQ	WSRZ-FM	Sarasota, FL
WDDV	WCTQ	Venice, FL
WDMK	WWBR	Clemens, MI
WDUV	WTBT	New Port Richey, FL
WELT	WJAF-FM	Swainsboro, GA
WILZ	WMJA	Saginaw, MI
WKBQ	WKBL-FM	Covington, TN
WKFX	WBFE	Barron, WI
WKLU	WQFE	Brownsburg, IN
WQSX	WEGQ	Lawrence, MA
WRKG	WQVR	La Crosse, FL
WRNC-FM	WIBD	Gray, GA
WSMJ	WXVO	Oliver Springs, TN
WSRZ-FM	WYNF	Coral Cove, FL
WTBT	WDUV	Bradenton, FL
WTLT	WPRW	Naples, FL
WWWX	WUSW	Oshkosh, WI
WWXY	WWVY	Hampton Bays, NY
WXBE	WZMT	Hazleton, PA
WXLX	WCFI	Lajas, PR
WXMZ	WKHB	Hartford, KY
WXWX	WEZR	Brillion, WI
WYLZ	WMJK	Pinconning, MI
WYNF	WLTF	Englewood, FL

parallel, at 1247 with Lebanese music and man, much easier to hear now that KDIA is talk/religion, hardly any splash. (Martin, OR)

1640 KDIA Vallejo, California, is now "The Light" parallel KXBT 1190 with Catholic programming, but not the same as KSMH. This info is via a phone call and from Gary Jackson who also called. (Martin, OR)

1660 WMIB Marco Island, Florida, now on the air, heard with music and IDs while KXOL was off. (Jackson, CA)

1665 2MM, Greek Radio, New South Wales, Australia, at 1249 good with man in Greek. (Martin, OR)

1673.9 Radio Symban, Sydney area, Australia, with music in Greek, announcer was distorted, but on-air telephone call from listener was clear from 1215 to 1245, best heard so far. At one point, it sounded like the caller said "Symban." (Martin, OR)

1683 Radio Club AM, Australia, at 1255 fairly good with what sounded like Greek programming. (Martin, OR)

1700 KQXX Brownsville, Texas, per phone call to KBOR, KQXX is indeed on the air, 24-hours-a-day with a regional Mexican format. Apparently, this is the new x-bander I have been hearing. (Martin, OR) Now on the air, heard in Spanish mornings. (Jackson, CA)

1701 Radio 1701, Australia, at 1243, the strongest of the Aussie x-banders with Hindi music and a woman in Hindi language. (Martin, OR)

Thanks to Mark Connelly, Bob Gilbert, Don Hallenbeck, Gary Jackson, Nile Kelly, and Patrick Martin for their logs and radio news. The best mediumwave DX often occurs September through November. As the DX picks up for the new season, be sure to let everyone know what you're hearing right here. 73 ■

Radio & The Internet

BY ERIC FORCE
<eforce@cybernet.net>

POP'COMM'S CYBER SLEUTH CHECKS OUT ONLINE RESOURCES

Computer And Web Help YOU Can Use

Wow! What a difference a decade makes! Less than 10 years ago, E-mail was something available only to those in a networked corporate environment, and a mouse, to many, meant rodent. Advances in computer technology, the Internet, and World Wide Web have changed all of that — forever! Today, E-mail accounts for a high percentage of worldwide communications and a few clicks of your mouse can quickly yield massive amounts of information. That's the good part.

On the downside, access to that vast quantity of information can be overwhelming. The sheer volume of online resources, now numbering in the hundreds of millions of web pages spanning perhaps two million plus Web sites, makes finding specific information via online search engines difficult at best. For many, "extremely frustrating" would be a gentle way of describing the experience. It's pretty daunting when one performs a search and finds there are thousands of potential pages meeting the search criteria. Most of us go down a few pages of search results and give up in frustration after a few minutes of reaching "dead ends." Utilizing online search engines might be a candidate for future discussion here. What do you think?

Tracking down and sharing quality resources that may be difficult to find or unknown to you will be one of the goals of this column. By way of example, some could be buried hundreds, even thousands, of lines deep in the results from a typical keyword search depending on the search engine and keyword(s) used. Another will be to help your online experiences become more enjoyable and productive. Toward that end, we'll include some "surfing" tips as space permits, plus a lot more as we move into the 21st Century. Stay tuned, there are a lot of neat things on the horizon.

It's YOUR Column!

Like the Web itself, this column is both dynamic and flexible, subject to what's important to you. Drop me an E-mail with your thoughts about the column and picks for outstanding online resources. While I can't guarantee every suggested site will be published, I can guarantee that I will visit every one you recommend and, unless the volume of E-mail becomes unmanageable, will personally respond to your notes. In a nutshell, we hope to help you derive the most benefit from this marvelous technology. With respect to desktop computers, please note that my expertise lies ONLY in the "IBM" world. My apologies to the "Mac" crowd. With that in mind, let's begin our journey into cyber space by noting two, extremely useful, software tools: WinZip for Windows and Adobe's® Acrobat® Reader.

Downloading (i.e. transferring files or documents from the Internet to your PC) will be a frequent activity. To conserve on space, many of those files will be in a compressed form. WinZip for Windows, from *Nico Mak Computing, Inc.*, provides an easy way to convert them back to their original state. Some type of decompression software is a must have. WinZip is the program I use and recommend to my friends. A fully functional evaluation copy of the program can be downloaded from **<http://www.winzip.com/>**.

No "Web Surfer's" software arsenal should be without the FREE Acrobat® Reader from *Adobe® Corporation*. A growing number of resources on the Web now make use of Portable Document Format (PDF) files. However, to view or print them you will need the Acrobat® reader software. This is another *must have* application and the price is right. A "Mac" format is also available. Download the most current version at **<http://www.adobe.com/prodindex/acrobat/readstep.html>**.

Let's shift gears now and chat a moment about THE HTML "404" FILE NOT FOUND ERROR. First, an associated definition. An acronym you will encounter repeatedly is URL. It stands for Uniform Resource Locator and is the "human readable" address used by your browser to reach a Website or "page" within a site. The URL is what appears in your browser's location window and is to your browser what your mailing address is to the Post Office. The "http://" addresses above are both examples of a URL.

Whether you attempt to visit a Web site by typing its URL from a publication like *Popular Communications* or click-on an online link, you will occasionally be the recipient of a *"File Not Found"* error message. Most often, the error pops up when the file you are seeking has been deleted or moved to another location within the site. Unfortunately, many folks will give up at that point, move on, and miss out on a potential gold mine of information. Even if the specific file has been deleted, the Website itself may contain valuable information and it's well worth taking a few seconds to explore further.

If you typed the URL and get the error message, check your spelling, being especially careful about upper and lower case letters. Most Websites are hosted by systems running the UNIX operating system, so case counts. Bottom line? When typing a Web address, and assuming the reference source is correct, everything must be typed exactly as shown for it to work.

Assuming spelling was not the problem, the secret to handling a "404" error is to step back through the URL (stopping at each forward slash) until you reach a valid page. It's really quite easy to do. Let's use the Adobe URL above as an example. Note that I have changed the file name (last item to the right in a URL) to force an error. In sequence, this is how it would look. First the complete "offending" URL: **<http://www.adobe.com/prodindex/acrobat/badpage.htm>**, which returns a File Not Found error. Stepping back, the URL becomes: <http://www.adobe.com/prodindex/acrobat/> and returns a valid page. If the above didn't work, then you would step back one more level so the URL would read: <http://www.adobe.com/prodindex/> and so on. In practice, one way to step back through the URL would be to place your mouse cursor to the extreme right of the URL in your browser's loca-

tion window, left click until the URL is NOT highlighted. Then backspace until you reach a forward slash and press your ENTER key. That's all there is to it. That little tip can payoff handsomely in terms of snagging some otherwise lost "Web gold." This technique will not work 100% of the time, but it's worth a shot rather than dismissing the new-found site as soon as a File Not Found error is encountered.

I just checked my word count and find we don't have a lot of room left for this month's column. Regardless, we can't leave without providing some "goodies," so we'll use the remaining space to highlight some resources you should find useful. Enjoy!

Amateur Radio

If there was an award for giving of one's self, desire to help others, and promote Amateur Radio, Simon Twigger, AA9PW, would have my vote. Whether just starting out or wanting to advance to a higher level, Simon's *"AA9PW Amateur Radio Exam Practice Page"* provides the ideal online resource. Only those familiar with the inner workings of HTML and other required elements could appreciate the time and effort he had to expend to create such a comprehensive and easy-to-use training platform. Send him a thank-you and check out **<http://www.biochem.mcw.edu/Postdocs/Simon/radio/exam. html>**.

Antennas And Antenna Modeling

Focusing on research and education about antennas and antenna modeling, L. B. Cebik, W4RNL, has assembled an outstanding repository of information of interest to radio enthusiasts. Thanks to E. C. Van Der Eecken, K6QGH, for the tip on this must visit site! You'll find Mr. Cebik's antenna gold mine at: **<http://web.utk.edu/~cebik/radio.html>**.

Components And Gear

If you're in the market for buying or selling components or gear, the ebay® online auction site is a resource worth checking out. As with any type of auction, always remember to NOT let your emotions rule your bidding. While it's possible to get some really good buys, it's just as easy to spend too much. A friend and I are currently building a radio-related Website and have setup a "pre-loaded" page with ebay® search links covering various components and equipment. "Prior Auction" links are also available so you can get a feel for how much comparable goods have been sold for. Take a peek at: **<http://www.dobe.com/vea/auction.htm>**.

MW (AM Broadcast Band) DXing

If it deals with MW DXing, Werner Funkenhauser has it covered. *Funkenhauser's Whamlog & Medium-wave DX Radio Links* serves as an extraordinary master index and invaluable resource for this fascinating hobby. You'll definitely want to visit and bookmark this impressive site: **<http://Home.InfoRamp.Net/~funk/>**.

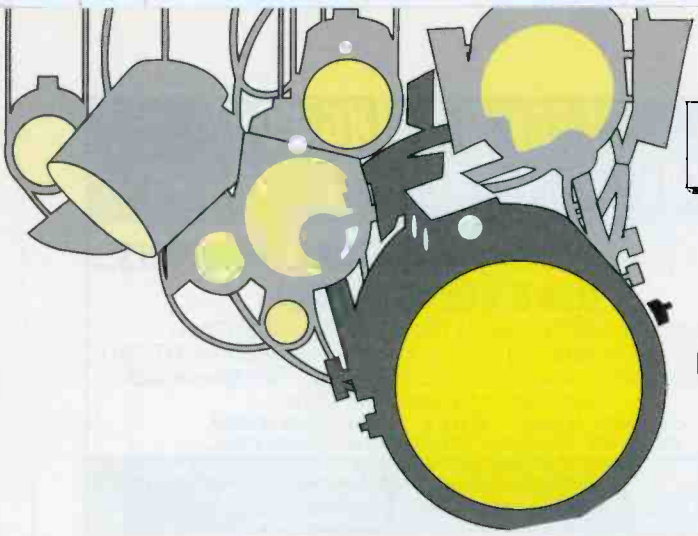
Scanner Frequency Data

You won't have to worry about server outages, slow network connections, or fumbling for that outdated frequency book with *CSP Technologies' ScannerBase XE* software. Combined with their FCC based, state frequency databases, you can have current information instantly available on your PC. Running under Windows®, both the program and databases are currently FREE and available for download. I have ScannerBase XE installed on my PC and love it! Don't miss this one! Visit: <http://www.csp-tech.com/sb_main.htm>.

PerCon Corporation, well-known for its Spectrum databases on CD, has done it again with the introduction of *"DataFinder,"* a FREE online search system. DataFinder provides hobbyists with access to a variety of PerCon databases, including the FCC Frequency Database containing over 3.3 million records. By the time you read this, online searches for Amateur Callsigns and Canadian Frequencies should also be available. Another outstanding resource! You'll find DataFinder at: **<http://www.perconcorp.com/datafinder/index.html>**.

Shucks! We've run out of space for this month's column. Stay tuned for more and be sure to visit the *Pop'Comm* Website for the latest and greatest in Radio Communications: **<http://www.popular-communications.com>**.

Until next time, 73! ■



product spotlight

BY KEN REISS
<Armadillo1@aol.com>

POP'COMM REVIEWS PRODUCTS OF INTEREST

ICOM's PCR-100 Computer-Controlled Receiver

If you've been into scanning for any length of time — say more than about three days — you'll no doubt have heard of the ICOM PCR-1000. This "black box" computer-controlled scanner was introduced about two years ago and has enjoyed quite a following since.

ICOM has now introduced the PCR-100, a little brother to the 1000. The 100 is a slightly smaller box, and features its own software, but many of the features are the same. It's tempting to look at the 100 as a "lite" version of the 1000, but the 100 deserves consideration on its own merits.

At first glance, the PCR-100 looks pretty much like any wideband receiver. Coverage runs from 500 kHz to 1300 MHz less cellular, of course, in the U.S. Modes of operation is where we do find one surprise: There's no sideband mode, or BFO to allow reception of SSB signals on shortwave. This might be the Achilles heel for anyone looking for a full wideband receiver, and by far the biggest factor in choosing the PCR-100 versus the PCR-1000. However, if your primary interest is in scanning and the VHF/UHF bands, read on.

There isn't much to see on the front of this receiver. On the right side, a power light indicates when the unit is in use and that's it for useful information from the receiver itself.

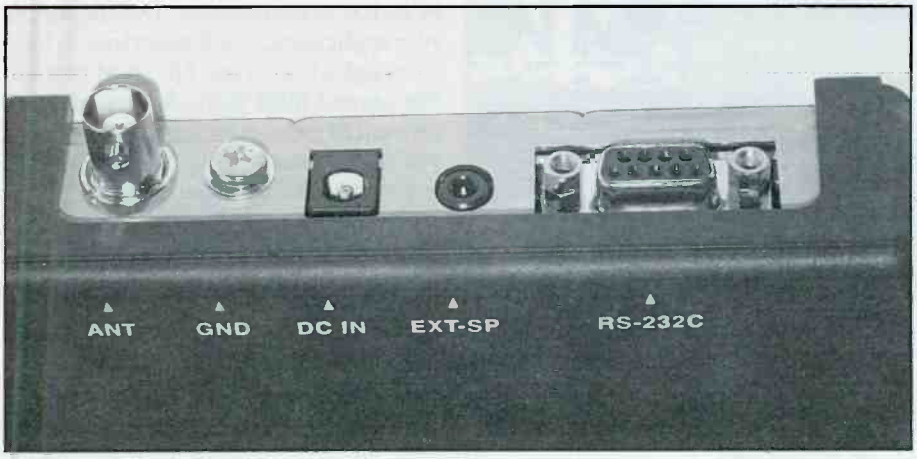
Like all "black box" receivers, there are very few controls on the receiver itself. Most of the few features that are on the unit are on the back panel. These include power, antenna, the computer RS-232 port, and audio output for connecting the receiver to your computer's sound system as recommended by ICOM, or to another speaker or amplifier. This connector doubles as both a line-out and external speaker jack, depending on software control. The jack can also supply a stereo (three-conductor) or mono (two-conductor) connection also determined by software. Note that only the FM broadcast band actually will receive stereo audio, but at least the signal will come out of both speakers if you choose to use a stereo-capable audio system. You can also just use the internal speaker, which works quite well in most cases.

Notably absent from the PCR-100 cabinet is a power switch. It is completely controlled by software.

ICOM includes two applications for control of the PCR-100. The first, the multi-function receiver, allows complete control over the unit using several screens and a quite impressive and very graphical control interface. This control screen, reminiscent of many worldband radio layouts, allows complete control over the major functions of the receiver, and is probably the one you'd want to use if you were configuring memories, or operating the radio as your primary focus.

There is also a "Simple Function Receiver Screen" which is a much smaller and less intrusive layout that still allows access to almost all of the radio's functions, although many of them are in separate windows that must be called up first. This works quite well for background scanning while you're working on other software. The "main" section of the display indicates frequency being tuned, power status, signal strength, memory name (if one is stored), and the current bank being scanned. There are also controls for volume up and down, and a menu pull-down to allow access to other functions and control palettes.

One window in particular, the "controller," is very handy to have displayed if you're scanning or searching unknown frequencies, or just tuning the shortwave broadcast bands in search of DX or worthwhile programming. From this palette, you can set the squelch level, choose the mode and filters in use (wide and narrow, but they vary depending on the mode in use), and adjust the attenuator. You can also set the frequency step,



There aren't a whole lot of connections on the rear either. Of course, the computer is required for operation, and antenna and power are a very good idea if you want to receive much. The external speaker jack doubles as a line-out under software control.

and then tune up or down the bands using that step. It's quite convenient.

There are also five "instant access" buttons on the PCR-100 that correspond to memory positions one through five of the current bank. I found these quite handy if I had programmed my top five channels into memory in order. That way, if something interesting was happening on one of those five frequencies, it was a matter of a single mouse click to hold the receiver on that channel waiting for the action. Of course, other memories can be accessed too, but it takes several more mouse clicks or keystrokes.

Earlier, I mentioned filter settings. There are actually four filters in the PCR-100; those available at any given time are dictated by mode. For instance, in the FM mode (for scanning) the 15-kHz filter is default, but the narrower 6 kHz and wider 50 kHz filters are also selectable. In wide FM, the 230-kHz filter is default (for FM broadcast) but the 50-kHz is also selectable. This might be useful for certain satellite modes or military operations, but in practice, 50 kHz might prove too wide. In the AM mode, 6 kHz is the default, but 15 and 50 are available. Something a bit narrower would be useful for crowded shortwave broadcast bands, but on a strong signal, the 6-kHz provided very pleasant audio for listening.

Thanks For The Memories

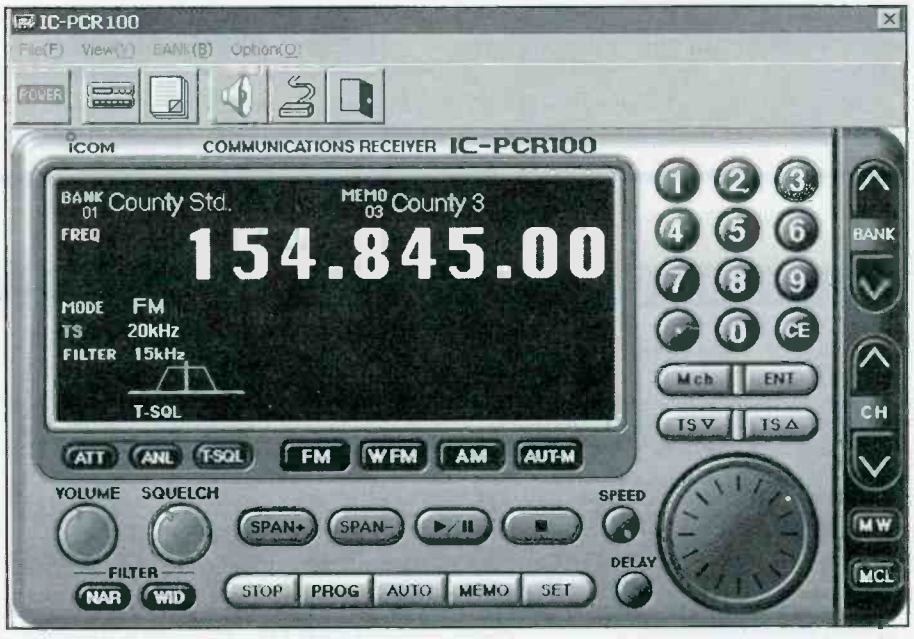
Since the PCR-100 appears to lend itself well to scanning applications, it's worth taking a look at the memory organization and data entry procedures. Each file saved to disk includes 20 banks of 50 channels each, for a total of 1,000 available channels at any time. Of course, you can save as many of these files to disk as you have space available. Each of the 20 banks can be named along with the alpha tag for each memory, which makes finding information easy, and serves as a great reminder when you're scanning frequencies that you don't use often.

