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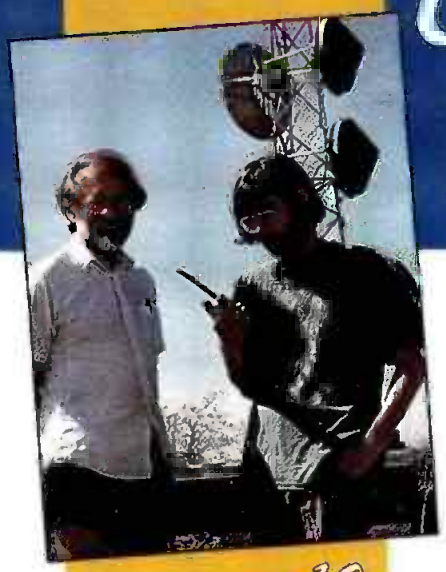

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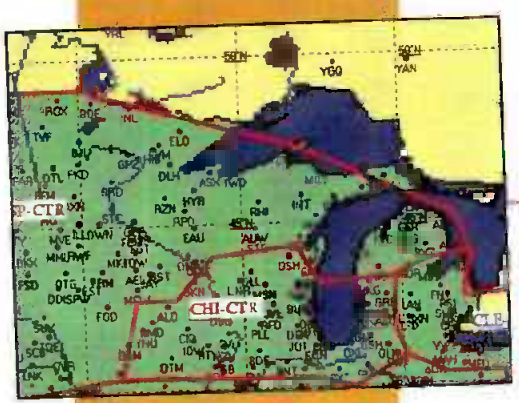

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Departments

On The Cover

Jesse Kovak checks out a vehicle at Eatontown, New Jersey's Monmouth Mall. Scanning your mall is a snap with the frequencies and tips in this month's ScanTech column on page 52. (Photo by Larry Mulvehill).

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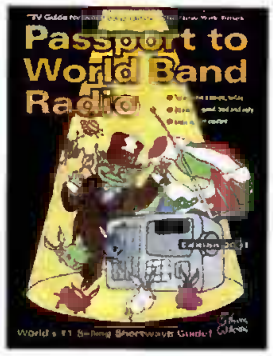

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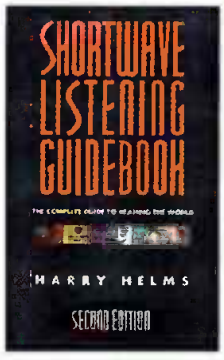

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TUNING IN

An Editorial

Inside The Mover's And Shaker's Minds

Just when I thought the FCC was beginning to get their act together comes news that they've dismissed Alan Dixon's petition to amend Section 95.413 of their rules regarding the prohibition of CB stations communicating more than 155 miles and with stations in foreign countries. Actually, I'm not completely surprised, but frankly I expected more from the Commission — more than caving in to pressure from the ARRL and, of all imaginable groups, the National Association of Broadcasters. Both commented on RM-9807, and both, I might add, were out of line in doing so. If either thinks otherwise, let them first think about cleaning up their own house, then look for other unfinished business far outside their league. Let the ARRL work on increasing ham radio's ranks, and when that job is completed, we'll talk about the CB radio service. And let the NAB return the airwaves to the general public, not mega-corporations, and speak honestly about LPFM — then, and only then should they weigh-in on the CB radio service. Imagine REACT International, Inc. weighing in on the LPFM issue or telling Billy Tauzin his shoes are on the wrong feet? He knows it, like the ARRL and NAB know they're full of baloney, but when you're living in the past, it's to be expected.