It is possible to enter the frequency, mode, and other receiver-related settings into a memory channel directly from the receiver screen, but for most applications you'll want to use the memory list for editing and revising memory information. This screen presents the information in a spreadsheet format that is quite easy to understand. Each channel includes the alpha numeric name, frequency, mode, selected filter, attenuator setting (very convenient), tuning step, and tone squelch setting (just like it's big brother, the PCR-100 includes CTSSS but not DCS tone squelch. This is an excellent feature that hopefully we'll see on more receivers in the future). Each memory position also includes memory SEL and SKIP settings (used for scanning) and a remarks column, which is only displayed in the memory list.

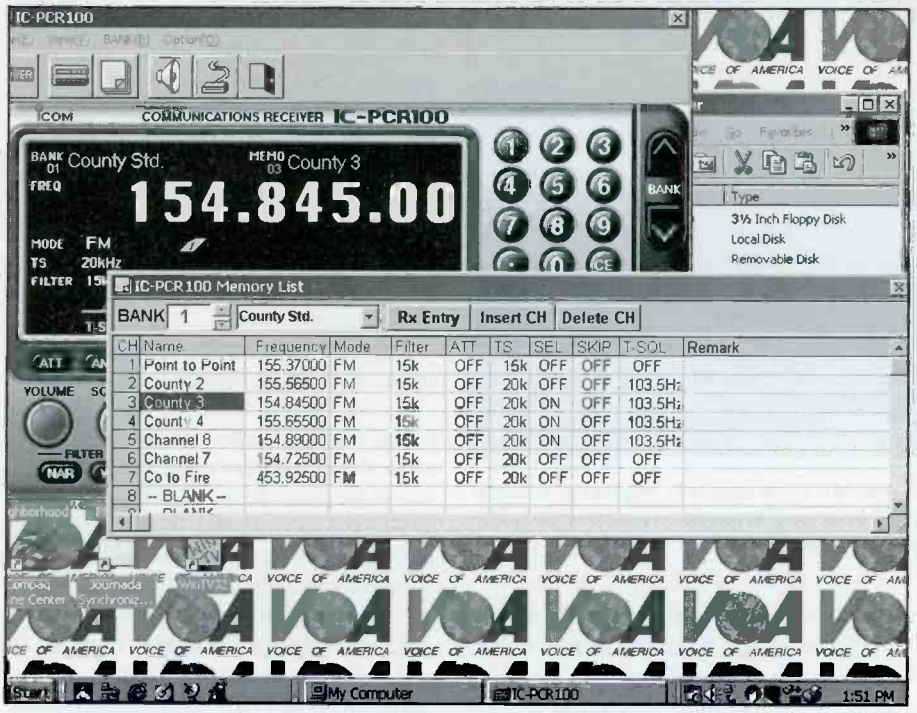
There are six scanning modes available, which offer many versatile options. These include programmed scan, Memory scan, Select memory scan, memory skip scan, mode select memory scan, and auto memory write scan. Some of those are pretty obvious as to what they do (auto memory write scan, for instance) but some are not, so let's have a quick look.

"Programmed scan" starts at a frequency (there are 20 ranges that can be set) and ends at another frequency. The radio cycles through this range repeatedly, pausing when activity is found. The "Auto memory write scan" allows found activity to be entered into a memory bank as it is located.

"Memory scan" simply scans all programmed memories in the selected bank regardless of other settings. The "memory skip scan" will skip any memories that are not programmed or have been set to skip in the memory channel list. This is probably the closest to normal scanner operations, and the mode that I used most of the time.



Here's where the real action takes place. This screen, laid out like most portable receivers, is a great control center for the PCR-100.



Entering data into memories can be done from the main screen one at a time, or conveniently entered into this handy spreadsheet.

When you don't want all the details, this small control center will let you listen while you work.

The "Select memory scan" allows only memories that have been designated as "SEL" in the memory list. This is like creating a "sub-bank" of preferred channels within a normal bank. This would be a much more effective function if it worked across all banks as it can on some of the high-end ICOM receivers, but alas it does not. You simply can't break the 50 channel limit.

Unfortunately, just like the PCR-1000, ICOM has hamstrung the software to allow access to only one bank at a time. While this works great for shortwave and limited scanning functions, it severely limits the usability of the software for scanning applications. Each bank has a limit of 50 channels, so that is the most you can scan at one time.

The Supplied Software

Software is what makes or breaks a computer-controlled system, and the PCR-100 is no different. Depending on your application, you'll either love or hate the supplied software. The good news is that several third party developers have announced support for the unit as well, so you're not stuck with the limitations imposed by the included applications.

The good news — sort of — is that since this is purely a software issue, ICOM could fix it at any time with a simple revision. It would make a good package (actually, two of them because the PCR-1000 suffers from the same limitation) great. The receivers are excellent, and the software supplied is good and easy to work with, providing most of the functionality that most users need. It also rates very high on the official "Harold — I don't understand what it does, but it sure looks cool" scale. It's unfortunate that this simple limitation is pushing scanner enthusiasts toward other products, or forcing them to add third party software for one feature.

The Bottom Line

If you're looking for a computer-controlled receiver with wideband coverage, the PCR-100 or PCR-1000 are both good choices. The determining factors will be your interest in shortwave and price difference. At a street price of under $300, the PCR-100 represents the most economical of the "black box" wideband receivers. If your primary focus is scanning or program listening, you'll like the PCR-100. If you want full coverage and full features, then you'll need to look at the PCR-1000 or other options.

I've attached the PCR-100 to my main computer (something I don't do often) and use it as a background scanner while I'm working on other things. I tend to limit my coverage to the immediate area in this mode, so the 50 channel limit has not been a problem, and the simple function receiver screen takes very little of the precious real estate on my screen.

Check it out. It may find a place in your shack. It makes a great entry level receiver for those interested in computer control, or those just getting started with radio and wanting a little taste of everything for a reasonable price.

For more information on the ICOM PCR-100, contact ICOM America, 2380 NE 116th Avenue, NE, Bellevue, WA 98004 or phone 425-454-8155. You can also visit ICOM on the Web at <http://www.icomamerica.com>. Be sure to tell them you read about the PCR-100 in *Pop'Comm*. ■

BY EDWARD TEACH

The Pirate's Den

FOCUS ON FREE RADIO BROADCASTING

Radio Metallica Worldwide Plays With Bill Clinton!

Sure looks like you folks have been busy beyond belief! Let's get right to the loggings.

Voice of the Raving Lunatic, 6955 USB to close at 0112. (The Duckman, NY) 0028 with the Chipmunks, others, then lead into CERW. (Finn, PA)

CERW (Crazy Elmo's Relay World) 6955 USB from 0115, on and off a number of times over the next hour. (Duckman, NY) 0012 with IS, ID, Seinfeld rap, other stuff. Also at 0142.(Bill Finn, PA) Also as "KERW" at 0149. (Lee Silvi, OH) 2338 and 2200 with music and movie clips. (Finn, PA)

WFMQ, 6955 USB at 2326 with hard rock, off 2230. (Dave Jeffery, NY)

Radio Eclipse, 6955 USB at 1323 with country music, rock, parodies. Providence address. (Jeffery, NY) 0424 with Respect, Hotel JTA, etc. (Finn, PA)

Radio Metallica Worldwide/ RMWW, 6952 at 1922 with talk, Secret Agent theme, off at 1950. (Jeffery, NY) RMWW, **6955 USB** at 2338 giving "two thumbs up" on the WMFQ program. "Bill Clinton is aware of this frequency." Another day at 0444. Also at 0226 with various tunes. (Finn, PA)

WACK Radio, 6955 USB at 0336, music and mention of several callers. Another at 2203. (Finn, PA) 0139 with music, phone number. (Silvi, OH) 0400 with many commercial parodies, rock and rap. Mentioning caller names and giving 1-888-959-8177 as the number to call. (William T. Hassig, IL)

Radio Tornado, 6955 USB, 2300 with usual clips of Dr.Tornado. Also tentative on **6950** at 0058 with Jimmy the Weasel and Dr. Tornado clips. (Finn, PA)

WMFQ, 6955 USB at 2322. (Finn, PA)

Radio 3, 6955 USB at 0002, with everything from Sesame Street to Culture Club. (Finn, PA)

Jimmy the Weasel, 6955 USB at 0032. (Finn, PA)

Radio Free Speech, 6955 at 0100 with FCC special. (Finn, PA) 0100 with muffled audio. Country-western music, telephoned the FCC. (Hassig, IL)

Radio Fusion Radio, 6955 USB at 0127 with various versions of the Macarena. (Finn, PA)

Scream of the Butterfly, 6955 USB, mentioned Klaatu, Donovan, and Beatles. (Finn, PA) 0200. Also at 0043 and 0055 with Madonna. (Silvi, OH)

SWRS, 11470 at 0120–0250, numbers parody and other stuff. Also at 0100. (Silvi, OH)

Voice of Prozac, 6955 at 2018. Also, tentative, at 0106. (Silvi, OH)

Numbers Parody, 6956 at 0112 and 0226 only using names of wines and liquors. (Silvi, OH)

Radio USA, 6955 USB at 0100 with ID. (Silvi, OH)

Ricochet Radio, 6955 heard at 0051. (Finn, PA) 0049 with music, talk, ID. (Silvi, OH)

WRMI/Radio Michigan Int. 6954 USB at 0319. (Finn, PA)

KRMI, 6955 at 0146 with music and Radio Michigan IDs. (Silvi, OH)

Radio Nexus, 6955.5 at 0345, end of program with request for QSO after. (Jerry Coatsworth, ON)

Nexus One, 6955 at 0216 with tests in lower sideband. (Silvi, OH)

Radio Alfa Lima Int., 11480 at 0154 with light pops. Said schedule began at 2200. Also mentioned an address, unable to copy in thunderstorm static. (Jon Oldenburg, WI)

Tentative WKND, 6955 at 0028, very weak but sounded like his tx. (Silvi, OH)

CBC/WHYP, tentative, 6950 with CBC-740/FM99.1 closing announcements. (Finn, PA) WHYP, tentatives at 0146, 2237, and 0316. (Silvi, OH)

CHU (?), 6950 at 0011 with several songs, ID as "CHU, Canada" and off. (Silvi, OH)

West Side Radio Broadcasting, 6955 LSB, at 0103 with many ID, Lulu drop. (Silvi, OH)

WBIG, 6955 at 0019 with music and IDs. (Silvi, OH)

Radio Garbanzo, 6955 at 0042. Music and many IDs. (Silvi, OH)

WWRB, 6955 LSB with Voice of Jams ID. (Finn, PA)

WSKY, 6955 at 2302 with Doors. Thanksgiving poll results, pirate radio awards on TV (they didn't want to stoop to that level). Maybe tape of an old show. (Finn, PA)

Radio Dairymart (?), 6955 USB at 0249. Unsure of ID. Testing. (Silvi, OH)

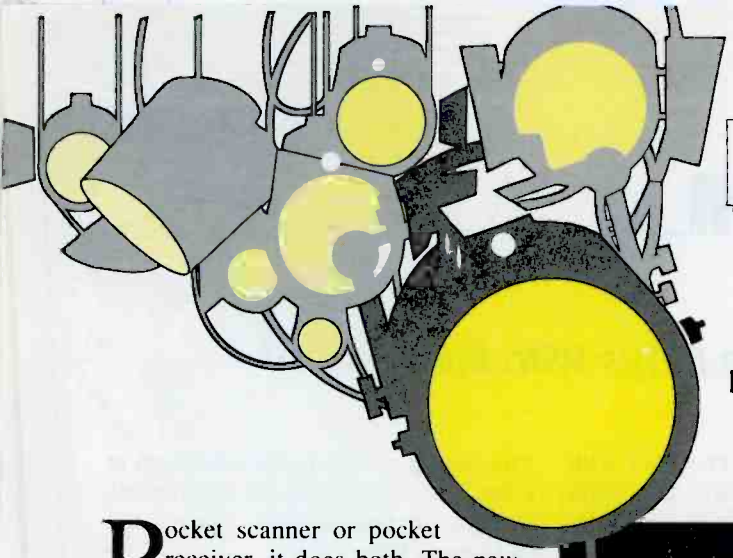
JTA Radio (?) 6955 USB at 0256. I think it was this ID copied through the static. (Silvi, OH)

Radio Azteca, 6955 USB at 0615 with skit using Rocky/Bullwinkle theme. Read listener comments and gave list of DXer phobias. Belfast, N.Y. maildrop. (D. Lopez, Jr. Unknown state)

WMPR, 6955.1 at 2330 with industrial dance music. (Hassig, IL)

And that's a very good group of loggings, folks! Keep 'em coming! You can send them to me at the Hicksville address via regular postal mail, or you can E-mail to my attention care of Editor Harold Ort at <popularcom@aol.com>. And, hey! How about some copies of QSLs from currently active pirates (so we can show them off here). Thanks!

Catch you all again next month! ■



product spotlight

BY GORDON WEST, WB6NOA

POP'COMM REVIEWS PRODUCTS OF INTEREST

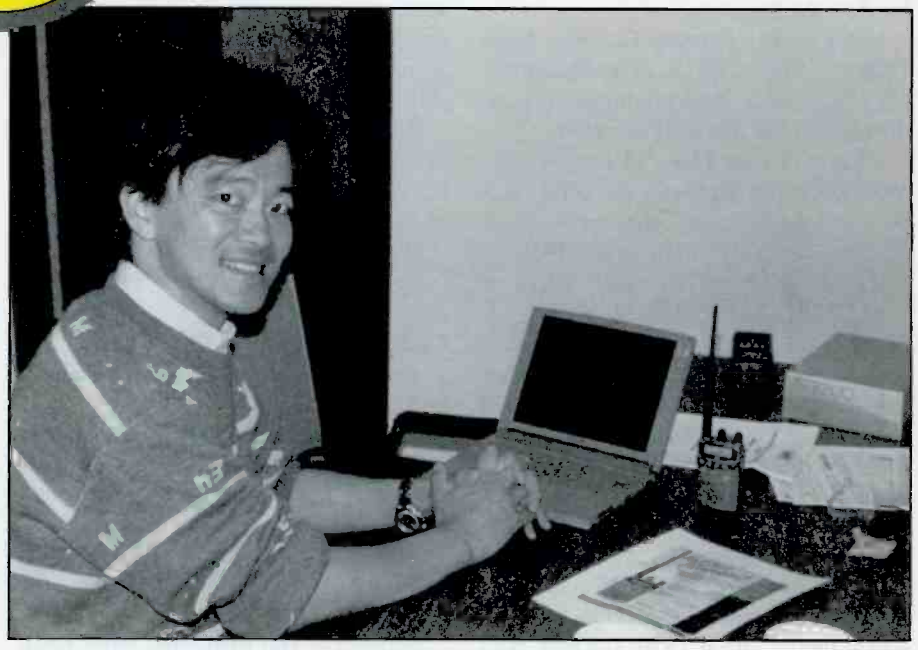
AOR's AR16B Pocket Scanner

Pocket scanner or pocket receiver, it does both. The new AOR AR16B's frequency coverage is 500 kHz to 1300 MHz, cellular blocked. Receiver modes are wideband FM for the music radio band, narrow FM for the majority of two-way communications, and amplitude modulation for the aeronautical modes and the hundreds of shortwave double-sideband broadcast stations. You also tune into WWV in the AM mode, so you can be first to know when the new millennium hits.

The AOR AR16B is shipped with a rubber flexible antenna that terminates to a common SMA connection. This allows you to hook up the tiny scanner to an outside longwire for shortwave reception, and also use the supplied rubber antenna outside when walking around tuning into VHF and UHF calls. Now, this small flexible rubber antenna WILL work on shortwave frequencies, too, but unless Voice of America is just a mile down the street, you won't hear much of anything below 30 MHz. I did manage to pick up a few shortwave stations plus 10 and 15 MHz WWV on the little black whip, but that was only if I pushed the squelch override monitor button, held the unit up in the air, and moved around the backyard for the shortwave sweet spot. But once the unit is hooked to any longwire, shortwave performance pops in crystal clear.

The AOR AR16B comes ready to use with two rechargeable nickel metal hydride (NiMh) batteries and an overnight charger. The two nickel metal hydride batteries offered 1300 mAh capacity; on a fresh charge you could run this equipment for days on end before needing a recharge.

There are two charger contact points on the bottom of the unit for future drop-in soon-to-be-offered charging without having to remove the individual cells. If you wanted to, you could go with a faster nickel metal hydride smart charger and bring both batteries back up to full capacity in less than an hour, but this must be done *outside* of the equipment on the special nickel metal hydride smart charger. Unlike nickel cadmium (NiCd) batteries, nickel metal hydride cells must be closely electronically monitored to ensure the right amount of charge and the precise time to automatically stop charging.



John at AOR using a computer to check functions on the AR16B.

The little AR16B also ships with a tiny wrist strap; and while I don't think many shortwave and scanner listeners will actually put the strap on their wrist, it's always a good idea to put your little pinky around the strap in case someone should actually knock into you, causing you to lose grip on the plastic scanner.

The AR16B has incredible memory: 500 programmable memory channels, 100 channels in each of the five banks. You could upload your frequencies by tuning them in with the top tuning knob, or you can use a third party computer program to type in the frequencies, and then effortlessly load them in via the little scanner's serial port. And once you start memorizing all of those broadcast bands, shortwave, aeronautical, military, and ham frequencies into each of the five banks, you will soon see that it's relatively easy to fill up 500 memory positions.

"The AR16B has incredible memory: 500 programmable memory channels, 100 channels in each of the five banks."

Off To The Banks

The AR16B mini receiver/scanner is preprogrammed with 25 "USA version" tuning banks. The banks offer effortless continuous tuning within factory pre-set,

NOT user-adjustable band limits. The banks are also preprogrammed with the proper USA tuning steps, as well as mode. Here is the factory pre-set tuning banks to get you started with the equipment without even reading the instruction book. But BE CAREFUL here!

AOR's FIRST PRODUCTION WHACKO BAND PLAN

BANK NO.	FROM (MHz)	TO (MHz)	MODE	TUNING STEPS (kHz)
1	.530	1.700	AM	10
2	88.1	108.0	WFM	100
3	118.1	136.0	AM	25
4	145.11	145.49	FM	1
5	146.6	147.45	WFM	12.5
6	162.4	162.575	FM	1
7	225.0	400	AM	25
8	440	450	FM	12.5
9	450	451	FM	12.5
10	455	456	FM	100
11	453	454	FM	100
12	460	461	FM	100
13	462.550	462.750	FM	50
14	464.0	465.0	FM	100
15	512	800	WFM	12.5
16	849.1	869.0	FM	100
17	902	928	FM	12.5
18	944.0	950.0	WFM	50
19	960.0	1215.0	FM	50
20	1240.0	1300	FM	12.5
21	.5	.180	AM	50
22	180	349.999	FM	1
23	350.001	824.0	FM	1
24	849.1	869.0	FM	5
25	894.1	1300	FM	5

STOP THE PRODUCTION RUN! I imagine your mouth and jaw are wide open, as mine was when I discovered what they first shipped out as upper and lower continuous-tuning limits.

- Wrong modes for ham 2 meters
- Wrong steps for new aeronautical frequencies
- Missed all international shortwave bands
- Missed the ham 222–225 MHz band
- Wrong steps throughout UHF banks
- Missed service banks, like grouped paramedic channels
- Missed GMRS and FRS limits
- Missed popular police and fire groups
- Missed VHF marine band
- Missed Class D Citizens Band
- Missed railroads
- Missed special emergency limits
- Missed FEMA limits

It gets worse. You cannot change the bank upper and lower frequencies on the AR16B itself. I tried in vain to put in customized upper and lower limits, and to change the steps, but when I went back to that bank again, everything reverted to the factory program.

John Furuya, WB6Z, at AOR indicated the equipment was so new that he and Taka really hadn't studied the bank list upper and lower limits, the bank mode, nor the bank tuning steps. Once they studied what could only be changed by a computer reprogramming, I hope they immediately told Japan to hold up production until a revised USA upper and lower frequency plan would be adopted.

And here is where *Popular Communications* readers can help — AOR is soliciting 25 bank channels, including upper and lower limits, tuning steps, and mode. AOR further assures me that they have the capabilities, in-house, to upload this new information to any sets already out there in the marketplace. I have already submitted my own recommended list of banks, and they include shortwave bands plus all of those missing "radio services" that I mentioned above. By the time you read this review, they should be up to speed with the new programming, and still want to hear from *Popular Communications* readers, too.