Dixon's original petition brought up excellent points; 11-meter propagation, and that allowing CB comms beyond the 155-mile limit would not fundamentally change CB's primary focus as a short-range service. Why is it that you and I know that no matter how much the politicians — and let's not kid ourselves, the FCC is chock full of politicians and lawyers — turn a deaf ear to CB, it's still a public radio service? At first glance their dismissal of Dixon's proposal is, in the grand scheme of things, not front-page news. In reality, it *is* indicative of the business-as-usual D.C. politics that surely must have our forefathers turning in their graves! Think about it for a moment. What person with an iota of common sense would even *consider* putting a radio service on HF, then tell the operators they're prohibited from talking more than 155 miles? I find it always helps to sit in a really comfortable chair with the TV and radios off with no one around when asking myself questions like this. Try it. Pretend for a moment that it's 1958 and you're the FCC chief with that proposed rule on your desk. It's early morning, you've had a smooth cup of coffee and chocolate donut, and you read the proposed "new" 11-meter rules. First thing I'd do is get the noodle-brained doofus who proposed the limitation (and other CB rules) into the office and ask him if he can count to 20 without removing his shoes. If he's successful he's fired. If he's not, he's fired. Point is, the FCC did a very dumb thing back then, and ever since with its on-again, off-again enforcement of 11-meters, on-again, off-again licensing of 11-meters, they've all but washed their hands of CB radio; sort of a marriage made in radio hell without much forethought on Uncle's part.

Today is apparently no different. In their August 18, 2000 denial of Dixon's petition by the Associate Chief, Wireless Telecommunications Bureau, the Commission said, "Based on our review of the record, we conclude that issuance of a Notice of Proposed Rule Making and the commencement of a separate proceeding regarding this matter is not warranted. Dixon's request is inconsistent with the purpose of the CB Radio Service and could fundamentally alter the nature of the service. Therefore, we deny Dixon's Petition." They go on to provide "Background" in Section II of their Order explaining the short-range intent of CB, basically giving a quick review of other CB rules, and overview of comments from CB operators saying [they] ". . . generally support the proposed rule amendment. They state that the present rule is unenforceable . . ."

Opposing the rule change, the ARRL basically said, ". . . this proposal seeks to

(Continued on page 78)

BY HAROLD ORT, N2RLL, SSB-596

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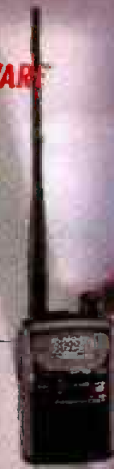

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Stop Whining!

Dear Editor:

I love the magazine and the wide range of radios you cover. I want to say a few things about the "hot" topic of the past months as a ham, CB operator, and scanner listener. If you don't want to learn the code, then don't. Become a no-code Tech. If you want to use the HF bands, then learn it. It's easy. Most people don't want to try, and that's fine, but stop whining.

I also think Ed Barnat does a great job with the "CB Scene." I think the FCC should open up the freeband frequencies. I wish Ed would print more radio modifications and tech tips. Most hams I know started in CB and some of us still enjoy it.

Carl Click
Troy, Missouri

Freebanders: Rampaging Radio Outlaws?

Dear Editor:

I have just finished reading your editorial on CB freebanders. You make us out to be outlaws raping and pillaging villages like the Hells Angels on a drunken rampage. The fact is, I and thousands of others around the world have been enjoying peaceful and interesting conversations for decades on the so-called freeband above and below the 40 allotted channels. In fact, conversations are far more sane and interesting than with most of the local CBers. At least the people I've talked to around the world don't throw carriers on me, curse at me or think they own the frequencies. If you listen to them you will find it hard to tell the difference between them and ham operators. Freebanders are very serious radio operators. They treat the frequencies and each other with respect and international courtesy. It is actually refreshing to flip the band switch to the freebands and hear real radio at its finest.

If the FCC would just wake up to the FACTS, they would realize they have a gold mine just waiting to be had. All of those who use the freeband have heard for years that these frequencies are assigned to other users. If I can talk to and hear clearly from every continent in the world, then how is it that in the 30 or more years I have monitored the freeband, I and everyone else I've spoken to have never heard anything or anyone else but CB Freebanders? If the FCC would just open these frequencies for what they're being used for, they could test and license them as clean as the ham bands. Ham operators have megahertz galore to have real radio fun with. All we are asking for is two measly little megahertz from 26 to 28 MHz to enjoy.

You ham operators are so spoiled with all of your frequency and power privileges, then you complain that the FCC has lowered the standards for ham licensing and it is letting the CB riff-raff take over your bands, yet you don't want the cure for your problem to become reality. If the FCC legalizes the freeband, more and more of us would leave you spoiled little boys alone.

The 40 CB channels are overcrowded with idiots who want to throw carriers, curse, own, and control the channel they talk on. Don't get me wrong as I have met a lot of nice people and longtime friends on CB, but there are 50 times more nasty rotten idiots than nice people. Does the FCC do anything about them? NO!! They just keep right on transmitting forever until some people get fed up enough to have an antenna party. And then they go to jail for destruction of private property, while the idiot gets another antenna and continues harassing on the airwaves. But the freebander who is just having fun talking to people with respect is getting his equipment confiscated, fined heavily and persecuted unjustly. What is wrong with this picture?

Are freebanders doing something illegal? YES! Are they hurting anyone? Absolutely not. Persecuting them is not the answer. Changing a very unnecessary and outdated law is the answer. If the freeband was busy with the kind of communications that the FCC says is supposed to be there, then you would have a good argument. But that is just not the case. The only people on the freeband are freebanders, hurting and interfering with absolutely nobody. It is obvious that the people have spoken and they want the bands for hobby and international fun. Why can't the FCC just let them have their fun legally?

David (Name with held)
Pennsylvania

Dear David:

You obviously feel very passionately about freebanding - passionate enough to type a very long letter and sign your name. For that, you are commended. However, you still bring me back to the '60s when antenna parties were as common as channel hogs on CB. It seems that some things never change. And like it or not if I were the judge, the folks caught and accused of destruction of private property would go to jail for a long time and be fined accordingly. And if an errant CBer - or any other radio operator - were before me as the judge, he or she too would face the music. It matters not how or where the victim in such a case is operating or who he or she is insulting; if you destroy private property, you're a menace to society. Frankly, what makes you think someone capable of carrying out such an act isn't capable of more serious behavior, like cutting someone's throat they disagree with? Pretty serious stuff, I'd say.

Think about this for a moment, David. We're living in a time when countless gillions of dollars are spent on portions of the radio spectrum by folks that have very, very deep pockets. And you're asking again for what? Two megahertz for fun? In an ideal world that might be possible. Dream on.

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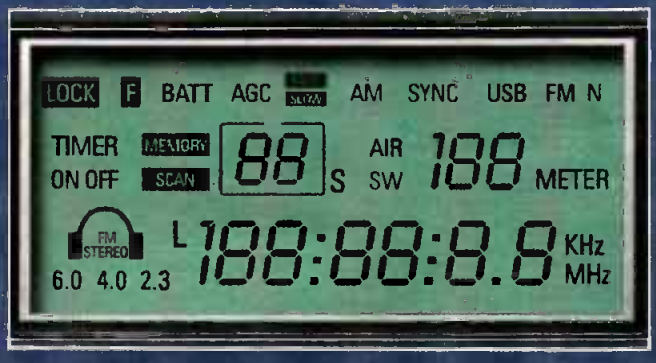

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Conquering EDACS: The Official Behind-The-Scenes Story

What Was Impossible To Monitor Is Now Reality

By Terry Brennan and Sean Sullivan

Trunked radio systems have changed the nature of public safety communications over the past decade. Unlike conventional radio systems, where each agency has a dedicated communications channel, trunked systems pack numerous channels onto a small set of frequencies. Computers allocate frequencies in real-time to individual conversations or transmissions, and microcontrollers in agency radios automate the frequent frequency switching that is needed. Scanner owners were left behind by this new technology.

In 1999, Uniden introduced the first scanners that could scan one of the two major trunked radio standards, EDACS (Enhanced Digital Access Communications System). The story of the development of EDACS-tracking scanners begins eight years ago, near Cape Canaveral, FL at news/talk radio station WTAI. News director Wayne West had a strong personal and professional interest in monitoring Brevard County's radio system. In addition to his journalistic interest, he worked part-time as a sheriff's dispatcher, and his wife was also in the sheriff's department. When the county installed a new EDACS system in 1992, he found the new signals impossible to monitor.

One of us (Terry Brennan) was chief engineer at WTAI, and West asked if there was any way to monitor an EDACS system. Although the frequency-hopping characteristic of trunking was a serious handicap, there was actually a more serious problem when using a conventional scanner — a variety of spurious signals unrelated to actual system traffic or operations. Loud beeps made it unpleasant to leave a scanner at a normal volume setting, and an unnecessary carrier at the end of transmissions made scanners "lock" on useless frequencies. Brennan modified the radio station's scanner to eliminate the most irritating of these unwanted signals.