Despite the bank problem, the rest of the scanning and receiving functions work great. Frequencies can easily be stored in any one of the 500 memory channels. You press the SC/SE key to select the bank search mode. Then tune in the desired frequency by the top knob, and hold the function key, and press the SC/SE key to display the memory number on the left side of the display. Rotate the dial knob to select any memory channel, and then hold the function key, press SC/SE key again, and a beep will be heard and the frequency and mode is now stored in memory.

And if you're doing this at night, you can press the lamp key and it will illuminate the LCD and front keys for five seconds. If you press lamp while holding the function key in, the lamp stays on constantly, which will quickly drain the two little "AA" batteries if you forget and leave it on during daylight operation.

There are all sorts of "set" menu items. You can set frequency steps from 1 kHz to 100 kHz, including some strange ones like 6.25 kHz, and 9 kHz — European standards. You can set one of three modes; AM, narrow FM, and wide FM. The wide FM is used for monitoring television audio, as well as the FM music band. Sorry, not in stereo.

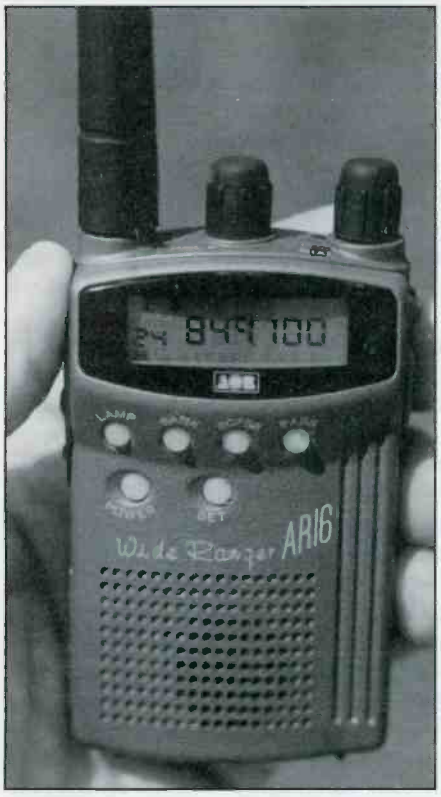
You can also over write any memory channel; and if you want to completely start over again, you can over write all memory channels at once. The manual indicates, "By performing this step, you will delete all memory channel contents and will no longer be able to retrieve them." Keep this in mind if "all clear" comes up on the screen!

There is also a menu item for "battery save" when you are monitoring a frequency and only expecting a radio call now and then. You can select 300 mS, 500 mS, or 1 second. You can also select "automatic power off" too, if you want to listen to the radio and then fall asleep.

The menu also allows you to assign a scan delay mode on any one of the 500 channels, a scan skip mode, as well as search mode for looking for activity. The menu also allows you to lock the keypad, and there is also a menu item for setting the AOR16B for RS-232C control. AOR notes, "An interface cable, level converter, and the control program software are required to use this function." You don't say. The only problem is if they don't offer the cable kits for software soon, and this is why I have encouraged them to halt production and get their bank upper and lower limits squared away before they unleash this terrific product on the marketplace.

Small Package — Good Scanner

And what a great scanner this is with full-sounding AM, crisp narrow-band FM, and full fidelity frequency modulation. We measured sensitivity in the narrow FM mode at .28 uV, and 1.0 uV in the AM mode, and an impressive 2.0 uV in the wide FM mode. When we ran the equipment off of outside antennas, performance was very good on shortwave. Overloading on VHF



AOR's new AR16B squeezes a lot of radio into a small shirt-sized package!

and UHF was not a major problem. After all, you can only squeeze so much filtering into this shirt-pocket-sized radio.

But better keep the radio close to your ear. We measured only 60 mW audio output; and while this is fine for an earphone (and they give you the earphone jack), it's just loud enough to be heard in a crowd. So plan to use your earphone often with the small set in your shirt pocket. We operated the equipment off of the ADI Premier "stealth" earphone, and everything sounded just great at mid-volume.

In the scan mode, it lopes along at 20 channels a second. Hardly warp speed, but still fast enough to zip through some of your favorite memory frequencies to hear all of the action. Again, keep in mind that this unit is extremely small; 2.4 inches wide, 4.2 inches high, and only 1.2 inches deep — and weighs only 5.4 ounces, with much of the weight from the batteries, so they don't necessarily have a lot of room on the inside to put in major circuits to make things scan faster.

The LCD display has good contrast — the best viewing angle is looking down at the unit in the vertical plane, as opposed to looking at the display flat-on with the sun behind you. But the numbers are nice and black on a very light background, which is good to see unlike some of the other manufacturer's units that may use a blue background with dark green numbers.

When you read this article, the AR16B will already have the better 25-bank limits in place. You can tell the difference because bank #1 presently starts out at 530 kHz to 1700 kHz, and AOR will change that to start off with 500 kHz to 1800 kHz. The new banks will also contain, starting with bank #2, several banks of AM shortwave reception, storing international shortwave bands by lower and upper limits.

I like the little AR16B as a shirt-pocket receiver/scanner. On an earphone, it works terrific as a stealth scanner receiver. If you need something small, you should consider the AR16B from AOR, which retails for $299.95. For more information, contact AOR, Inc., 20655 S. Western Avenue, Suite 112, Torrance, California 90501 or phone 310-787-8615. Visit them on the Web at <http://www.aorusa.com>. ■

Washington Beat

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

FCC ACTIONS AFFECTING COMMUNICATIONS

H.R. 514 Update, Spectrum Auctions: 220 MHz, And Possibly More?

Soon the leaves will start to turn, cool breezes will refresh, and Congress will get back to work after a summer recess. We will be watching to see what will become of H.R. 514, the latest anti-scanner legislation on the table. As we go to press, near the eve of the summer congressional hiatus, H.R. 514 is languishing quietly before the Senate Commerce Committee. Facing a number of bills of greater importance than H.R. 514, the Senate may find it has little incentive, just prior to adjourning, to act on what has become an explosive issue. With autumn arriving though, the lobbying industry for cellular may again go on a rampage to have outlawed certain FCC-approved consumer electronic products used by police officers, emergency responders, community watch groups, radio hobbyists, and others.

To date, cellular and PCS carriers have yet to activate digital voice privacy on any substantial scale, if at all. Why? Legal considerations remain for wireless telephone carriers to address. One is the question of liability. Can a subscriber sue a carrier if an encrypted message somehow manages to be intercepted and decoded? Quite possibly. Will the risk of a substantial judgement against a cellular carrier be worth revenue generated by charging extra for the premium service of voice privacy? That is precisely the question carriers must ask themselves. *Pop'Comm's* legislative affairs department is close to this issue, and will be "monitoring" the situation.

More Auctions

What ever became of the 220-MHz frequencies taken from amateur radio in the late 1980s? Those who have been licensed hams since then probably know the saga all too well. The history of the 220–222-MHz band is far too long to be re-told here with any level of detail. Bluntly, this portion of the band was wrestled away from protesting hams and handed over to various parties with commercial interests, in FCC Docket 87-14. Some licenses were issued soon after the reallocation, but these frequencies have gone largely under-utilized since then. Back on June 8 this year, the FCC finally began license auctions for the *second phase* of 220-MHz auctions. Hundreds of licenses around the country were put on the block. Additionally, 10 federal government channels have been assigned and 10 public safety channels, as well as five emergency medical radio channels will be assigned.

What does this have to do with radio monitoring in this digital age? Plenty! Our public safety agencies are increasingly going to digital voice modes. There is less and less for scanner enthusiasts to listen to with present, lagging, state-of-the-art equipment. Many will be surprised to hear that the newest, latest-and-greatest technology isn't so new. And this technology — two related technologies actually — is being marketed specifically for the 220-MHz band. I am speaking of single sideband modulation. That's right, a mode that is about as *analog* as can possibly be. Why sideband? These are narrowband 5 kHz channels. Regardless of the modulation scheme, they will exhibit lower audio fidelity or lower data rates than wider channels. Two sideband schemes in particular are being marketed. One is Amplitude Compandored Single Side Band (ACSSB). This is a generic single sideband mode using speech compression for audio processing and utilizing a pilot tone, filtered from output audio, to keep the signal tuned in without the need for Receiver Incremental Tuning (RIT) or "clarifier" controls. The other major scheme is proprietary, and is known as Linear Modulation (LM), marketed by Intek Global Technologies. It is a suppressed carrier vestigial sideband variation. LM relies on audio baseband digital signal processing, reference vector equalization, and Cartesian loop linearization. Yet, the final RF is modulated in the analog mode, although a half-and-half audio frequency inversion occurs during the modulation process.

While LM will probably not produce intelligible audio on a standard SSB receiver, ACSSB should, pilot tone and all. Hang on to your all-mode 220 MHz ham rigs. You may be in for some interesting monitor loggings. In any event, it would not require rocket science to produce a scanner capable of easily monitoring both these sideband modes. Bear in mind that digital modes are legal in the 220-MHz band as well. However, cost and market factors may draw system operators to one or both of these potentially superior technologies. Visit the LM Website at <www.linearmod.com>.

Is Any Service Safe?

Had about enough of the FCC selling off our precious, limited natural resource, spectrum? Well, "hurry if you order now, we will also include . . . " Perhaps someday soon, frequencies will be bought and sold just as slick as a late night TV commercial for Japanese kitchen knives. The FCC was first given auction authority in 1993 in the Omnibus Budget Reconciliation Act (PL 103-66, Title VI, §6002(a), 107 statutes 312 (1993)). This past summer, in **WT Docket 99-87**, the FCC was seeking comment on what radio services, besides Commercial Mobile Radio Services (CMRS), essentially wireless telephone services, could be found auctionable under expanded auction authority newly granted to the FCC in the Balanced Budget Act of 1997 (PL 105-33, Title III, 111 Statutes 251 (1997)). Now, the Commission is required to resolve cases of mutually exclusive license applications, that is, more than one applicant for a given license, by auction. The FCC wants to see how many different radio services' spectrum can be sold to the highest bidder.

Is any radio service safe? By statute, three specific exemptions from competitive bidding exist. These are for "public safety radio services," terrestrial digital television licenses, and permits for parties giving up their existing NTSC licenses, and non-commercial educational and public broadcast stations (47 USC §309(j)). Yet in the WT 99-87 header, rules parts are cited for various radio services to potentially be affected. These included cellular, broadcast, business two-way, marine, aviation, CB radio, and even the amateur radio service, among others. It is extremely unlikely that ham operators will end up having to pay for their frequencies, given the lack of mutually exclusive licensing, the public service nature of their existence, and the remaining fact that this proposed rule would apply only to *new* licenses. And, since the FCC gave up any hope of control of the citizens band back in the early 1980s when it abandoned CB licensing, it is also unlikely that the Commis-sion would seriously consider auctioning those frequencies either. Since CB and the new Family Radio Service (FRS) have no licensing issuance to contend with in the first place, licensing auctions under the new statute are moot anyway. At deadline, this Notice of Proposed Rulemaking remains nebulous and uncertain. Certainly, opposition will be substantial. By the time you read this, this issue may be very close to having been settled. We will keep you informed. Readers can contact me with comments and questions at <n3hoe@ juno.com>. ■

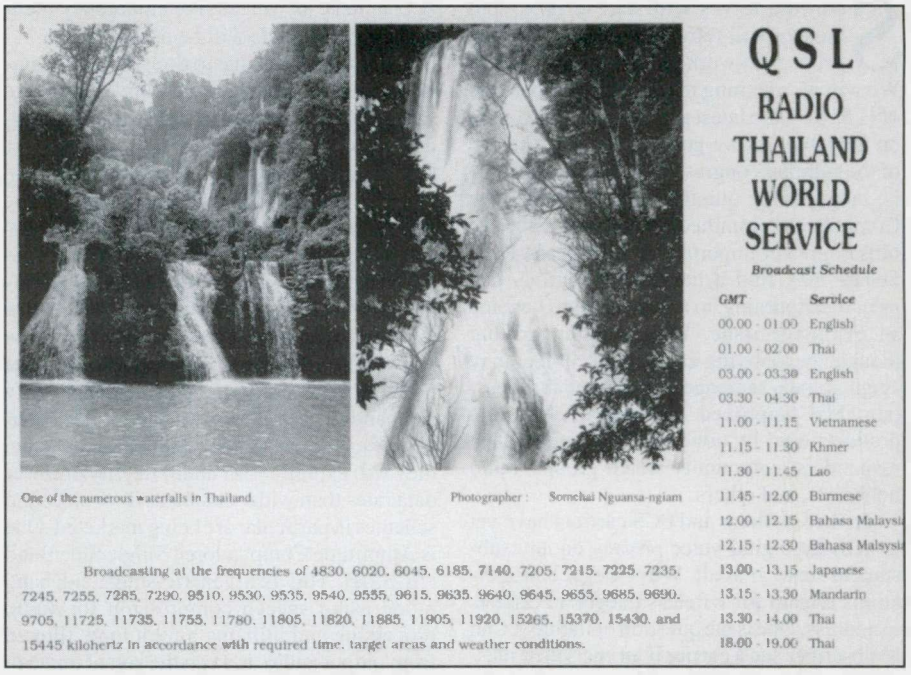
The Listening Post

BY GERRY L. DEXTER

WHAT'S HAPPENING: INTERNATIONAL SHORTWAVE BROADCASTING BANDS

Catch It While You Can: Radio St. Helena Day On October 23!

As Count Basie would have said, "One more time!" Last year's special broadcast from Radio St. Helena was advertised as the last such transmission ever. Now word has come that Cable and Wireless, St. Helena has agreed to let its facility be used for one more "Radio St. Helena Day." So if we take them at their word, then you had better be in front of your radio **on October 23 between 1900 and 0000 on 11092.5 SSB**, especially if you've missed out on previous editions of this special radio event. If you have access to the Web, you can check on any last-minute changes at <http://www.sthelena.se>. If you hear them, be sure to send a report — even if you've done so before. The mailing address is Radio St. Helena, The Castle, Jamestown, Island of St. Helena, South Atlantic Ocean. Let's hope they'll change their minds and, at least continue these broadcasts at least every other year.



Radio Thailand sends this color photo card to acknowledge reception of its International Service which is aired over the Voice of America's Thailand facility.

One of the oldest stations in Central America is back on shortwave. **TIQ, Radio Casino in Puerto Limon, Costa Rica** is in operation again on **5954**, scheduled from 1030 to 0000. Unfortunately, this part of the radio dial is a real audio jungle so it takes a lot of work and no small amount of luck to lure it into your headphones. If you can get enough for a log, reports go to Apartado 287, 7300, Puerto Limon.

Merlin Network One, part of the company which operates the BBC's transmitters, has scaled back its shortwave programming, all the way down to a mere hour a day — and that is from an outside religious broadcaster. It's on Monday through Friday from 1600–1700 on **6175** — a time/frequency combo which puts it virtually out of reach for us. Apparently MNO will, in the future, restrict its efforts to selling block program time to outside groups and broadcasters. It seems that about once a year, some broadcaster pays for not having taken "Shortwave Economics 101."

Radio Bulgaria has a new address. Their post office box has been closed, so now you have to deal with all those oddly spelled words: 4 Draganb Tsankov Blvd., 1040 Sofia, Bulgaria.

Another address change is Radio Kuwait. The one to use now is Ministry of Information, Engineering Affairs, Department of Frequencies, P.O. Box 967, 130010 Safat, Kuwait.

And, to get a QSL out of RTT, Tunisia, you now need to send your report to: Office Nationale de la Telediffusion, Mr. Abdesselem Slim Cite Ennassim I, Borjel-1080, Tunis, Tunisia.

Guinea has always ranked pretty high on the QSL difficulty meter, but there have been one or two QSLs issued by Radio Conakry lately. If you need to hear from these people, now's a good time to have another go at them. The address is Directeur General/ORTG, Ministere de la Communication, Republique de Guinee, Direction Generale de L'Office de Radiodiffusion-Television Guinee (ORTG), B.P. 391, Conakry, Guinea. (You may need a larger than normal envelope to get all of that on!)

Radio 21 started out as a Web-only station from **Pristina, Kosovo**. Now, it is on the air via Radio Netherlands, broadcasting to the refugees. It airs on **9495** from 1830 to 2025 with a brief newscast in English near the end of the transmission. Unfortunately, WHRI also claims this frequency so you may need to dig underneath or wait for one of the two to change frequency. The Netherlands relay arrangement is not likely to be permanent so it's anyone's guess as to how long the arrangement will continue.

Here's a neat one to go after. **Radio Maryja**, a privately-owned Catholic station in Poland airs some of its programs on shortwave via a facility in Russia. It's currently scheduled on Saturdays from 0500 to 0715 and Sundays from 0600 to 0800 on **12010** and from 1930 to 2000 on **7400**, all in Polish. If you catch this reports go to ul Zwirki i Wigury 80, 87-1000 Torun, Poland.

This month's book award goes to Marty Foss of Talkeetna, Alaska. His reports

Kol Israel has been sending this blue and white QSL for a number of years.

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

from way up north are always interesting. Marty receives a copy of the *Shortwave Listening Guidebook* by Harry Helms, courtesy of Universal Radio, 6830 Americana Parkway, Reynoldsburg, Ohio 43068. For a coy of their monster catalog, call 614-866-4267 or E-mail them at <dx@universal-radio.com>.

Remember your shortwave reception logs are always welcome. Just be sure to list items by country, double-space (at a minimum) between each one and add your last name and state abbreviation after each item. Other things we can put to good use are spare QSL cards you don't need returned, station photos, and other materials, including program schedules. And how about a photograph of you at your listening post? We'll be glad to do our bit to help make you a DX star! As always, thanks so much for your continued interest and cooperation!

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

ALASKA — KNLS, **11780** at 1734 with religious program in RR. (Miller, WA)

ALBANIA — Radio Tirana, **7160** at 0251. (Moser, IL) **7270** from 0445 highly emotional announcer in Albanian. (Linonis, PA)

ALGERIA — Radio Algiers, **16160** at 1943 in SS with a Kenny Rogers song. (Brossell, WI)

ANGOLA — Radio Nacional, **11954** monitored at 2119 to 2200 with music and talk in PP. (Ziegner, MA)

ANTARCTICA — **15476**, Radio Nacional Arcangel at 1900 to 1930 with sports in SS. E-mail reply gives current schedule as Monday–Friday from 1800–2030. I believe Silvi received one of the test broadcasts in March or May (*which was an extended schedule — Ed*). (Kolesov, Ukraine)

ANTIGUA — Deutsche Welle, **6040** at 0115. Also tentative, this site on **15105** at 0300. (Newbury, NE) **9640** at 0311. (Jeffery, NY) BBC via Antigua, **5975** at 2330, 0200. (Jeffery, NY)

ASCENSION ISLAND — Radio Japan relay, **9665** at 0025. (Newbury, NE)

AUSTRALIA — Radio Australia, **9515** at 1245. (Miller, WA) **9580** at 1100. (Linonis, PA) **11650** at 1415 to past 1440. (Brossell, WI) 1624 with various ethnic music styles. (Newbury, NE) **11880** at 1818 with item about prostitution problem at Waikiki Beach in Hawaii. (Foss, AK) **12080//6025** at 0900 in EE and Tok Pisin. (Ziegner, MA) **15515** at 0450, **17580** at 0435 and **21740** at 0122. (Moser, IL)

AUSTRIA — Radio Austria Int'l, **6155** with Report From Austria in progress at 0551. (Foss, AK) **9870** at 0150 to North America. Mention of a quiz contest. Off at 0156. (Linonis, PA) **13730** at 2330 in SS. (Barton, AZ) 0422 in GG. (Moser, IL)

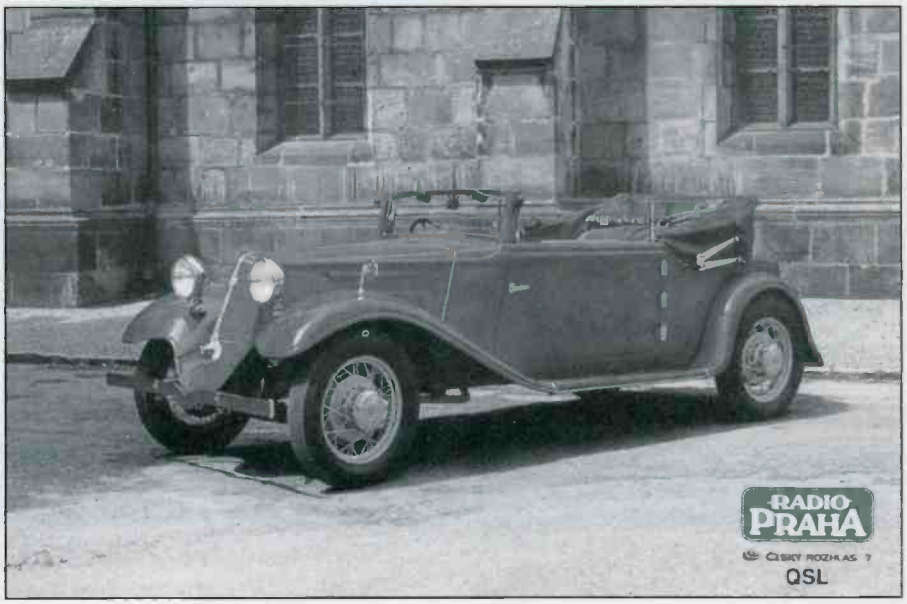
BELGIUM — Radio Vlaanderen Int'l, via Bonaire, **15565** at 0358 with news, "Belgium Today." (Paszkiewicz, WI)

BOTSWANA — VOA relay, **13710** at 1926 with African Perspectives. (Foss, AK)

BRAZIL — Radio Inconfidencia , **15190** at 1609 in PP. (Jeffery, NY) Radio Nacional do Amazonia, **11780**, at 2335 in PP. (Miller, WA)

BULGARIA — Radio Sofia, **11700** at 0224. (Miller, WA) **11720** at 2148 with DX program. (Brossell, WI)

Reporter Edouard S. Provencher of Biddeford, Maine, is celebrating 30 years of shortwave listening with this card showing him at his listening post.



This snazzy car is one of a series on historic Czech automobiles featured in Radio Prague's current QSL series. This one is the Tatra 12, circa 1926.

CHINA — Radio Japan Sackville relay, **5960** monitored at 0322 in JJ with Japanese music. (Jeffery, NY) Radio Canada Int'l, **13670** at 2046 with Maple Leaf Mailbag and **17820** with Earth Watch at 2049. (Jeffery, NY) **15470** at 2225 with news. (Newbury, NE) BBC Sackville relay, **6175** at 2321 and **9515** at 1517. (Jeffery, NY)

CHILE — Voz Cristiana, **21550** at 1425 and 2222 with religious pops in SS. (Newbury, NE) 1801. (Jeffery, NY) 2200–2230. (Linonis, PA)

CHINA — Central People's Broadcasting Station, **6015** at 1935 with traditional CC music. (Foss, AK) China Radio Int'l, **9690** via Spain at 0300 with EE to North America. (Linonis, PA) **9705** at 1359. (Miller, WA)

COLOMBIA — Caracol Colombia, **5078** with news in SS at 0645. (Miller, WA)

COSTA RICA — Adventist World Radio, **5030.11** at 011 to past 0220 with religious music, radio drama, ID as "Radio Mundial, la voz de Esperanza." Fair; parallel to **9725** which was very good. ID and address given at 0212. Not heard very often lately. (Alexander, PA) RFPI, **15050** at 2224. (Newbury, NE)

CYPRUS — Adventist World Radio via Cyprus, **9485** at 2130 in AA with music, talk, address in Nicosia (Ziegner, MA) BBC via Cyprus, **11845** at 0358. (Newbury, NE) **11955** at 0323. (Jeffery, NY)

CZECH REPUBLIC — Radio Prague, **11600** at 2140 with jazz. (Brossell, WI) 0340. (Newbury, NE) **15530** at 0353 with economic report. (Paszkiewicz, WI) Radio Liberty (Azzatig Radio) **9660** at 2300 in Kazak with news, music and comment. (Ziegner, MA)

DENMARK — Radio Denmark via Norway, **17500** at 1925 in DD. (Miller, WA)

DOMINICAN REPUBLIC — Onda Musical, **4779.9** at 0245–0300 close with radio drama in SS, ballads, closing announcements, ID 0258 and off with national anthem. (Alexander, PA)

ECUADOR — Radio Oriental, Tena, on **4785** in SS at 1049. (Miller, WA) HCJB, **15140** at 2228 with Christian rock and rap. (Newbury, NE) **15140** at 0202, **15295** in SS at 1619, **17660** in EE at 1909 and 2029. (Jeffery, NY)

EGYPT — Radio Cairo, **15210** at 1940 in AA. (Brossell, WI)

ENGLAND — HCJB via Merlin Communications, **11760** (**ex 11780**) at new 1600–1730 in Russian and other CIS languages. (Kolesov, Ukraine) Merlin Network One on **21550** at 1630 with various styles of music. (Linonis, PA) Voice of Deliverance via (Merlin Network One) **9855** at 0100 Sundays only. Address is Voice of Deliverance, P.O. Box 123, Goole DN14 5YQ, England. (Provencher, ME) BBC, **9740** at 1227. (Miller, WA)

EQUATORIAL GUINEA — Radio Africa, **15185** with religious programming at 2200. (Brossell, WI) 2258 giving their address. (Paszkiewicz, WI)

FINLAND — YLE/Radio Finland, **15400** at 1230 with EE to North America. (Silvi, OH)

FRANCE — Radio France Int'l, **11965** at 1816 in FF. (Foss, AK) **15155** with news at 1230. (Brossell, WI)

FRENCH GUIANA — Radio Japan/NHK on **11890** at 2200 in JJ. (Kolesov, Ukraine) China Radio Int'l relay, **9730** at 0435. (Barton, AZ) (*See also China — Ed*)

GABON — Africa Number One, **9580** in FF from 0500 with African pops, news, perhaps sports. (Linonis, PA) **17630** at 1523 with hi-life; all FF. (Brossell, WI)

GERMANY — Deutsche Welle, **13720** monitored at 0459 with sign-on in PP to Africa. **15275** at 0130 in GG. (Moser, IL) **13780** with news at 0306. (Barton, AZ) **15105** at 0332. (Miller, WA) Unlisted **15540** at 1700 in GG. (Newbury, NE)

GREECE — Voice of Greece, **7448** at 0156 with Greek music. (Foss, AK) **7450** at 2340 with EE news. (Ziegner, MA) 0200 with EE

ID, news, into Greek. (Linonis, PA) **9690** at 1300 (*new frequency? — Ed*) and **15640** at 2308, both in Greek. (Miller, WA)

GUAM — Trans World Radio/KTWR, **15330** at 1500 with religious program. (Brossell, WI)

GUYANA — Guyana Broadcasting Corp., **5950** at 0845 with variety of Hindi-style vocals, local pops, EE birthdays, anniversary greetings. There's a 0800–1000 window when WYFR is off. (Alexander, PA)

HAWAII — KWHR, **17510** at 0250 with DX program. (Jeffery, NY)

HONDURAS — La Voz Evangelica, **4820** at 1059 with religious programming in SS. (Miller, WA)

HUNGARY — Radio Budapest (presumed) on **9840** at 0253 with a feature on musical instruments. Off 0257. (Jffery, NY)

INDIA — All India Radio, **11620** at 2200 with EE news, Indian pops. (Linonis, PA)

IRAN — Voice of the Islamic Republic of Iran, **15084** in Farsi at 1834. (Brossell, WI) 2331 with Koran recitations. (Jeffery, NY)

ISRAEL — Kol Israel, **15615** //**15640** at 0437 in Yiddish or Hebrew. **15640** in EE and EE and Yiddish. (Moser, IL) **15650** at 1821 in Hebrew. (Miller, WA) **17535** at 1428. (Barton, AZ) **17545** at 1525 in HH. (Brossell, WI) Reshet Bet service, **11585** at 0239 in Hebrew. (Jeffery, NY)

ITALY — RAI, **6015** at 0306 in II to North America. (Moser, IL) **9675** in II at 2231. (Ziegner, MA) **11800** at 2320 in II with opera. (Newbury, NE) **15240** at 2200 with news, postal, and E-mail addresses, request for reports. (Brossell, WI 2338 in II. (Jeffery, NY)

JAPAN — Radio Japan/NHK, **11715** monitored at 0530. (Linonis, PA) **11730** at 1510, 1530. (Brossell, WI)

JORDAN — Radio Jordan, **11935** in AA at 0440. Mentions of Amman. (Linonis, PA)

KUWAIT — Radio Kuwait, **11675** at 0230 and 0347, all AA with Koran recitations. (Newbury, NE) **11990** at 1830 with news. (Linonis, PA) 1952 in EE with rock. (Jeffery, NY) **15495** at 2210, //**15505**. (Brossell, WI) 0418, also //**15505**. (Moser, IL) **15505** at 1800 and 2244, both in AA. (Newbury, NE)

LIBERIA — Radio Liberia, **5100** at 2316 to 0002 sign-off. Local news, some Afro-pops, talk in local language at 2325, U.S. pops. Off with national anthem. (Alexander, PA)

LIBYA — Voice of Africa program of Radio Jamahiriya, **15395** at 0220 with anti-U.S. talk. Into FF. (Paszkiewicz, WI) Radio Jamahiriya, **15415** at 2104 with AA speech by Arafat. (Miller, WA)

LITHUANIA — Radio Vilnius heard daily on **9855** in EE at 0030. (Provencher, ME)

MADAGASCAR — Radio Netherlands relay, **9890** at 1533. (Barton, AZ)

MALAYSIA — Radio Malaysia, **7295** at 1900 with ID, news in EE, romantic pops. (Foss, AK)

MOROCCO — RTV Maroccaine, **15345** in AA at 1739. (Ziegner, MA)

MONGOLIA — Voice of Mongolia says Mongolia has canceled daylight savings time because it is bad for the body "rhythms." I've not been able to hear them since this announcement. (Ziegner, MA)

NAMIBIA (tentative) — Namibia Broadcasting Corp, **7165.12** at 0525; tune in to talk in vernacular, African choral music. (Alexander, PA)

NETHERLANDS ANTILLES — Radio Netherlands, **9845** at 0013. (Newbury, NE)

NEW ZEALAND — Radio New Zealand Int'l, **17676** monitored at 0132 with Cadenza and 0209 with In Touch With New Zealand. (Jeffery, NY)

NORTH KOREA — Radio Pyongyang now uses **7505** and **11710** for RR at 0700–0800. (Kolesov, Ukraine)

PAPUA NEW GUINEA — NBC, Port Moresby, **4890** at 0754 with pops, news of Papua New Guinea at 0800. (Foss, AK) 1214 with pop. (Barton, AZ) Radio Madang, **3260** in Pidgin at 1040. (Miller, WA)

PERU — Radio Horizonte, **4534.15** monitored at 0920 with SS talk, jingles, promos, emotional talk by woman. (Alexander, PA) Radio Madre de Dios, **4950.11** at 0915 with SS talk, Peruvian folk music, announcements, ID. (Alexander, PA)

PHILIPPINES — Radio Veritas Asia, **9660** at 1356 with sign-off. (Miller, WA) VOA relay, **9760** at 1121. (Jeffery, NY) 1237. (Newbury, NE) **17765** at 0155 in CC. (Paszkiewicz, WI)

RUSSIA — Magadan Radio, **5940** at 0535 with man-woman RR talks. (Foss, AK) Voice of Russia, **7180** at 0243 thanking people for letters. (Moser, IL) Here and parallel **7125** at 0520 with The Jazz Show. (Linonis, PA **15595** at 0240. (Newbury, NE) **17570**, //**15460** in

The former Radio Sani in Puerto Lempira, Honduras, operated from this site a few years ago.

probable Bengali at 1530. (Ziegner, MA) **17690** at 0304, **//17630**. (Barton, AZ)

ROMANIA — Radio Romania Int'l, **9570** at 0200 sign-on to 0255 close and **listing parallels 9510, 11725, 11740, 11810, 17735. 11740, and 11810** were poor with co-channel QRM, others fair to good. **9570** clear of China Radio Int'l on this occasion. (Alexander, PA) **11725** at 0225. (Brossell, WI) **11810** at 2340 in EE and **15365** at 2300 sign-on in possible PP. (Paszkiewicz, WI) **11725** very good at 0200. **9505** fair. **11810**, not usually audible due to Radio Taipei via WYFR, heard at 2300. **15105** inaudible due to DW via Antigua. (Silvi, OH) **15180** at 2155 asking for comments and reports to P.O. Box 111, Bucharest. (Brossell, WI)

RWANDA — Deutsche Welle relay, **15275** at 2231 in GG. (Newbury, NE)

SAUDI ARABIA — Broadcasting Service of the Kingdom of Saudi Arabia, **15270** in AA at 0330 with Holy Koran service. (Linonis, PA) Presumed on **17775** at 0205. (Jeffery, NY)

SINGAPORE — BBC relay, **6195** at 1114 and **9740** at 1105 to Asia/Pacific. (Jeffery, NY) **9740** at 1412. (Barton, AZ) Radio Corporation of Singapore, **7170** at 1241 with Tamil music. (Miller, WA)

SLOVAKIA — Adventist World Radio/ Voice of Hope, **11600** at 0130 with religious programming, transmitter site mentioned, address. Into announced Punjab at 0200. (Alexander, PA)

SOLOMON ISLANDS — Solomon Islands Broadcasting Commission, **5020** at 0945 with public service announcements, some EE. (Paszkiewicz, WI) 1138 with "Titanic" theme. (Miller, WA)

SOUTH AFRICA — Channel Africa, **11720** at 0504 with report on UN sanctions against the UNITA Angolan resistance. (Moser, IL) Adventist World Radio via Meyerton, **5960** at 0500 with religious programming, Afro-style music. (Alexander, PA)

SOUTH KOREA — Radio Korea Int'l, **11725** at 0245 with news of their 1999 competition. (Newbury, NE)

SPAIN — China Radio Int'l, via Spain, 9690 at 0300 with IS, ID, news. (Jeffery, NY)

SWITZERLAND — Swiss Radio Int'l, 5850 at 0529 in GG. (Foss, AK) 9730 at 0400. (Linonis, PA)

SYRIA — Radio Damascus, 12085 at 2150 to 2205 with music, ID. (Ziegner, MA)

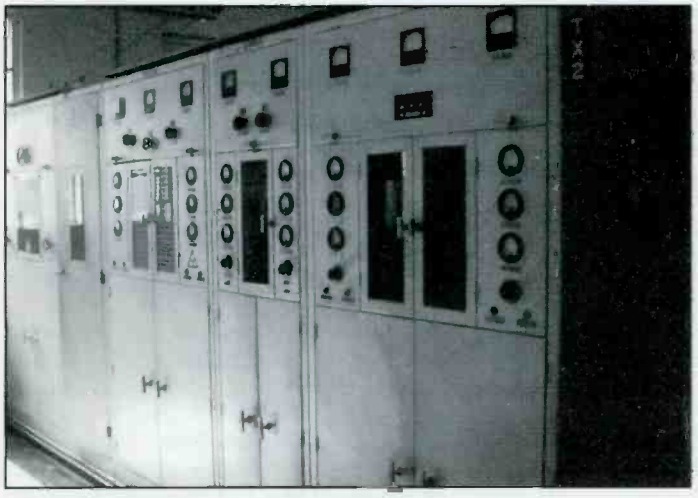
TAIWAN — Radio Taipei Int'l, 9680 via WYFR, 0325. (Newbury, NE) 15715 at 2028 in SS and 17805 in SS at 2349. (Jeffery, NY)

TURKEY — Voice of Turkey, **11665** at 0305 with news, ID. (Paszkiewicz, WI) **11915** at 1900 in TT with traditional music. Also 13695 at 1800 in EE. (Ziegner, MA) 13695 at 1900 with history feature. (Newbury, NE) 15350 at 1450 in TT. (Brossell, WI)

UNITED ARAB EMIRATES — UAE Radio, Dubai, 11950 in AA at 1902. (Brossell, WI) **13675** at 0300 in AA. (Linonis, PA) **1855** in AA, time pips at 1900. (Newbury, NE) 1900 with news in AA. (Ziegner, MA)

YEMEN — Republic of Yemen Radio, 9780 in AA at 2210 with music, talk. (Ziegner, MA)

That's all, folks! A mighty round of applause, please, for the good folks who checked in this time: Lee Silvi, Mentor, Ohio; Sheryl Paszkiewicz, Manitowoc, Wisconsin; Brian Alexander, Mechanicsburg, Pennsylvania; Howard Moser, Lincolnshire, Illinois; Dave Jeffery, Niagara Falls, New York; Tricia Ziegner, Westford, Massachusetts; Robert Brossell, Pewaukee, Wisconsin; Ed Newbury, Kimball, Nebraska; Edouard S. Provencher, Biddeford, Maine; Sergey Kolesov, Kiev, Ukraine; Michael Miller, Issaquah, Washington; Rick Barton, Phoenix, Arizona; Jack Linonis, West Middlesex, Pennsylvania, and Marty Foss, Talkeetna, Alaska. Thanks to each one of you! ■



Here's a look at one of Radio Australia's high-power transmitters.

Behold! A shack photo! This guy, whose initials are GLD, has been knocking around the shortwave bands since the 1950s, and he looks it!

BY KIRK KLEINSCHMIDT, NTØZ

The Ham Column

GETTING STARTED AS A RADIO AMATEUR

Antenna Tuners 101

As we approach the turn of the century, antenna tuners are as popular as ever — and as confusing. New types and new applications make choosing and using an antenna tuner — or choosing not to use one — potentially confusing, especially for newcomers.

There's a lot of hype and folklore surrounding antenna tuners, especially when it comes to what they can and can't do. Figuring out whether your station really needs one is half the battle. The other half is finding an antenna tuner with the right features at a price you can afford. Now, let's clear the air about antenna tuners, and get to the bottom line!

Basically, your transmitter wants to see an antenna that's as close to an impedance of 50 ohms as possible. If you're like most hams, a length of 50-ohm coax connects your antenna to your transmitter. When an antenna is properly matched (resonant or nearly so) to your transmitter, most of the power sent through the transmission line reaches the antenna and is radiated into space (good!). If the antenna isn't properly matched, some of the energy in the transmission line bounces back and forth between the antenna and the transmitter instead of being radiated (not so good!). Serious mismatches can *greatly* reduce your transmitted signal and might even damage or destroy your transmitter! The greater the mismatch, the less power your rig puts out.

All About SWR

The term for measuring this match (or mismatch) is called SWR (standing wave ratio), and it's measured with an SWR meter (of course!). Simply, a ratio of 1:1 (or close to it) is best; 2:1 is usable; and 3:1 or greater probably signifies a serious mismatch (for antennas fed with 50-ohm coax, anyway).

Cutting a wire antenna (or tuning a beam antenna) so it presents a 50-ohm load to your transmitter is pretty easy — if you're interested in operating on a narrow range of frequencies on one band! If you want wider coverage from the same antenna you can insert an *antenna tuner* between your rig and antenna.

For all-around antenna tuner chores with coax or ladder-line feeds, the MFJ Model 969 uses a large roller inductor to precisely match a wide range of antenna impedances. It also has a built-in balun for matching balanced lines (450-ohm ladder line or 300-ohm TV twinlead).

Designed to be placed at the antenna feed point, SGC's Model 231 "autocoupler" can automatically match almost any wire antenna from 8 to 300 feet in the blink of an eye. While handy at home, the '231 really shines while mobile or in the field. I haven't found an antenna that couldn't be tamed with one or the other!

By adjusting the tuner's controls, you can "trick" your radio into putting out full power (and be "happy" in the process). When properly adjusted, there's a nearly perfect match between your rig and the tuner (1:1 SWR). There's still a mismatch between the tuner and the antenna, but if you're using a good quality transmission line, most of your precious radio energy makes it to the antenna and is radiated happily into space.

In this simplified scenario, a shack-mounted antenna tuner works best at HF — the lower in frequency the better, as coax losses increase with frequency. Also, the antenna being "tuned" should be reasonably resonant.