Brennan, as a long-time scanner listener himself, thought about ways to help other scanner users deal with the challenge of EDACS radio reception. He created a new and more sophisticated circuit to dynamically minimize the disruptions of monitoring an EDACS trunked radio system, designed to be installed in any scanner. With this 'G/Wiz' circuit operating, reception was like listening to a conventional system again, although all of the agencies were still mixed together. This proved to be very popular with local TV crews, hobbyists, and volunteer firefighters, and it is still sold nationally through Scanner Master.

The next step, which was much more complex, would be to design a system that would let users selectively track different agencies within an EDACS system. This would require computer control, based on reception of the "control channel." One frequency in every EDACS system is devoted to a continuous transmission of digital data, and EDACS radios use this information to know which agencies are transmitting on which frequencies.

In early 1996, Rich Barnett at Scanner Master asked Brennan if he could create a technology to track EDACS transmissions. This was an exciting challenge. Starting from scratch, Brennan analyzed the signals sent by the EDACS "control channel." Developing such a system was no simple effort, since there was no public information on the encoding of the control channel, and the format was not obvious. In his minivan, using a 486/33 MHz desktop computer with a sound card, Brennan digitally recorded transmission samples from different EDACS systems around the U.S., noting exactly what the system was doing during each sample. Capturing certain significant, but rare events, like emergency button activations, took patience. As data was collected from numerous systems it could be correlated to observations.

Terry Brennan and Sean Sullivan testing the prototype BC245XLT on Mt. Wachusett, north of Worcester, Massachusetts in early 1999.

Like Codebreaking

The process of deduction was like codebreaking. He wrote software to translate the audio to data, and then to interpret and analyze the data. Eventually he understood the system well enough, from observation alone, that his software could 'read' recordings of the control channel and print detailed logs of system activity. At this time, one of us (Sean Sullivan) became involved in the project. Sullivan was in his junior year at Amherst College, working toward a degree in computer science and astronomy. As Brennan started to unravel the data format, he asked Sullivan to write a computer pro-

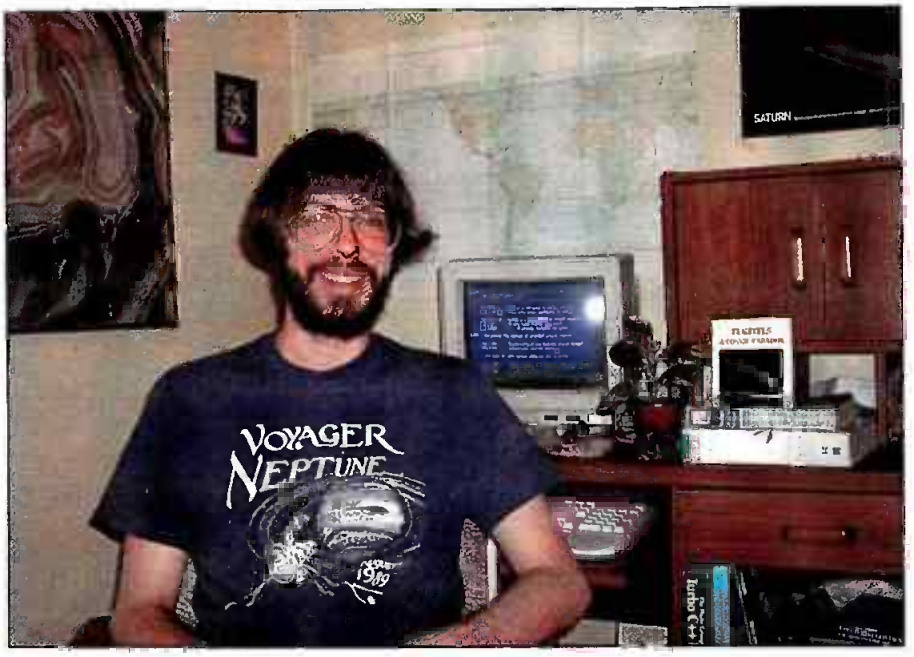
Terry Brennan recording data in his minivan.

gram that would track the system in real time. The program began as a passive display, showing the talkgroups active on each system frequency. Talkgroups were shown in the AFS format, a notation based on Brennan's observations of the EDACS binary data format, which grouped various agencies and fleets in specific patterns.