Using your antenna tuner to tweak a dipole that's resonant on 7.0 MHz to work at 7.275 MHz is a good idea. So is using a tuner to load a 40-meter dipole on 15 meters (or an 80-meter dipole on 10 meters), because the bands are harmonically related in a way that results in reasonable feed line SWRs. Using your shack-mounted tuner to load a 40-meter dipole on 80 meters (or an 80-meter dipole on 160 meters, etc) is a terrible idea. Although the SWR between your rig and your tuner might be 1:1, the SWR on the coax that runs between your tuner and your antenna will be extremely high, which results in horrible losses.

"The greater the mismatch, the less power your rig puts out."

To get around the punishing SWR losses that result from high feed line SWRs, you'll have to feed your antenna with 450-ohm ladder line (which is nearly lossless compared to coax) or mount your antenna tuner at the feed point of your antenna. Completely automatic tuners designed to be mounted at the antenna feed point are available from SGC, <www.sgcworld.com>, and other manufacturers. They're not exactly inexpensive, but they're an excellent way to feed a single antenna on multiple bands.

Use A Tuner If . . .

You want to feed your antenna with 450-ohm ladder line. Ladder line is almost lossless at HF (much better than coax). The problem is, ladder line is *balanced*, while your rig (and your coax) is *unbalanced*. To bridge the gap, you need an antenna tuner with a built-in *BALUN*, a special *balanced to unbalanced* transformer.

You want to use your antenna on frequencies for which it isn't designed. If you try, for example, to use your 40-meter dipole on 10 meters, the SWR will be very high, and poor performance will result. With an antenna tuner in line, you'll probably be able to create a 1:1 SWR between your transmitter and your antenna tuner, permitting operation. (Some mismatches are too great for any tuner to handle.)

Your antenna has a narrow SWR bandwidth on some bands. Some multiband antennas don't offer low SWR from one end of a band to another. With your antenna tuner, you can operate anywhere in the band and still put out full power from a happy radio.

Don't Use A Tuner If . . .

Your SWR is 1.5:1 or less on the frequencies at which you operate. Most modern rigs will tolerate an SWR of 1.5:1 or less with no difficulty and still put out full power.

You have a high SWR at VHF or UHF. Because feed line losses increase rapidly at these frequencies, antenna tuners are generally not useful. The only real remedy is to use a high-quality feed line and a properly matched antenna. No shortcuts here!

You're interfering with TVs, telephones, or other electronic equipment in the neighborhood. Despite what you may have heard, antenna tuners don't usually do a good job cleaning up these problems. Some designs reduce *harmonic radiation*, but most of the previously mentioned interference is caused by RF overload at the fundamental frequency. Tuners do nothing to reduce this (and may actually make it worse!).

"A tuner rated at 300 W will probably serve your 100-watt-output-or-less station just fine."

Power Handling And Features

Useful antenna tuner features include a built-in SWR meter (otherwise you'll have to use an external meter or the one built into your rig); high-quality inductors, roller or tapped (your antenna tuner is not the place to skimp on component quality!); a built-in balun (for using open-wire line); and a built-in antenna switch (your antenna farm will likely grow).

Some tuners are totally automatic — just push a button or key your transmitter and you're at 1:1 SWR. The problem? They're usually expensive!

A tuner rated at 300 W will probably serve your 100-watt-output-or-less station just fine. At certain frequencies, and when trying to match certain transmission line impedances, RF voltage soars and can even cause sparks or arcing! This can destroy your tuner and/or your rig, so when it comes to buying antenna tuners, the greater the power rating the better! If you're planning to feed a single antenna with ladder and tune it on multiple bands, use the beefiest tuner and balun you can get your hands on.

See you again next month. Send your QSL cards, questions, and letters to *Popular Communications*, "The Ham Column," 25 Newbridge Rd., Hicksville, NY 11801. ■

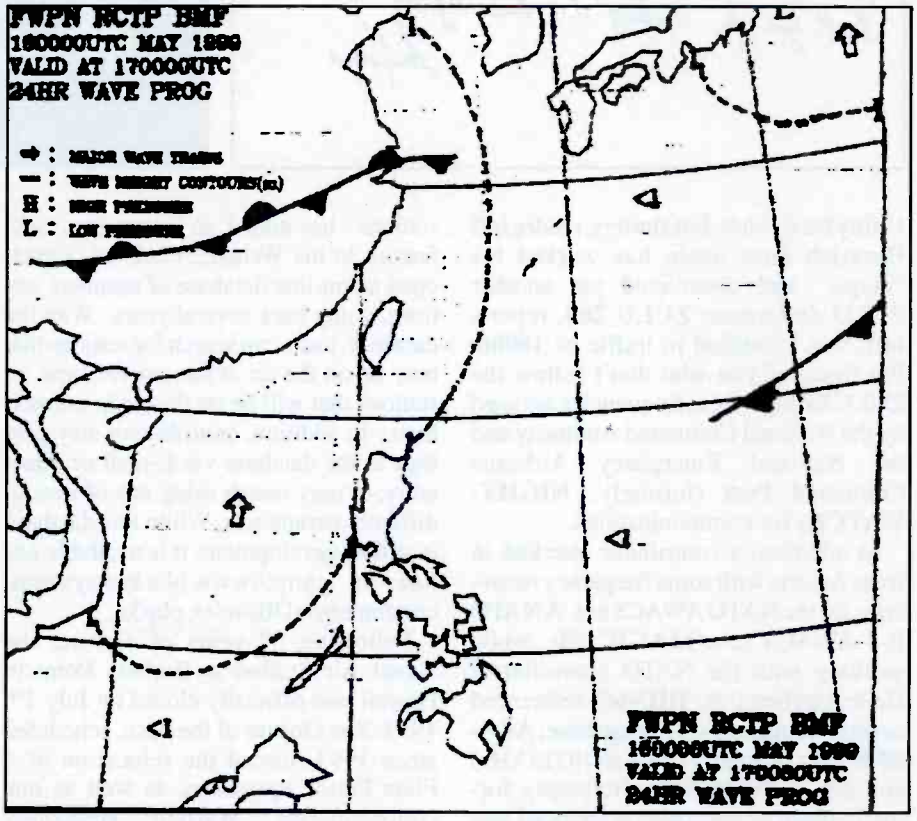
BY RICHARD "RD" BAKER
<CommConf@concentric.net>
and MIKE FINK <mikef@apk.net>

Communications Confidential

YOUR GUIDE TO SHORTWAVE "UTILITY" STATIONS

Another Key Goes Silent

Back in the July edition of "Communications Confidential," guest-editor D. Christopher stated that Globe Wireless was expected to remain in the CW business for the foreseeable future. He also posed the question "for how long?" Well, that question has now been answered. By the time this edition of the magazine hits the streets, the Globe Wireless network will have ceased all CW operations from its four U.S. stations; **KFS, KPH, WCC, and WNU**, effective 2359 UTC on 12 July 1999. With the advent of GMDSS, along with the further development of Globe Wireless's GlobeE-mail system, the days of CW among the powerhouse network were certainly numbered. However, Globe Wireless will remain a major player in the HF-network arena, with 16 stations currently under the Globe Wireless banner. Thanks to Ray Prestridge for additional information on this unfortunate closing.



Excellent chart received by Rayomnd Prestridge, Texas, from BMF, Taipei Meteo, on 13900.0 kHz.

Digital News

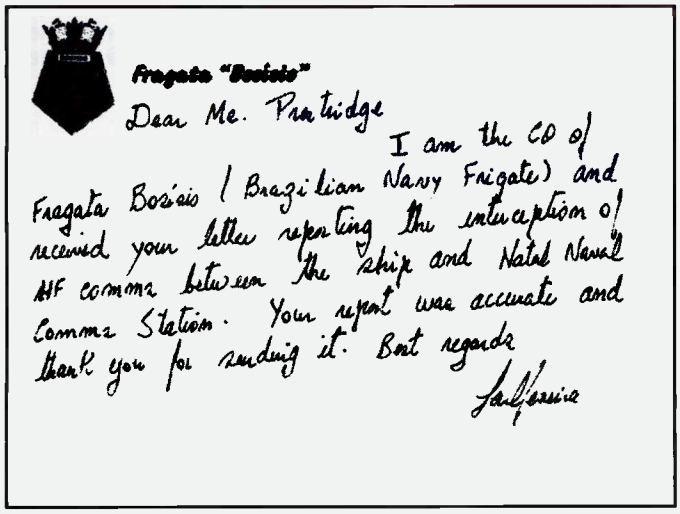
During July 1999, the U.S. Coast Guard initiated transmissions on 518 kHz from its new NAVTEX facility at Savannah, Georgia. Announced on May 21st, 1999, this facility is being installed to cover an existing coverage gap between CAMSLANT at Portsmouth, Virginia, and the NAVTEX station in Miami, Florida. The station was expected to start broadcasts at 0040 UTC, with the identification character "E." Earlier in the year, the U.S. Coast Guard announced that it would not be replacing the now-closed Adak, Alaska, NAVTEX station. The primary reason for not replacing the station was multi-fold, with the costs of replacement and a lack of complaints from the users of the network being the foremost reasons given. The products previously broadcast from Adak are now broadcast from the NAVTEX station at Kodiak, Alaska.

Here's some additional information of interest to the maritime digital monitors. On June 23rd, 1999, the International Telecommunications Union (ITU) announced that its capacity of SELCAL numbers for ship stations has been depleted. As most of you know, SELCAL numbers are used on SITOR connections between coast stations and vessels at sea. The total SELCAL availability under the current system is limited to 1000 blocks of 100 five-digit numbers; 100,000 numbers in total. While not all of these SELCALs have actually been assigned to vessels, all have been allocated to the appropriate maritime/communication administrations. This is not a major problem as much of the equipment out on the market supports the use of the vessel's MMSI as an identifier in place of the SELCAL. However, for those with older equipment, or those purchasing used equipment, this could pose a problem.

For users of the Macintosh computer, Chris Smolinski has released a new version of his digital decoder, Multimode. Besides offering the "basic" modes, such as SITOR and RTTY, Chris has included other unusual offerings such as PSK31, DTMF/EIA/CCIR-tone decoding, and tone decoding for the XPH Russian numbers station. An evaluation version of Multimode is available at <http://www.blackcatsystems.com/software/multimode.php3>, while the registered version is available from Chris for only $45. Chris also reports that a Windows version of this popular software is in development.

Other News

A couple of recent HF frequency updates courtesy of the Worldwide


Fragata "Bosisio"

Dear Mr. Prestridge

I am the CO of Fragata Bosisio (Brazilian Navy Frigate) and received your letter reporting the interception of HF comms between the ship and Natal Naval Comms Station. Your report was accurate and thank you for sending it. Best regards

Paulo Cesar

← *QSL reply received by Raymond Prestridge, TX, from Brazilian Navy frigate Bosijio, callsign PWBO. First Brazilian warship I've ever seen QSL'ed and I'm jealous Ray!*

USN P-3C takes-off on a mission at Misawa Air Base, Japan. (Note radome from 3rd Space Surveillance Squadron in background). ↓

Utility News club. For starters, reader Jeff Haverlah once again has worked his "magic" and discovered yet another ZULU designator. **ZULU 260**, reports Jeff, was identified in traffic as **18006**. For those of you who don't follow the ZULU listings, these frequencies are used by the National Command Authority and the National Emergency Airborne Command Post (formerly: **NIGHTWATCH**) for communications.

In addition, a contributor checked in from Austria with some frequency recoveries for the NATO AWACS net. A NATO E-3 AWACS (c/s: **MAGIC 58**) while working with the NATO controller at Geilenkirchen (c/s: **DHN66**) referenced several frequencies. Among these; **A4 — 8980 kHz** (formerly listed as 10315 kHz) and **A8 — 10315 kHz** (frequency formerly listed as A4). Also referenced was a change to **A3**, but no corresponding frequency was found.

The Royal Australian Navy has been in the worldwide military news recently due to the commissioning of a first-of-its-kind amphibious transport ship. Designated a "Fast Sealift Catamaran," the *HMAS Jervis Bay* is a one-of-a-kind catamaran on lease by the RAN from the civilian builders. Capable of carrying 500 troops over "considerable distances" with a top speed "in excess of 40 knots," the Jervis Bay provides the RAN with a unique capability in the realm of amphibious warfare. UTE monitors around the world will have their best chance at hearing the Jervis Bay on the RAN's primary frequency of **8122 kHz**. Listeners in the U.S. will have to stay up late, however, as this frequency carries in usually during the early-morning hours.

Chris Smolinski, known to many of us as an expert in the area of the "numbers stations" has added an interesting new feature to his Website. Chris has developed an on-line database of numbers stations, going back several years. With the database, users can search for stations that may be on the air at the current time, or stations that will be on the air in the next hour. In addition, contributors may post logs to the database via E-mail or direct entry, or may search using any of several different parameters. While this database is still in development, it is available on-line at <http://www.blackcatsystems.com/numbersDB/index.php3>.

Following 57 years of service, the Naval Air Station at Barbers Point in Hawaii was officially closed on July 1st, 1999. The closure of the base, scheduled since 1993, forced the relocation of 4 Fleet Patrol squadrons, as well as one Antisubmarine Warfare Helicopter squadron. The units affected by the closure include VP-4 (Skinny Dragons), VP-9 (Golden Eagles), VP-47 (Golden Swordsmen), VPU-2 (Wizards), and HSL-37 (Easy Riders). VPU-2 flies EP-3E, UP-3E, and P-3C aircraft while the remaining VP squadrons fly the P-3C exclusively. HSL-37 operates the SH-60 ASW helicopter. All of the units will remain active, but will now operate out of Marine Corps Base Hawaii (formerly MCB Kaneohe Bay).

Reader Mail

Alan Gale checks in with some comments regarding his recent loggings on **5680 kHz**. To quote from Alan's E-mail; "Several U.S. stations were heard calling for radio checks, and judging by the signal strengths, I suspect they were probably all in the Mildenhall area. It as great to hear RCC Malta again, this time in what turned out to be a false alarm. An unusual one was LBJ in Norway, who came on to 'roger' all contacts between Bodo Radio and Saver 20 in a SAR op in the Norwegian Sea. With plenty of German Navy activity too, it was a big improvement on some of the recent months." Alan reports that besides 5680 kHz, **8980 kHz**, and **9001 kHz** were also noted active. He goes on to add that some recordings from his loggings have been posted on his Website at: <http://www.zen.co.uk/home/page/alan.gale/sardb.htm>.

The MidAtlantic DXer checks in with some information related to Maryland-area MARS monitoring. While a thorough listing of frequencies (HF-VHF) is available on his Website, MidAtlantic DXer reports that the following frequencies have been noted with activity in recent weeks: **3350.5 kHz**, **4015 kHz**, **4020.7 kHz**, **4024.5 kHz**, **4026 kHz**, and **6880 kHz** (PACTOR). These are a combination of Army and Navy MARS frequencies and may be found in USB (Navy) or LSB (usually Army). In addition, he reports that the MidEast Region Civil Air Patrol units meet on **4585 kHz** almost daily. For more detailed information about these, and many other UTE targets, check out his Website at: <http://home.att.net/~MidAtlanticDXer/index.htm>.

Parting Shots

Lastly, while not a "utility" target, many UTE listeners follow the annual broadcast from Radio St. Helena. This year's Radio St. Helena Day is scheduled for October 23, 1999, from 1900 UTC until 2359 UTC. The announcement on the Radio St. Helena Website, <http://www.sthelena.se/radiosth.htm>, also states that this may be the last Radio St.

Helena Day. One reason for this is undoubtedly money. Another perhaps more telling reason is a dramatic decline in listeners' reports.

The 1998 Radio St. Helena Day transmission brought in only 50% of the reports, as compared to the 1997 transmission. Lend your support, and ears, to this annual worldwide event from the tiny island of St. Helena. You won't regret one minute of chasing this unusual target! Now, on to the logs.

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)

UTE Loggings SSB/CW/DIGITAL

2383.4: Warship "GP" clg FUE in RTTY 850/100 at 2115. (JD-UK)

2628: FTJ Mossad, Israel, in USB monitored at 1900. (TY-JP)

3350: Beijing Radio, CHN in RTTY 50/425 at 1950 w/wx. (EW-AU)

3458: JPN, Tokyo meteo, w/FAX 120/576 wx map at 1025. Shanghai Volmet, CHN in USB w/Volmet forecast at 1117. (EW-AU)

3450.5: Unid stn 6PXJ rpt "V ABYZ DE 6PXJ over and over in CW at 1415. Also heard on 4567 at 1830 on another day. (TY-JP) *(Same calls logged previously on 3445 and 6785 in Germany. . . poss Russian? — Ed)*

3732: VKQ609 Queensland State Emergency Services, Wide Bay Region, Australia, w/net checks at 0948 in USB. (SD-AU)

4165: KPA2 Mossad, Israel in USB monitored at 1915. (TY-JP)

4215: XSG Shanghai Radio, CHN in CW w/stn marker at 1010. (EW-AU)

4218.5: XSG Shanghai Radio, CHN in CW w/stn marker at 1255. (EW-AU)

4270: PCD Mossad, Israel, in USB monitored at 1800. (TY-JP)

4375: HMAS Fremantle wkg Canberra Control re has QRM on 12 MHz req they kick to 4 MHz at 0759. (NJ-NZ) Huon at 1003 in USB wkg Canberra Control sending tfc in plain voice and then switching to ANDVT followed by confirmation and clarification of message in plain voice. (SD-AU)

4426: NMN, USCG CAMSLANT Chesapeake, VA at 0506 in USB w/marine info BC also // 6501 and 8764. (JK-NY)

4463: FTJ Mossad, Israel in USB monitored at 1030. (TY-JP)

4560: YHF Mossad, Israel, in USB monitored at 1900. (TY-JP)

4567: Unid, ABYZ de 6PWJ in CW w/stn marker at 1115. (EW-AU)

4647: Tallinn Radio, EST in USB w/Volmet BC at 1217. (EW-AU)

4665: PCD2 Mossad, Israel in USB at 2045, on another day C102 Mossad at 1845. (TY-JP)

4724: VICTOR YANKEE 511 at 0914 in USB clg MAINSAIL w/no joy. (SD-AU)

4739: FIDDLE clg C762, no joy at 0441 in USB. FIDDLE wkg ST, then cld C762 again no joy at 0452. (JK-NY)

4881: E10: Mossad Numbers Station at 0240 in USB YL/5FGs. Already in progress (MADX - MD)

4890: ULX Mossad, Israel, in USB monitored at 1930. (TY-JP)

4980: VVJJ Charleville Radio, AUS in USB at 1120 w/flying doctor service re: accident on large stn. (EW-AU)

5091: JSR Mossad, Israel in USB monitored at 2000. (TY-JP)

5142.6: USCGC Key Largo and USCG Group. Charleston w/man overboard status in USB at 0138. (JM-KY)

5145: VNZ, Port Augusta Radio, AUS, in USB w/School of the Air at 2333. (EW-AU)

5160: Sydney Skycoms, AUS, in USB w/pp to Qantas 29 at 1820. (EW-AU)

5170: KPA2 Mossad, Israel, in USB monitored at 2015. (TY-JP)

5180: Cape Radio, USAF Eastern Test Range at 0808 in USB clg JELLY. (IJ-NZ)

5227: VLH, SDE Charleville QLD, Australia at 0655 in USB. (IJ-NZ)

5255: Unid Commercial stns in Australia at 0646 in USB. (IJ-NZ)

5345: Unid stn Russia at 0905 in USB, w/YL in RR. (IJ-NZ)

5356: WOODBOURNE clg DIP FLAT at 0401 in USB re all is OK and back out of hospital. (NJ-NZ)

5370: VHA, SOTA Alice Springs NT, Australia, at 0700 in USB w/YL ending the day's lessons. (IJ-NZ)

5383: ZKNT, ZKCT13, ZKCT14, and ZKCT15: Civil Defense Auckland, Masterton, Kapiti, and Porirua Central Zone net New Zealand at 2118 in USB w/weekly net check-ins. ZKNT has taken over from ZKCT Palmerston North, as net controller. (IJ-NZ)

5400: Radio Rivadavia Feed Argentina at 0705 in LSB w/music. (IJ-NZ)

5422: Lincolnshire Poacher, British M16, Cyprus in USB at 1900. (TY-JP)

5425: ART Mossad, Israel, in USB monitored at 2000. (TY-YP)

5435: ART2 Mossad, Israel in USB monitored at 1900. (TY-JP)

5437: ART Mossad, Israel in USB monitored at 1030. (TY-JP)

5510: Unid Stn Russia at 0839 in USB, w/OM in RR clg. (IJ-NZ)

5574: San Francisco Radio, USA in USB at 1029 w/Delta flight. (EW-AU)

5598: Santa Maria Control, AZR in USB at 1113 clg unid flt. (EW-AU)

5628: Tokyo Radio, Japan in USB at 1107 clg Continental 8 w/pos rpt. (EW-AU)

5667: San Francisco Radio, USA in USB at 1118 w/Hawaiian 16 pos rpt. (EW-AU)

5673: Guangzhou Radio, CHN in USB w/volmet BC at 1200. Beijing Volmet, CHN in USB w\wx at 1255. (EW-AU)

5684: Unid in USB at 1210 clg Libya 8 req fuel and water sitrep. (EW-AU)

5687: IROQUOIS 3815 clg Airforce Auckland, IROQUOIS 3815 airborne from Palmerston North for Ohakea at 0427. Airforce Woodbourne clg Airforce Auckland, req they close watch at 0430. (NJ-NZ)

5696: CG1713 (HC130H), CGAS Clearwater, establishes guard w/CAMSLANT at 0835 in USB. CAMSLANT clg F4A "in the clear" at 2314 at 2316 CG 6026 wkg CAMSLANT (JK-NY)

5853: VLH, SDE Charleville QLD, Australia, at 0645 in USB w/YL reading a story. (IJ-NZ)

5812: North Korean female nbrs stn North Korea, in powerful AM at 1400, rpt on 4770. Freq braking observed on 5872. (TY-JP)

5860: ZERO ALPHA, presumed Australian Army relief op's net, Papua New Guinea monitored at 0727 in USB clg 3 NOVEMBER BRAVO, LIMA SIERRA 3 and 23 DELTA w/no joy. (IJ-NZ)

5900: Unid French Polynesian stns at 0659 in USB w/2 OM in FF also ALE bursts. (IJ-NZ)

5925: Unid Commercial stns in Australia at 0725 in USB w/2 OM. One of them mentioned he was taking a short trip and wanted to know if the club had EFTPOS facilities. (IJ-NZ)

6270: ULX Mossad, Israel in USB monitored at 1030. (TY-JP)

6315: VIP, Perth Radio, AUS in CW w/stn marker at 1035. (EW-AU)

6328: YLQ, Riga Radio, LVA in CW w/stn marker at 1030. (EW-AU)

6513: HLS, Seoul Radio, South Korea, w/short melody minor of Beethoven's 9th symphony "Ode to Joy" between pp in USB at 1840. (TY-YP)

6532: Tokyo Aeradio, Japan, w/Northwest 8 at 1058. San Francisco Radio, USA, w/Air Nauru 372 at 1101, both in USB. (EW-AU)

6586: New York Radio wkg Windsor 913 monitored at 0147 and American 56 at 0148, both in USB. (MF-OH)

6604: New York Volmet, USA, in USB w/wx at 1105. (EW-AU)

6640: San Francisco Aeradio and Delta 54 (L-1011) at 0630 in USB w/pp. (IJ-NZ)

6643: "R"- Russian navy single-letter CW channel mkr from Ustinov at 1815. First time I've heard "R" stn on this freq. (TY-JP)

6649: Guayaquil Radio, ECU in USB w/unid comms at 1144. (EW-AU)

6655: Tokyo Aeradio, Japan, in USB w/Northwest 9 at 1826. (EW-AU)

6658: KPA2 Mossad, Israel in USB monitored at 1915. (TY-JP)

6693: SEA LION 31 (P3C-RAAF 92AW) at 0614 clg MINIATURE req cancellation of NEPTUNE 01. At 0618, clg MINIATURE for

r/c. WAVERIDER 36 at 0629 clg MINIATURE then at 0838 MINIATURE clg NEPTUNE 01 adv "king pin" barrier buoy posn NEPTUNE 01 then req barrier # and MINIATURE raises WAVERIDER 36 who conveys them. All in USB. (SD-AU)

6689.4: BRAVO WHISKEY and VICTOR, USN at 0934 w/roger out and then mentioned about maint proper comms procedures. (IJ-NZ) USN BRAVO WHISKEY tracking net w/various callsigns, ROBIN, CONDOR, ORIOLE, CARDINAL. Frequent SITREPs, tracking inbound hostiles at 0000. (JK-NY) All in USB.

6693: WAVERIDER 32 clg MINIATURE w/ops nml msg and coded pos rep at 1217. SEA LION 31 clg MINIATURE req cancellation of flight plan due to being on deck and complete (as MINIATURE put it). SEA LION 31 op has Australian accent and callsign belongs to RAAF 92nd Wing P3C Orions. At 0614, NEPTUNE 01 clg MINIATURE for r/c. NEPTUNE 01 operator has EE accent, all in USB. (SD-AU)

6739: Offutt w/EAM // 8992, 11175, 13200, and 15016 at 0443 in USB, repeated on same freqs at 0447. McClellan w/unid stn, weak and unreadable, told to QSY to 11175 at 0612. (JK-NY) Yokota GHFS, Japan in USB w/Sky King Sky King at 1113. (EW-AU)

6745: PCD2 Mossad, Israel, in USB monitored at 2045, //4665. (TY-YP)

6751: Japanese military monitored at 0906 in USB w/wx. (IJ-NZ)

6754: Trenton military, Canada in USB w/wx monitored at 1032. (EW-AU)

6767.5: Unid in CW w/5l at 1054. (EW-AU)

6778: JULIET 3 JULIET, U.S. military at 0458, in USB w/EAMs. (IJ-NZ)

6779: DHJ59 and DRFB: GN Wilhemshaven Germany and FGS Homburg at 0505 in USB w/radio checks. (IJ-NZ)

6780: Unid commercial stns in Australia at 0845 in USB. (IJ-NZ)

6785: VMI w/test tape "this is a test transmission from VMI, the base of the Mount Isa School of the Air" at 2347 in USB. (SD-AU)

6786: V2A, Atencion Numbers Station at 0600 in AM YL/SS/5FGs. (MADX-MD)

6814: Unid, stn Fiji at 0626 in USB w/OM clg Suva and 32. (IJ-NZ)

6800: U.S. fishing boats at 0552 in USB, one mentioned that some of the guys off-loading were over their quota. (IJ-NZ)

6815: VZQ748, Wide Bay Helicopter Rescue Service, Maryborough QLD, Australia at 0643 clg RESCUE and going clear of the channel. (IJ-NZ) VJD405, MAF Air Services Pty. Ltd. w/ req for Area 51 wx and TAFs for Kalgoorlie and Warburton at 2330. (SD-AU) All in USB.

6815.5: USCG GANTSEC and 417 at 0432 in USB re to resume normal patrol and be advised of these occurrences. (IJ-NZ)

6820: Unid Townsville Base wkg Mobile 3 arranging rendezvous at 9 a.m. at the service stn at Cunnamulla, in USB at 2231. (SD-AU)

6833: 7 X-RAY KILO, U.S. military at 0445 in USB w/30 char EAM. (IJ-NZ)

Japanese Self-Defense Forces frigate Yubari, located at Mutsu Naval Base.

6840: EZI Mossad, Israel, in USB at 2000, //9130. (TY-YP)

6849: New Tribes Mission, PNG in USB w/pp at 1108. (EW-AU)

6850: VJM and VLZ MacQuarrie IS and Davis station Antarctica at 0513 w/radio checks and test counts. (IJ-NZ) VJM, Macquarie Isl. clg Scott Base and VLZ, Davis Base w/net check prior to coord. inter-base darts competition at 0639. VKQ825, Seymours P/L, Toongoolawah Qld. clg Colin adv its ok to depart at 2221. (SD-AU) All in USB.

6860: Unid commercial stns in Australia at 0718 in USB. (IJ-NZ)

6890: VNZ, RFDS Port Augusta SA, Australia monitored at 0648 in USB w/YL clg VKJ91. (IJ-NZ)

6903: MIKE 2 LIMA, U.S. military at 0544 in USB w/EAMs. (IJ-NZ)

6905: VKR402, Police, Mount Isa QLD, Australia monitored at 0814 in USB, w/YL and OM. (IJ-NZ)

6906.7: Presumed Tunisian Naval stn at 0540 in ARQ. (IJ-NZ)

6908: 10, 20, and ZERO ALPHA, Australian Army Relief OPs net Papua New Guinea at 0840 w/radio checks in the plain. All units were req to change to CH# X-Ray Foxtrot X-Ray, not found. At 0848, mentioned that the ZERO ALPHA SUNRAY had the spare equipment and was heading to the location. Also req change to CH# Lima Golf Bravo for talk w/SUNRAY. Unid Telecom, Russia at 0913 w/YL in RR. (IJ-NZ) All in USB.

6910: VNN737, Lake Macquarie Communications w/two mobiles discussing weekend activities in Nyngan as well as ETA of mobiles enrt from Central Coast monitored at 2346 in USB. (SD-AU)

6972: Unid, stn Solomon Islands at 0742 in USB w/OM clg Honiara. (IJ-NZ)

6977: Australian Army Relief OPs net Papua New Guinea at 0730 w/2 OMs re safety of the PNG personnel. (IJ-NZ) TWO ZERO Australian Army relief ops PNG ending transmission at 1030. (SD-AU) Both in USB.

6980: CIP 77, CKN and VEX, Kingston CFB ONT, Vancouver CFB BC and Penhold CFB AB: Presumed CFARS net at 0615 in USB w/radio checks. (IJ-NZ)

6983.5: Presumed Australian Police at 0640 in USB w/2 OMs re having a look around the house, if there was any suspicious circumstances and going up to the hospital. (IJ-NZ)

6994: CHARLIE INDIA PAPA or CHARLIE LIMA PAPA (audio too distorted): Presumed Australian Army Relief OPs net Papua New Guinea at 0740 in USB w/radio checks. (IJ-NZ)

7307: VJQ727, SDE Rockhampton QLD, Australia at 2248 in USB. (IJ-NZ)

7330: VL2SES, State of Emergency Service Wild Meadows, Cobar, Darling, New England NSW and Lord Howe Is Australia at 2315 w/radio checks. (IJ-NZ) VL2SES, N.S.W. State Emergency Services w/ NORTH WEST conducting net checks at 2311. (SD-AU) All in USB.

7335: CHU Ottawa Radio, CAN in AM w/time sig at 0815. (EW-AU)

7357: VJN Cairns Radio, AUS in USB w/School of the Air at 2327. (EW-AU)

7365: VL2HF, New South Wales National Parks and Wildlife Service w/ 3222 wkg 3201, discussing construction of electric fences at 0509 in USB. (SD-AU)

7401: VJG719, AGL Pipelines LTD Windula Creek QLD, Australia at 2240 in USB (IJ-NZ)

7445: SYN2 Mossad, Israel in USB monitored at 1945. (TY-YP)

7456: Unid Papua New Guinea or Solomon Island stns at 0732 in USB. (IJ-NZ)

7501: VMI w/ test tape "this is a test trans-

mission from VMI, the base of the Mount Isa School of the Air" at 2328 in USB. (SD-AU)
7517: AXA777, J. Larsen P/L Albion Qld clg/wkg Mary at VJ387 BASE adv he is enrt to Stanthorpe Qld at 0006 in USB. (SD-AU)
7530: VLT SDE Charters Towers QLD, Australia at 2326 in USB. (IJ-NZ)
7535: AXI, Darwin meteo, AUS w/FAX 120/576 wx map at 1857. (EW-AU) USS La Moure County (LST-1194), Newport-class LST at 1159 in USB wkg Norfolk SESEF wkg on URT-23 #1 in USB and AM. (MADX-MD)
7565: 8DE, Education Dept. Dubbo NSW, Australia at 2245 in USB. (IJ-NZ)
7580.5: Unid Stns, Pacific Islands monitored at 0628 in USB w/OM and YL in a Pac. Island language. (IJ-NZ)
7589: GOLF ZERO BRAVO U.S. military at 0438 in USB w/30 char EAM. (IJ-NZ)
7600: VKQ522, Oil drilling and exploration PTY LTD Toowoomba QLD, Australia at 0505 in USB. (IJ-NZ)
7602: FDI22, FAF Narbonne France at 0431 in RTTY 50 Bd/425 w/RYRY and Le Brick tests. (IJ-NZ)
7612: ZERO ALPHA and 20: Australian Army relief OPs net Papua New Guinea monitored at 0704 in USB with r/c. ZERO ALPHA and 20: Australian Army Relief OPs net Papua New Guinea at 0855 in USB w/routine traffic. (IJ-NZ)
7637: VJQ727, SDE Rockhampton QLD, Australia at 2322 in USB, w/lessons. (IJ-NZ)
7643: VJN, Cairns Radio, AUS in USB w/School of the Air at 2340. (EW-AU)
7644: Unid in CW w/msg to UXLI UXRK at 1147. (EW-AU)
7646.1: DDH7, Hamburg Radio, GER in RTTY 50/400 w/wx at 0550. (EW-AU)
7665: OVC, Danish Navy, Groennedal, Greenland in CW, wkg Danish warship OUEV on same freq, OUEV then changed to 75/170 in RTTY at 1950. (JD-UK)
7673: DELTA LIMA PAPA and DELTA ROMEO PAPA: Presumed Australian Army relief OPs net Papua New Guinea at 0716 in USB w/ radio checks and sending data bursts. (IJ-NZ)
7674: HBD20, MFA Berne Switzerland at 0545 in ARQ w/5Lgs. (IJ-NZ)
7683: 22 BRAVO, presumed Australian Army relief OPs net Papua New Guinea at 0642 w/"Any stn monitoring this is 22 BRAVO out." (IJ-NZ) ZERO ALPHA Australian Army relief ops PNG wkg 20 attempting to send modem tfc that wouldn't synch and resorting to 3fgs then adv by 0A to QSY 6691 at 2224.(SD-AU) All in USB.
7735: Unid, commercial stns Australian at 0724. VZQ355, LR Gimm Warwick QLD, Australia at 2317 in USB. (IJ-NZ) Fourwheel Drive Net, AUS, VKS737, w/base clg several vehicles at 2225 (EW-AU) All in USB.
7737: MIKE 29 and ECHO HOTEL DELTA, presumed Australian Army Relief Ops net Papua New Guinea at 2045 in USB w/radio checks. LIMA KILO OSCAR and JULIET JULIET QUEBEC, also presumed Australian Army relief Ops net Papua New Guinea at 0701 in USB w/radio checks. (IJ-NZ)
7775: Belconnen Radio, AUS w/75/850 encrypted at 1203. (EW-AU)
7792: VLH, School of Distance Education (SDE), Charleville QLD, Australia at 2204 in USB w/morning assembly, giving out the list of active channels in use. 5227, 5243, 5853, 6945, 7792, and then announcements. (IJ-NZ)
7803: VMI w/ test tape "this is a test transmission from VMI, the base of the Mount Isa School of the Air" at 2232 in USB. (SD-AU)
7880: DDK3 Norrdeich Radio, GER w/FAX 120/576 wx map at 2118. (EW-AU)
7919: Christian Radio Missionary Fellowship stns, PNG at 0710 in USB. (IJ-NZ)
7965: Unid commercial stn Australia at 0705 in USB. (IJ-NZ)
7978: Unid, Australian fishing comms w/discussion re options for the next day at 1139 in USB. (SD-AU)
8011: VJQ727, Capricornian School of Dist. Ed. w/ OM conducting water safety lesson at 0448 in USB. (SD-AU)
8014: VJD316, Northern Territory Dept. Ed., Katharine w/ YL conducting lesson and asking for feedback at 2246 in USB. (SD-AU)
8035: Alice Springs Radio, AUS in USB w/School of the Air at 0645. (EW-AU)
8040: GFA23 Bracknell Radio, UK w/FAX 120/576 wx map at 0824. (EW-AU)
8073: Unid in CW w/5l at 1101. (EW-AU)
8076: SIL Papua Radio, PNG in USB w/linguistic lessons at 1108. (EW-AU)
8088.9: Unid, in RTTY 75/850 7-bit Baudot encrypted no ID seen at 1920. (JD-UK)
8093.5: VJQ750, Kyle Communications, Lutwyche Qld w/ Mobile 26 wkg Mobile 13 w/ conversation about Sydney pubs in the 1950s at 2249 in USB. (SD-AU)
8111.7: Unid Dept. of Sea Transport stn Indonesia monitored at 0915 in ARQ w/Nav msgs. (IJ-NZ)
8120.5: Warship "0WW" wkg OVK on same freq in CW at 2015. (JD-UK)
8122: Canberra Control clg Betano (RAN L133 LCH/LSM) at 2314. Canberra Control clg Bendigo w/ r\c ALPHA 4 ALPHA 4 over at 0227 (NJ-NZ) Canberra Control, AUS clg HMAS Benalla and other ships at 0950. (EW-AU) Canberra Control (H.M.A.S.) Tarakan w/tfc passed using ANDVT at 0920. Leeuwin clg Canberra Control w/r/c at 2329. (SD) All in USB.
8156: ARCHITECT, RAF Bampton England at 2045 in USB w/wx. (IJ-NZ)
8150: 8DE, Dept. School Education Dubbo w/ Mrs. Townsend conducting reading lesson to Rebecca at 0135 in USB. (SD-AU)
8194: FDI22, French AF Narbonne in RTTY 50/400 test tape at 2015. (JD-UK)
8182.5: TELSTRA Phone system Australia at 0650 in USB. (IJ-NZ)
8255: ZMH32, Tairoa Head Radio (Ports of Otago LTD) New Zealand at 2145 in USB w/ tfc on hand. (IJ-NZ)
8259.2: Unid stn in CW w/vvv cq 747 t24 3l rpts at 1005. (EW-AU)
8294: VZX, Penta COMSTAT w/Coffs Harbour to Fiji Yacht Race w/afternoon sked and pos reports from vsls Antipodes, Drina, La Violon, Moon Penny, Too Impetuous, and True Blue at 0610 in USB. (SD-AU)
8298.1: Unid in ARQ 100/170 w/telex msgs in SS at 0712. (EW-AU)
8310: Unid in ARQ 100/170 w/idle only at 0927. (EW-AU)
8405: UFL, Vladivostok Radio, URS in RTTY 50/170 telegrams in RR at 0943. (EW-AU)
8419.5: NOJ, Kodiak Radio, USA in CW w/stn marker at 1133. (EW-AU)
8420: KEJ, Hoolehua Radio, USA in CW w/stn marker at 1132. (EW-AU)
8435.5: OST, Ostend Radio, BEL in CW w/stn marker at 0629. (EW-AU)
8450: SAA, Karlskrona Radio, SWE in CW w/stn marker at 0634. (EW-AU)
8454.8: 9WH20, Kota Kinabalu, MLA in CW w/stn marker at 1007. (EW-AU)
8463.1:CKN, Vancouver Radio, CAN in RTTY 75/850 w/ freq list at 0748. (EW-AU)
8473: WLO, Mobile Radio, USA in FEC w/tfc list at 1204. (EW-AU)
8495: Moscow Radio, URS in CW w/stn marker at 1115. (EW-AU)
8502: NMG, USCG New Orleans, USA in USB w/North Atl. wx at 0955. (EW-AU)
8504: NMG, USCG New Orleans, USA w/wx fax 120/576 at 0630. (EW-AU)
8514.1: XSQ, Guangzhou Radio, CHN in CW w/stn marker at 1212. (EW-AU)
8515: UFL, Vladivostok Radio, URS in CW w/stn marker at 1110. (EW-AU)
8526.4: KFS, San Francisco Radio, USA in CW/SITOR w/stn marker at 0718. (EW-AU)
8551.7: CTP, Oeiras Naval, POR in RTTY w/DE NAWS at 0828. (EW-AU) *(assume it was 75/850 — Ed)*
8572: HLO, Seoul Radio, KOR in CW w/stn marker at 1041. (EW-AU)
8605: UIW, Kalingrad Radio, URS in CW w/stn marker at 0723. (EW-AU)
8625.9: GYA, Royal Navy, UK in RTTY 75/170 w/test msg at 2131. (EW-AU)
8646: VTP6, Vishakhaphatnam, IND in CW w/stn marker at 1227. (EW-AU)
8663.4: KEJ, Hoolehua Radio, USA in CW/SITOR w/stn marker at 1234. (EW-AU)
8713: V2X, Penta Constat, AUS in USB w/wx at 0838. (EW-AU)
8722: WOM, Pennsuco Radio, USA in USB w/tfc list at 1105. (EW-AU)
8786: WLO, Mobile Radio, USA in USB w/wx at 1204. (EW-AU)
8792.7: FJY2, Kergulen Radio, AMS Isl. in ARQ-E3 96/425 idling at 1115. (EW-AU)
8825: Beijing Volmet, CHN in USB w/wx at 0253. (EW-AU)
8828: Honolulu Volmet, USA w/wx monitored at 0657. Tokyo Volmet, J w/wx at 0839. Hong Kong Volmet, CHN in w/wx at 0841. (EW-AU) All in USB.
8861: Dakar Control, SEN w/Dakar clg unid flt at 0815. Canary Isl. Con., CNI in USB clg Lufthana flt at 0852. (EW-AU) All in USB.
8867: Nandi Radio, FJI w/AMC 925C at

1214. San Franciso Radio, USA w/QANTAS 11 at 1216. Brisbane Radio, AUS w/unid at 1045. (EWAU) All in USB.

8879: JBO Toyko Radio, JPN w/pp at 1102. Perth Radio, AUS w/REACH 52 clg Perth at 1022. (EW-AU) All in USB

8903: Naha Radio, JPN in USB w/Japanair 711 clg control at 1104. (EW-AU)

8906: New York Radio wkg CONDOR 223 at 0048. REACH 8049 clg New York Radio w/posn rpt at 0051. (MF-OH) Santa Maria Control, AZR clg AEROFLOT 336 w/pos rpt at 1055. (EW-AU) All in USB.