There were no EDACS systems near Amherst, located in rural western Massachusetts. The nearest systems were about 50 miles away in Worcester, MA, and Hartford, CT, and the signals were very weak. We found that there were a few odd and very localized "hot spots" around town where signals were much stronger. One such spot was next to a railroad bridge near the college, and another was behind a local mall. We worked for hours in Brennan's minivan parked in the Massachusetts wind and snow. Inside the van, we sat buried in radios, cable, papers and computers, with a Yagi antenna facing out the window, taking observations and interactively writing and debugging software. Software is not always created at a tidy desk.

Controlling The Radio

As we crafted a reliable reception system, the next step was to control the radio. Brennan built demodulation hardware that worked with a PC-programmable radio (a Yaesu FRG9600), and Sullivan wrote a set of software tuning functions to control the radio. Despite the fact that Sullivan was working on his senior thesis at the same time, we finished the prototype in mid-



Sean Sullivan at his desk.

1997. The resulting 'G/Trac' software and hardware accurately tracked EDACS systems. The system was very nice, but most scanner users would find it inconvenient to carry a laptop computer everywhere. Our goal was to make EDACS tracking widely available in a scanner.

After talking with various scanner manufacturers about our technology, our group reached an agreement with Uniden in 1998 to add EDACS tracking to the TrunkTracker series. This was a natural match. Uniden's product managers and senior executives understood the importance of trunking in the future of scanner technology, and they had already developed the first Trunk Tracker scanner capable of receiving trunked systems using the Motorola standard, which is different from EDACS.

Spring 1999

For the next year, we collaborated with engineers at Uniden in Dallas and Japan to refine the EDACS tracking technology and integrate it into a new radio design. We were both living in Boston, and we found a good signal reception location near MIT for the nearest EDACS system (in Worcester, MA). In contrast to other test locations we had used, we found that it was pleasantly inconspicuous at MIT to have a minivan filled with electronics and a Yagi sticking out the window.

"The availability of trunk-tracking scanners is not only valuable to radio hobbyists, but also to public safety professionals..."

In May of 1999, we took the prototype BC245XLT to the top of Mt. Wachusett, and heard it smoothly track three different EDACS systems. The first EDACS tracking scanner was a reality. In the summer of 1999, the BC245 came on the market. This was followed by the PRO-94 and PRO-2052, sold through RadioShack. The Uniden BC-780 is to be released this year. After all the time and effort involved in deciphering the transmission format and developing a tracking system, it is very satisfying to see the technology reaching a broad market.

The availability of trunk-tracking scanners is not only valuable to radio hobbyists, but also to public safety professionals who use the equipment to stay aware of activity in nearby towns that use trunked systems, or to keep in touch with their own agencies while off-duty. Indeed, some of the most enthusiastic users are volunteer firefighters.

Trunking: Here To Stay

We all know it's here to stay, and makes for efficient use of the spectrum, since multiple agencies can use a small number of frequencies. It allows for a lot of flexibility for each agency, since there are a virtually unlimited number of talkgroup codes available. And now, what once looked like a serious danger to the future of scanning has been conquered, and the hobby has moved into the age of trunked radio reception. ■

Editor's Note: Broadcast Engineer Terence Brennan (KC4YDM) is a member of SBE and NARTE. Sean Sullivan (KC4YES) graduated from Amherst College and is a consulting software engineer. They were jointly awarded U.S. Patent 5,956,648 for trunked scanning, and have other patents pending. Their Website, gtrac.ztn.net, presents information about EDACS systems and the TrunkTracker scanners. The authors can be reached at gtrac@golux.org, and Scanner Master can be reached through their Website at www.scannermaster.com or at 800-722-6701.

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Ultimate Features! Auto tuning! The Grundig 400PE has auto tuning on shortwave and stops at every signal and lets you listen. With the exceptional sensitivity of the 400PE, you can use the auto tune to catch even the weakest of signals.
Incredible timing features! The Grundig 400PE can send you to sleep listening to your favorite music.
You can set the alarm to wake up to music or the morning traffic report, then switch to BBC shortwave for the world news.
The choice is yours!

Powerful Memory! Described as a smart radio with 40 memory positions, the Grundig 400PE remembers your favorites-even if you don't!