8942: Hong Kong Radio, CHN in USB w\CATHAY 716 pos rpt at 1120. (EW-AU)

8951: Toyko Control, JAP in USB w/SINGAPORES 12 pos at 1124. (EW-AU)

8965: XPH, USAF Thule AFB Greenland and REACH 119 PAPA (C17) at 0512 in USB w/pp to Lajes CP. (IJ-NZ)

8968: BACKBENCH: U.S. military at 0517 w/EAMs. (IJ-NZ) MONA LISA w/30-char. EAM at 0437 then MONA LISA w/EAM simulcast on 11267 at 0538. (JK-NY)

8971: AXH: RAAF Townsville and AUSSIE 169 Australia at 0712 w/pp to 92 Wing OPs. (IJ-NZ) TRIDENT 720 clg TRIDENT 730, also clg GOLDEN HAWK at 1711, raised GOLDEN HAWK then switched to ANDVT at 1714. (JK-NY) WRANGLER 01 at 1228 in clg MIKE 1 SIERRA w/radio check. (SD-AU) All in USB.

8972: GRIZZLY and PHANTOM 11 USN at 0648 in USB passing pos report for the target, and OPs normal with BLUESTAR. (IJ-NZ)

8974: ZKX, RNZAF Auckland and HERCULES 7002 (C130) New Zealand at 2224 wanting to know why 7002 didn't do the drop. PTSU to open Whenuapai DZ. ZKX, RNZAF Auckland, and KIWI 127 (P3) New Zealand at 0520 w/arrival times for Whenuapai Auckland. Had returned from a nine-hour search of the Pacific Ocean, north of NZ for the boat Alexandra II w/102 Chinese illegal immigrants onboard. The boat was last sited near the Solomon Islands and its intended destination is believed to be NZ. (IJ-NZ) Airforce Townsville clg STALLION 011 (RAAF C130 A97-003) at 2235. KIWI 333 clg Airforce Auckland w/ops normal monitored at 0003. Airforce Auckland via selcall clg KIWI 333 w/ops normal at 0201. (NJ-NZ) TIGER 84 clg Air Force Sydney adv he is conducting ops at Jervis Bay and requesting r/c at 2326. (SD-AU) All in USB.

8983: USCG Chesapeake and 1712 at 2154 re radio guard, req POB (*Persons On Board — Ed*). (IJ-NZ) CG 6041 req guard w/CAMSLANT, enrt CGAS Clearwater, parent command is CGAS Clearwater at 1820. CG 2139 w/CAMSLANT rep ops normal at 2156. (JK-NY) All in USB.

8989: 6 UNIFORM TANGO and QUEBEC PAPA HOTEL, Australian Mil. monitored at 0647 in USB w/radio checks and closing down watch. (IJ-NZ)

8992: REACH HL4 via Hickam w/pp to Little Rock Ops, departed Ascension, expected ETA to Antigua at 1000, asked for wx and req to re-file flight plan at 0700. Andrews GHFS w/EAM then rptd again by Andrews at 0708. Croughton wkg unid a/c at 0627. Croughton wkg REACH 05 at 0631. REACH 8265 via Hickam w/pp to Hilda Meteo at 0702. Hickam running pp for REACH Z7 to Charleston CP at 0551. (JK-NY) All in USB.

8997: UNCLOUDED and JUNGLE 816, USN at 0927 in USB re is currently hot at this time then switched to ANDVT to pass posn report of the active target. (IJ-NZ)

9007: AXF, RAAF Sydney and AUSSIE 167 Australia monitored at 0700 in USB w/pp to 10 SQN. (IJ-NZ)

9010: ARCHITECT, RAF Bampton England at 2140 in USB w/TAFs. (IJ-NZ)

9016: DANDELION wkg SYMBOLIC w/authentication's at 0514 in USB. (NJ-NZ)

9031: Army Sydney clg Airforce Townsville w/pp at 0508 in USB. (NJ-NZ)

9036: FOXTROT 8 ROMEO, U.S. mil at 0554 in USB w/30 char EAM. (IJ-NZ)

9064: M8, Cuban Morse numbers station at 0700 in CW w/5FGs. (MADX-MD)

9084.8: RFFX, Paris Radio, F in ARQ-E 72/120 idling only at 1110. (EW-AU)

9130: EZI Mossad, Israel, in USB at 2000, //6840. (TY-YP)

9163.5: 9 LIMA CHARLIE presumed RNZAF tactical ground stn New Zealand at 0143 in USB w/radio checks. (IJ-NZ)

9166.2: Unid, Philippines stn at 0920 in ARQ selcalling FCOD. (IJ-NZ)

9215: Federal Police net Argentina at 0315 in USB, OM in SS w/advisories. (IJ-NZ)

9260: MOONBEAM and SHAG 11, NATO Balkan Ops at 0410 in USB, clg in the blind and Parkhill encryption. (IJ-NZ)

9263.5: 9 LIMA CHARLIE, presumed RNZAF tactical ground stn New Zealand at 0139 in USB w/radio checks. (IJ-NZ)

9449.9: Unid, stns Papua New Guinea or Solomon Islands at 0843 in USB. (IJ-NZ)

9996: RWM Moscow Radio, URS in CW w/time sig at 2317. (EW-AU)

10024: Pasqua Control, EAI in USB w/pos rep from Argentina 1. (EW-AU)

10046: 4XZ, Haifa Radio, ISR in CW w/stn marker at 2315. (EW-AU)

10100: DDK9, Offenbach meteo, GER in RTTY 50/400 w/wx at 0602. (EW-AU)

10169.5: HSW61, Bangkok Radio, THA in RTTY 50/170 w/wx at 1132. (EW-AU)

10020: VLB2 Mossad, Israel in USB at 1845, //12747 //14750. (TY-JP)

10100.8: DDK9, Hamburg Meteo at 0726 in RTTY 75/400 w/meteo tfc. (MADX-MD)

10204: WAR46 wkg BANKBOOK sig chk at 0321 again at 0322 BANKBOOK wkg MONA LISA w/sig chk.. BANKBOOK wkg SUNBURST advises MONA LISA also in the net, then switched to ANDVT mode, then BANKBOOK again at 0506. BANKBOOK clg SUNBURST, no joy at 0542. BANKBOOK w/20-char. EAM at 0600. (JK-NY) SYMBOLIC wkg DANDELION req to meet your stn Z175 over at 0513. (NJ-NZ) All in USB.

10205: RTP78 Irkutsk Radio, URS w/FAX 120/576 w/wx map at 0952. (EW-AU)

10206: Australian Net, AUS in USB re left Alice Springs, some sort of mining ops at 2320. (EW-AU)

10241: Unid, in RTTY 250/50 at 1415, just caught the end of a message containing many Cyrillic characters. (JD-UK)

10281.3: RFLI Fort De France, MRT in ARQ-E3 192/300 idling only at 0741. (EW-AU)

10303.1: Unid 300/120 w/burst type sig at 0750. (EW-AU)

10320.5: Unid in PICOLLO 6, idling only at 0700. (EW-AU)

10343: Sailmail Radio, USA in PACTOR 100/170 w/msgs to ships at 0805. (EW-AU)

10355: 4XZ, IN Haifa Israel monitored at 0440 in CW (IJ-NZ)

10423: CIA Counting stn at 2213 in USB w/YL w/numbers. (IJ-NZ)

10426: Lincolnshire Poacher, British M16, Cyprus in USB monitored at 2000, //6900 //11547. (TY-JP)

10484.3: Unid, presumed MFA Sofia in RTTY 500/196.23, 7 bits, w/single bit "Stop" element, plain-language Bulgarian at 0850. (JD-UK)

10503: USN Ops ALPHA WHISKY in USB w/Battle Grp w/track 9 Zulu at 0942. (EW-AU)

10566: Unid in CW w/5L grp monitored at 1301. (EW-AU)

10722: Portishead, UK w/Speedbird 9 r\c at 0912 in USB. (EW-AU)

10757.4: U.S. tuna fishing boats at 0642 in LSB w/encryption. (IJ-NZ)

10970: Abnormal Israeli Mossad transmission, Mossad lady rpt "MIWE2" in phonetics for more than 30 mins at 1900. First time encounter w/"MIWE2" On another day, usual MIW2 Mossad, Israel, in USB at 1915. (TY-JP)

11015: VLN, SDE Cairns QLD, Australia, at 0426 in USB. (IJ-NZ)

11175: USAF Ascension Is. and NAVY 50515 at 2347 in USB w/req to change to 624 for Andrews. (IJ-NZ) Croughton wkg REACH G3 w/pp to McGuire and Hilda East at 0312. Hickam w/EAM,rptd by Andrews and other GHFS stns at 0429. Hickam wkg REACH 4062 w/pp for wx at 0613. Hickam wkg REACH Z11 for pp to Charleston CP and meteo at 0633. MOONBEAM 01 via Andrews w/pp for Aviano wx at 0550. Hickam w/EAM, rpt by Andrews and other GHFS stns at 0429 and 0434. (JK-NY) All in USB.

11181: Thule wkg pp for JW629 to Andrews CP, 629 req CP relay message to NASA Wallops at 0112. (MF-OH)

11199: AXI, RAAF Darwin and TESTER 905 Australia at 0520 in USB w/pp to NAVSTAR. (IJ-NZ)

11205.5: U.S. tuna fishing boats at 0417 in LSB. (IJ-NZ)

11235: AXI RAAF Darwin and TESTER 905 Australia at 0519 changed to 11199 for pp. (IJ-NZ) Airforce Townsville clg Army Sydney changed to 9031 at 0506. STRIKER 150 clg Airforce Sydney w/radio check and gone at 0343 (NJ-NZ) All in USB.

11236.7: Unid, poss Egyptian MFA at 2104 in ARQ w/weak signal. (MADX-MD)

11244: McClellan w/EAM monitored at 0515, Andrews w/EAM followed at 0516, both in USB. (NJ-NZ)

11247: Gibraltar (RAF Gibraltar) wkg ARCHITECT w/text count, radio check, at 0545 in USB. (NJ-NZ)
11396: Manila Radio, PHL w/Speedbird 16 clg Perth at 1007. Bali Radio (Den Pasar), INS w/Bali pos to Speedbird 16 at 1009. Perth Radio, AUS w/Emirates 68 passing pos rpt at 1006. All in USB. (EW-AU)
11419.9: OZUU25, Kohnhavn Radio, DNK in TWINPLEX 100/170 w/5LG at 0615. (EW-AU)
11498: Russian Man numbers station (E6) at 0300 in AM EE w/5FGs (x2). Already in progress at 0300. QRT w/"00000" at 0315. (MADX-MD)
11547: Lincolnshire Poacher, British M16 in USB at 2000, //6900 //10426. (TY-JP)
11580: The CIA Counting in USB at 2100. (TY-JP)
12147: Spanish Man (V7) at 0610 in AM w/numbers stn w/null msg 118 118 118 000. (SD-AU)
12353: VZX, Penta COMSTAT Coffs Harbour w/Fiji Yacht Race afternoon sked at 0610 in USB. (SD-AU)
12585.5: KPH, San Francisco, USA in CW w/stn marker at 0633. (EW-AU)
12586.5: WLO, Mobile Radio, USA, in CW w/stn marker at at 1132. (EW-AU)
12587: LZW, Varna Radio BUL w/SITOR B tfc list at 0045 and 0245. (RP2-TX)
12589.5: WCC, Chatham Radio, USA, in CW w/stn marker at at 0527. (EW-AU)
12590.5: KLB, Seattle Radio, USA, in CW w/stn marker at 1020. (EW-AU)
12591.5: UFL, Vladivostok, URS in SITOR-A w/msgs to ships at 1040. (EW-AU)
12592.5: NMN, Portsmouth Radio, USA, in CW w/stn marker at at 0554. (EW-AU)
12593: ESA, Tallinn Radio, EST in CW w/stn marker at 0227. (EW-AU)
12599.5: UAT, Moscow Radio, URS, in CW w/stn marker at 0210. (EW-AU)
12601: HEC, Bern Radio, SWI in CW w/stn marker at 0522. (EW-AU)
12607: GKQ5, Portishead Radio, UK, in CW w/stn marker at 1213. (EW-AU)
12611.5: KEJ, Hoolehua Radio, USA, in CW w/stn marker at 1147. (EW-AU)
12615: USU, Mariupol Radio, UKR, in CW w/stn marker at 0513. (EW-AU)
12615.5: 8PO, Barbados Radio, BRB, in CW w/stn marker at 0703. (EW-AU)
12622.5: XSQ, Guangzhou Radio, CHN in CW w/stn marker at 1149. (EW-AU)
12624.5: WCC, Chatham Radio, USA, in CW w/stn marker at 1152. (EW-AU)
12629: KHF, Guam Radio, GUA, in CW w/stn marker at 0848. (EW-AU)
12660.2: S7Q, Mahe Radio, SEY, in CW w/stn marker at 1000. (EW-AU)
12670.5: WNU, Slidell Radio, USA, in CW/SITOR w/stn marker at 0641. (EW-AU)
12678: 9MG, Penang Radio MLA in CW w/marker at 1130. (RP2-TX)
12691.5: RFVIE, FF Reunion area REU 75/850 in RTTY at 1005 clg FAAA. (RP2-TX)
12747: VLB2, Mossad Israel in USB at 1845. //10820//14750. On another day, MIW2 Mossad, Israel hrd at 1945. (TY-JP)
12756.5: A9M, Bahrain Radio, BHR in SITOR-A 100/170 w/msg to ship at 1043. (EW-AU)
12771: UHP, St. Petersberg Radio, URS in CW w/stn marker at 0800. (EW-AU)
12823.9: CTP, NATO Lisbon, POR in BAUDOT 75/850 w/NAWS DE CTP at 0636. (EW-AU)
12829.5: XFM, Manzanillo Radio, MEX in CW w/stn marker at 0702. (EW-AU)
12903.5: RBSL, Bombay Radio, IND in BAUDOT 50/850 w/RY testing at 1002. (EW-AU)
12940.7: MGJ, Faslane Radio, UK in BAUDOT 75/115 w/MGJ 03. . . etc. monitored at 0855. (EW-AU)
12948: DVY, Iloilo Radio, PHL in CW w/stn marker at 0803. (EW-AU)
12954: XSG, Shanghai Radio, CHN in CW w/Time sig marker at 0900. (EW-AU)
13044: VRX, Hong Kong Radio, CHN in CW w/stn marker at 1026. (EW-AU)
13072.4: KFS, San Francisco, USA in CW w/stn marker at 0631. (EW-AU)
13077: Madrid Radio, SPA in USB w/SS and EE tfc list at 0603. (EW-AU)
13089: NMN, USCG CAMSLANT Chesapeake, VA, USA in USB w/wx BC at 1143. (EW-AU)
13107: XSQ Guangzhou Radio, CHN in USB w/pp at 1030. (EW-AU)
13110: WLO Mobile Radio, USA, in USB w/stn info at 1334. (EW-AU)
13116: HMAS Benella wkg Darwin Control, all positions refer to WHISKEY GOLF SIERRA figures 84 stn (UNIFORM TANGO MIKE zone figures 55) stop at 0204. (NJ-NZ) *(rare log of the Royal Australian Navy on 13 Mhz. — Ed)*
13146: GKB, Portishead Radio, UK in USB w/wx for east Medit and Black Sea at 0823. (EW-AU)
13152: WLO, Mobile Radio, USA w/wx at 1202. 3AC Monaco Radio, MON w/Voice mirror in four languages. Both in USB. (EW-AU)
13155: FIREBUG, U.S. mil. at 0450 in USB w/30 char EAM. (IJ-NZ)
13156.6: 9MR Johor Bahru Naval, Malaysia in RTTY 50/850 w/wx in EE at 1650. (JD-UK)
13161: HLS, Seoul Radio, South Korea w/short melody of Beethoven's 9th symphony "Ode to Joy" between pp at 0615. (TY-JP) HLS Seoul Radio, KOR w/pp at 1147. (EW-AU) Both in USB.
13176: Madrid Radio, SPA in USB w/pp in SS at 0610. (EW-AU)
13188: XSG Shanghai Radio, CHN in USB w/pp at 1149. (EW-AU)
13200: Andrews wkg pp for JAPAN NAVY 60 to DSN#264-xxxx\264-xxxx-JANSDF (sp). *(Should be Japan Naval Self-Defense Force unit at Atsugi NAS, Japan based upon DSN number — Ed)* Andrews unsuccessful and handed JN60 off to a worldwide DSN operator at 2003. (MF-OH)
13206: Airforce Perth clg STRIKER 102 (RAAF P3 Orion) at 0343. (NJ-NZ) Air Force Sydney, AUS clg Air Force Darwin at 0200. Air Force Townsville, AUS clg TIGER 85 (helo) at 2345. (EW-AU) All in USB.
13225: JYJ, LDOC Amman Jordan and Jordanian 705 at 0450 in USB w/arrival at gate No 3. (IJ-NZ)
13241: Andrews and NAVY 50515 at 2351 in USB w/sig check on 624. (IJ-NZ)
13282: Honolulu Volmet, USA w/wx at 0659. Auckland Volmet, NZL w/wx at 0751. Tokyo Volmet Japan w/wx at 1839. Hong Kong Volmet, CHN w/wx at 0841, All in USB. (EW-AU)
13333: Saudia 6853 clg Speedbird London req wx for Torino and adv they will require a hi-lift on arrival at 0615 in USB. (SD-AU)
13336.7: MFA Cairo in ARQ with msg to New York at 1645. (JD-UK)
13452: The Counting Station (V5) monitored at 0100 in AM w/numbers stn id 772 grupo 113 //15651. (SD-AU)
13467: Polish Embassy, Moscow in POL-ARQ wkg MFA at 1315. (JD-UK)
13533: EZI2, Mossad, Israel in USB monitored at 1930. (TY-JP)
13542: ZRO3, Pretoria METEO, South Africa at 0658 in RTTY 75 Bd/425 w/wx. (IJ-NZ)
13920: AXM35, Melbourne Meteo at 0837 in FAX 120/576. (MADX-MD)
13953.2: NMC, USCG CAMSPAC at 0036 in GTOR 100/200 clg NSTF: USCGC Steadfast (WMEC-625), and wkg NAQD: USCGC Jarvis (WHEC-725). Also at 2108 clg NMEL: USCGC Mellon WHEC-717. (MADX-MD)
13997: HWK7 unid, presumably France in CW, sent one message in what looked like Italian at 1035. (JD-UK)
14000: Abnormal Mossad transmission ZWL, Mossad, Israeld in USB at 1400. Mossad lady rpt "Zulu Whisky Lima," for more than 10 mins. covering "Nancy" Adam Susan nbrs on the same freq. Anyway two different nbrs hrd simultaneously. ZWL is a deep cover and mission specific transmission of Mossad. First time I've ever encountered ZWL and Mossad lady on 14000 kHz.. (TY-JP)
14420: VDD and CIS202 Debert NS and UNID stn Canadian military monitored at 0640 in USB w/radio checks and PSK or QPSK data bursts. (IJ-NZ)
14436: GFL23 Bracknell Radio, UK w/FAX 120/576 wx map at 0937. (EW-AU)
14446.3: MKK, London Radio, UK w/VFT Foxes w/no id at 0907. (EW-AU)
14446.7: RFVI, 602 FF Le Port, REU in ARQ-E3 100/425 idling only at 0602. (EW-AU)
14467.3: DDH, Hamburg Meteo, GER in RTTY 50/425 w/wx at 1220. (EW-AU)
14486: RFGW, Paris Radio, FRN in FEC-A 192/425 w/diplo msgs at 0815. (EW-AU)
14487: Numbers stn. in USB w/English lady at 1305. (EW-AU)
14556: RIW, Moscow Radio, URS in CW clg 2RJE9 w/stn marker at 0814. (EW-AU)
14571: The CIA Counting nbrs hrd in AM at 1200, //16198. (TY-JP)
14648: 4XZ, IN Haifa, Israel monitored at 0458 in CW. (IJ-NZ)
14648.1: 4XZ, Haifa, ISR in CW w/stn marker and 5LG at 2345. (EW-AU)

14654.5: SPW, Warsaw Radio, POL in ARQ 100/170 w/diplo msgs at 1103. (EW-AU)
14670: CHU, Ottawa Radio, CAN in AM w/time sig at 1013. (EW-AU)
14677: DFZG, Belgrade Radio, YUG in RTTY 75/400 w/encrypted msgs at 0826. (EW-AU)
14686: 4XZ, Haifa Radio, ISR in CW w/stn marker at 1151. (EW-AU)
14739: CIA counting nbrs hrd in AM at 1300, //16198. (TY-JP)
14750: MIW2 MOSSAD No. stn. at 0517 rpt MIW2. (IJ-NZ): Abnormal Mossad transmission, Mossad lady rpt "VLBC2" in phonetics for more than 10 mins at 2225. First time I've ever heard VLBC2. Unable to find parallel freq. On another day usual VLB2 Mossad Israel hrd at 1945, //12747. All in USB. (TY-JP)
14794: Unid presumed Russian military in CW wkg a similar stn on 14896 at 1615. (JD-UK)
15627: Unid commercial stns, Australia at 2218 in USB. (IJ-NZ)
15868: Unid in RTTY 75/400 w/encrypted Yugoslav diplo at 1710. (JD-UK)
15904: Unid FAPSI stn in RTTY 75/500 at 1132. (JD-UK)
16026: RBL88 unid in CW, w/"RMD95 de RBL88 QSA?" at 1107. (JD-UK)
16074: RJF94 somewhere in Russia in CW wkg RJF95 at 1640. (JD-UK)
16129: "M4W" unid in RTTY 340/75 rpt many times, then OFF with no tfc at 0833. (JD-UK)
16235: GYU, RN Gibraltar in Piccolo-6 clg GXQ RN, Forest Moor,UK w/test tape at 1340. (JD-UK)
16340.2: Unid Romanian diplo in ROU-FEC at 164.5 bd encrypted at 0900. (JD-UK)
16325: Unid Romanian diplo in CW "QRR 75" followed by 164.5 bd in ROU-FEC w/encryption at 0905. (JD-UK)
16905.5: RFQPME FF Djibouti area DJI 75/850 in RTTY at 0045 clg FAAA also rpt on 13043. (RP2-TX)
16910.2: HLJ Seoul Radio KOR w/CW channel marker at 1215. (RP2-TX)
16950: 9MB, Malaysian Navy Penang/ Georgetown MLA in CW w/marker at 1230. (RP2-TX)
17066.5: A9M, Bahrain Radio BHR in FEC w/tfc list at 0035. (RP2-TX)
17069.5: JJC, Kyodo News Japan w/60/576 FAX at 1500. (RP2-TX)
17091: XSQ, Guanghzou Radio CHN in CW w/marker at 1345. (RP2-TX)
17103.2: XSG, Shanghai Radio CHN in CW w/tfc list and marker at 1245. (RP2-TX)
17113: GKB, Portishead Radio, UK in CW w/stn marker at 1817. (EW-AU)
17141: UFN, Novorossiysk Radio RUS in CW w/tfc list and marker 0000. (RP2-TX) UFN Novorossisyk Radio, URS in CW w/stn marker at 1510. (EW-AU)
17146.5: CBV, Playa Ancha Radio CHL w/120/576 wefax at 2310. (RP2-TX)
17156.7: MFA Cairo?, EGY in ARQ w/Arabic msg at 0744. (EW-AU)
17165.6: CLA, Havana Radio, CUB in CW w/stn marker at 1345. (EW-AU)
17180: FUG, La Regine, FRN in RTTY 75/850 w/RY SG line test at 0747. (EW-AU)
17184.8: PKE, Amboina Radio INS w/CW channel marker at 1245 off at 1300. (RP2-TX)
17231.3: CWA, Cerrito Radio, URG in CW w/stn marker at 0805. (EW-AU)
17239.7: PKX, Jakarta Radio INS w/ CW channel marker at 1300. (RP2-TX)
17269: BVA, Taipei Radio, TAI in USB w/woman w\BVA msg at 0657. (EW-AU)
17344: RAN Darwin Control, Australia and GOLF CHARLIE (RN ship) monitored at 0107 w/ALPHA 6 and ZBZ QSY to first 19 MHz freq. (IJ-NZ) CANBERRA CONTROL wkg GOLF CHARLIE at 0249. All in USB. (NJ-NZ)
17473: Unid in CW w/"KDZ27 QRU TKS GB SK," looked like a FAPSI sked w/no tfc on hand at 0915. (JD-UK)
17481: Unid, URS w/81 Baud 81/220 encrypted at 1114. (EW-AU)
17499: Cherry Ripe nbrs, British MI6, Guam in USB at 1300, //22108. (TY-JP)
17550.9: RFTJ, Dakar Radio, SEN in ARQ-E3 192/425 idling only at 0532. (EW-AU)
18012: CIRCUS NOIR, FAF Noumea New Caledonia and COTAM 27 at 0515 in USB w/routine tfc. (IJ-NZ)
18036.5: CIA Radio in USB w/Counting stn 392 at 0617. (EW-AU)
18042.7: RFTJD, Libreville Radio, GAB in ARQ-E3 192/425 idling only monitored at 0830. (EW-AU)
18201.7: MFA Cairo, EGY in ARQ w/Arabic msgs and 5l,qsx 19286.7 at 0717. (EW-AU)
18220: JMH, Tokyo Meteo Japan w/120/576 wefax at 1810. (RP2-TX)
18293.7: RFFA, Paris Radio, FRN in ARQ-E3 100/425 idling only at 0803. (EW-AU)
18320.7: RFTJ, Dakar Radio, SEN in ARQ-E3 192/320 idling only at 0529. (EW-AU)
18414.8: 8BY Paris Radio, FRN in CW w/stn marker at 0630. (EW-AU)
18481: 4XZ, Haifa Radio, Israel w/5LG at 1125. (EW-AU) 4XZ Haifa, Israel at 2248 (IJ-NZ) Both in CW.
18523.7: RFFA, Mod Paris, FRA in ARQ-E3 192/366 idling only at 0807. (EW-AU)
18678: CLP1, MFA Havana Cuba at 2315 in RTTY 50/500. (IJ-NZ)
18980: 7CJ believed to be Indonesian diplo in CW at 1300. (JD-UK)
18980.5: UK mil. in Picollo 6, idling only at 1145. (EW-AU)
19110.1: Unid RTTY 75/425 w/5LG at 0230. (EW-AU)
19685.5: WLO, Mobile Radio, USA in CW w/stn marker at 0239. (EW-AU)
19736.5: ZLA, Awanui Control, NZL in CW w/stn marker at 0437. (EW-AU)
20192: PWX33, Brasilia Naval in RTTY 850/75 clg ZRH w/test tape at 1320. (JD-UK)
20355: 4XZ, IN Haifa Israel at 2253. (IJ-NZ) 4XZ Haifa Radio, Israel w/stn marker at 0410. (EW-AU) All in CW.
20633.7: RFVI, Le Port Radio, REU in ARQ-E3 100/425 idling only at 0252. (EW-AU)
20946.7: VL8IPA, Darwin Radio, AUS in CW w/stn marker w/other modes at 0755. (EW-AU)
22108: Cherry Ripe nbrs, British MI6, Guam in USB at 1300, //17499. (TY-JP)
22383: VIP Perth Radio, AUS in CW w/stn marker at 0319. (EW-AU)
22587.5: LPD71, General Pacheco Radio ARG in CW w/marker at 2245. (RP2-TX)
22723: JFA, Funabashi Radio, JAP in USB w/pp at 1105. (EW-AU)
23761: Cherry Ripe nbrs, British M16, Guam in USB at 1200, //17499. (TY-JP)
25870: RPU WFLA 970 AM Tampa, FL, USA at 2242 in NFM. (IJ-NZ)
25910: RPU WJFP 107.1 from West Palm Beach FL, USA at 2120 in NFM. (IJ-NZ)
26450: RPU WLW 700 AM Cincinnati, OH, USA at 2103 in NFM. (IJ-NZ)
27860: Volunteer CG Melbourne VIC, Australia at 0105 w/wx. VMR203 Royal Volunteer Coastal Patrol Narooma NSW, Australia at 2305 adv all stns to change to CH#91 for wind warning bulletin. All in AM mode. (IJ-NZ)
27880: VMR445, Air Sea Rescue Bribie IS QLD, Australia at 0118 clg. VMR405 Volunteer CG Noosa Heads QLD, Australia at 2152 w/the boat Natter for r/c. VMR406 and VMR404: Volunteer CGs Mooloobar and Caloundra QLD, Australia at 2230 w/radio checks. VMR450: Air Sea Rescue Beenleigh QLD, Australia at 2242 w/the boat Tropic2. All in AM mode. (IJ-NZ)
27900: VMR217, Royal Volunteer Coastal Patrol Port Stephens NSW, Australia at 2318 w/the boat *Second Wind* for pos reports. VMR216 Volunteer CG Lake Macquarie NSW, Australia at 0000. VMR417 Volunteer CG Tin Can Bay QLD, Australia at 0025 w/the boat Nike2 for posn reports. Volunteer CG Sydney NSW, Australia at 0028 w/the boat 423 for posn reports. All in AM mode. (IJ-NZ)
27910: VMR210 Royal Volunteer Coastal Patrol Wollongong NSW, Australia, at 0008 passing wx to the *Angle325*. VMR203 Royal Volunteer Coastal Patrol Narooma NSW, Australia at 2306 w/wind warnings. VMR403 Volunteer CG Redcliffe QLD, Australia at 0113 w/the *Broadfish*. VMR466 Air Sea Rescue Hervey Bay QLD, Australia at 2312 w/the boat Smokey, for posn reports. Seaway Tower QLD?, Australia at 2348 w/posn reports from the boat *Shand*. All in AM mode. (IJ-NZ)

A special thanks to this month's contributors: (EW) Eddy Waters, Australia, (MF) Mike Fink, Ohio, (IJ) Ian Julian, New Zealand, (JD) John Doe, United Kingdom, (JK) John Kasupski, New York, (JM) Jack Metcalf, Kentucky, (MADX) MidAtlanticDX'er, Maryland (NJ) Noel Jones, New Zealand, (RP2) Ray Prestridge, Texas, (SD) Simon Denneen, Australia, and (TY)Takashi Yamaguchi, Japan. ■

tude. They and ConEd are offered here in this forum as classic textbook examples of poor planning and deplorable customer service at a time when power outages of this magnitude in the U.S. should be a thing of the past.

Our *Pop'Comm* hats *are* off to the folks in the trenches: utility and telephone workers who were out there in the oppressive heat doing yeoman work while the CEOs leaned back in their chairs preparing their excuses — the right "spin" — for what could only be called a lesson in how not to supply electricity and prepare for the worst. We also salute the fire fighters, medics, police, and multitude of volunteer public safety pros who helped us through the tough times this past summer. Meanwhile, like we said last month — the clock is ticking toward 2000 — but it's *battery* operated and running quite well, thank-you.

Radio And The Internet

A special welcome to Eric Force, our new "Radio And The Internet" columnist. Each month, Eric will be talking about great online radio resources, interesting Websites and lots of good stuff related to radios and computers.

Eric is formerly a Senior Analyst in the Computer Systems Division of a Fortune 500 company. He's now self-employed as a computer consultant and application programmer. He recently joined forces with E.C. Van Der Eecken, K6QGH, to form Van Eric Antennas, builders of high-performance Medium Wave Air Core Loop Antennas. Eric's technology-related hobbies include SWLing, MW DXing, HTML Programming, and Information Retrieval Techniques. Eric, his wife Patricia, and multi-generation family currently reside in a rural southern New Jersey community. Welcome aboard, Eric! ■

The Radio Hobby Loses Alan M. Dorhoffer, K2EEK — CQ Editor

Every once in a while through life's journey, you encounter a really genuine, thoughtful, down-to-earth person. Alan Dorhoffer was such a person. Alan died July 19 from complications of cancer surgery. He was 61. He became the magazine's 10th Editor in 1976 and was also co-owner of CQ Magazine since 1979.

Dorhoffer lived in Port Washington, New York and was a ham since his teenage years, concentrating his activity on his favorite band, 10 meters. CQ Publisher, Dick Ross said of Alan, "Alan tried to focus on the 'people' aspect of amateur radio. In the magazine's 50th anniversary issue he wrote, "Ham radio is people interacting with other people . . . the act of doing, whether it's contests or awards, that's been my outlook."

Alan's illness was diagnosed only a week or so before he succumbed to it. He was not married at the time of his death, and had no children; but he is survived by an "extended family" of over 1,000,000 close friends — the world's amateur radio operators.

When someone passes, it's only natural to recall your last conversation with that person. A few weeks ago, Alan pulled me aside and asked me if I had heard about the Defense Department's new Cold War Recognition Certificate. Seems if you served during certain dates, you could request the certificate. And although Alan — a former Army medic — and I would frequently get a good laugh about something the Army had done, this, I could tell by the expression on his face, was different. He was serious about my getting this certificate — serious enough to give me a photocopy of the necessary form, urging me to "send it in right away." When my certificate arrives and hangs on the wall, it'll mean much more than either of us realized at the time.

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The Loose Connection

BY BILL PRICE, N3AVY

RADIO COMMUNICATIONS HUMOR

"I Will Give Up My Key When They . . . "

OK, class — raise your hands — how many of you got into the radio hobby *only* because it afforded you the opportunity to send and receive Morse Code? That's what I thought.

I did. Really. I swear — just as Dave Barry would — that I'm not making this up. From my seventh birthday until about my 27th, I wanted to be a ham. When he heard this, my dad — who deserves credit for most of the good things that have ever happened to me — bought me a study guide and license manual, a code key and buzzer (oscillators were complex then) and offered to buy me a transmitter and receiver anytime the motivation struck and I earned a license.

The year was 1965. Robin Williams was an announcer for Armed Forces Radio and I was preparing to graduate from high school. No, let me rephrase that. As I waited and hoped for some clerical error which might allow me to graduate from high school, my dad pulled off the single most important selling job of his — and my — life. When he was through with his pitch (and I never heard it coming), I had decided that joining the Coast Guard was about the cleverest thing I could do. I could travel, learn a skill, never once sleep on the ground, and eat well while "saving lives and property at sea."

Between the ages of seven and 18, I had learned Morse code. I could send and identify any number or letter, and a period and a comma. I could not, however, *copy* Morse code. During all that time, the only code I could ever copy was "CQ." I could also probably have copied the word "CABS" if someone had sent it to me, since I had learned A, B, and C very well and even my mom knew that an S was three dits. No one, to my knowledge, ever sent the word "CABS" on the ham bands during those 11 years — at least not while I was listening.

So — to compress history a bit — I enlisted, went to boot camp, marched, ran, and did nautical and military stuff, like tying granny knots in little bits of string called "clothes stops," which they told us were to be used like clothespins. I still don't understand how I would have tied my skivvies out to dry, but since we had no clotheslines, it never really mattered.

We attended classes, marched, and took tests to demonstrate that we had been awake and present. During our off-time, we shined our shoes and pondered the career choices before us. Scrape paint or go to school — scrape paint or go to school. Hmmm.

My first choice was to be a Journalist. That, it turned out, would require me to re-enlist twice and scrape paint for eight years while Alex Haley finally decided to retire and write *Roots*. My second choice, Parachute Rigger, also hinged on one of two men quitting or dying. All of a sudden I was standing in line, faced with a choice that would affect me for the next four years, and I was told to "pick one or move on."

I had heard that the only choices which would assure me a school and regular promotions were Radioman and Sonarman. I made those my first and second choices. I was sent for aptitude testing. I scored high in the Sonar Pitch Memory Test, but so did several others. My next test was the Morse code recognition test. "During the next several minutes, you will hear a series of Morse code characters over that loudspeaker. Write down the characters you hear, in the order you hear them. If you miss a character, draw a dash, or your answers will be out of sequence and you will score zero. Pencils up — begin."

Looking back, this code was sent between two and three WPM. I knew all the letters and numbers, but couldn't remember them fast enough before the next one came. There had to be a way. After several letters had gone by, I began writing the dots and dashes on the paper. After I'd done that, it was easy to identify them as time permitted. It worked. I scored highest — even beating out a licensed novice ham. Career counselling, immediate and brief, followed. "You have scored very high in the Morse code Recognition Test and the Sonar Pitch Memory Test. Assuming you meet all the physical and military requirements and are graduated from this basic training program, you can be guaranteed an opening in Radioman "A" school, and you have a chance of an opening in Sonarman "A" school. What'll it be, sailor?"

"Radioman, SIR!"

"Good choice, sailor. If you'd have said Sonarman, you'd be chippin' paint. Next."

Six months in Groton, Connecticut, taught me to type 60 WPM, and copy Morse code at 20 WPM — oddly enough — on a typewriter. Had I failed to learn either, I'd have served breakfast to those who could.

On my first shipboard patrol, I learned the joy of ham radio, without benefit of license. I found that procedures were not as strict as they told us in school, and there were opportunities to chat with other radiomen via Morse code. Commercial ships also monitored 500 kHz and would mail a postcard home from their next port-of-call if you asked. Late-night operators on remote shore stations would gab half the night at reduced power — to minimize the chance of being noticed.

In my four years in the Coast Guard, I never once spoke into a microphone (though I once plugged my electric guitar into the mic jack of a really hefty AM transmitter and played Semper Paratus). I grew to love CW, and still do. I built a "foot-key" one night and worked an entire watch, sending with my foot. I had to take off my shoe. My sending stunk (how poetic), but it's something to tell the grandchildren. After 25 years licensed, I have yet to make an SSB QSO.

After I got out, I was looking for a way to send and receive code, and the ham bands were the only opportunity that didn't involve moving to the coast and working in a commercial maritime radio station. A friend just about forced me to finally take the test. First WN3SKM. Then KA3BRH, and N3AVY. Yeah — I like the sound of that last one.

Note: Bill still doesn't qualify for the "How I Got Started" award, but he says he'll never quit writing because, as he puts it, "Where else could a person of my girth earn money in his underwear?"

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