Never Before Value! Includes deluxe travel pouch, stereo earphones, owner's manual, external antenna and a 9 volt Grundig AC adapter. Uses 6 AA batteries (not included)

Style • Titanium look

Shortwave, AM and FM • Continuous shortwave from 1.6 - 30 MHz, covering all existing shortwave bands plus FM-stereo, AM and Longwave. • Single sideband (SSB) circuitry allows for reception of two-way communication such as amateur radio, military, commercial, air-to-ground, and ship-to-shore.

Memory Positions • 40 randomly programmable memory positions allow for quick access to favorite stations.

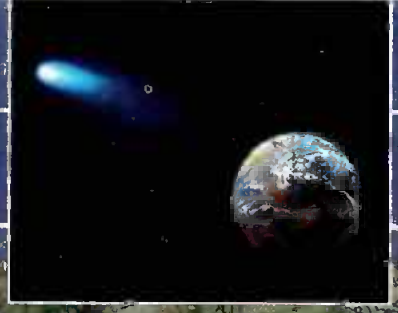
Multi-function Liquid Crystal Display • The LCD simultaneously displays the time, frequency, band, alarm and sleep timer.

Clock, Alarm and Timer • Two alarm modes: Beeper and radio.
• Dual clocks show time in 24 hour format.
• Sleep timer programmable in 15 minute increments.

Dimensions: 7.75" L X 4.5" H X 1.5" W

Weight: 1 lb. 5 oz.

- Best in Value



Yacht Boy 300 Professional Edition (YB 300PE)

Power and Performance with the Affordable Yacht Boy 300 Professional.

Designed for the traveller, the titanium look digital radio provides incredible power and performance for an incredibly low price! Packed with features, this radio is an excellent value, accompanied with 3 AA batteries, AC adapter, earphones, supplementary Antenna and carrying case!

State of-the-art features include:

- Digital tuning with 24 user-programmable memory presets
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- Illuminated multifunction LCD display screen
- AM/FM stereo via earphones
- Clock, alarm and 10 to 90 minute sleep timer
- Digital tuning display
- Direct frequency entry
- DX/ local selector
- Titanium look finish
- External antenna jack
- Dynamic micro speaker
- Earphone jack
- Telescopic antenna

Dimensions: 5.75" L × 3.5" H × 1.25" W

Weight: 9.92 oz

by GRUNDIG

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RADIO RESOURCES

Interesting Thoughts And Ideas For Enjoying The Hobby

Speaking Of Audio: Great Gifts For The Holidays!

It's holiday time, and whether you are into CB radio, CB and scanning, scanning CB and ham, or are just an all-around general radio nut like I am, you know the importance of those relatively inexpensive radio add-ons that make listening and speaking over the airwaves more enjoyable, and more functional — in short, better!

Some of these transmit-and-receive accessories might also make great holiday gifts at your local radio club gathering. Each of these little gems I have personally tried out myself, and I will tell it like it is on which ones work, and a few that work well, but only under certain circumstances.

Similar looking base mikes from Pryme (left) and Adonis (right).

Inexpensive Speaker

Need more output from your handheld when you are using it mobile? Here's an inexpensive amplified speaker box operating from a battery (or 12-volt DC) that gives you ear-splitting audio from any handheld two-way radio or scanner. It's made by well-respected Naval Electronics (Tampa, Florida; 813-885-6091), and has a transistorized one-watt amplifier to up your audio HT out. You can plug the box into a cigarette lighter receptacle, or run it off of four "AA" batteries. Connect the supplied stereo speaker jack to your handheld earphone or speaker output jack, and leave the unit turned off for a regular external speaker sound — nice and mellow. When you switch the Naval HTS-3 amplified speaker on, it is ready to dramatically increase your audio out. In the squelch mode, the speaker will go into a battery-saving sleep mode if it doesn't detect activity for more than 10 seconds. But as soon as the squelch breaks open, stand by for a loud blast of crisp audio.

This equipment also offers a tape trigger. When the radio channel becomes active and the squelch breaks open, the Naval HTS-3 will trigger the tape recorder. The recorder will stay triggered five to 10 seconds after the channel shuts down, ensuring that you don't lose any chatter when listening to fast-paced simplex calls. The unit is quite fast on pick-up, and about the most you lose is the first syllable. Even if you leave the Naval speaker turned off in the normal bypass mode, you can sure improve the audio of your small-speaker equipment.

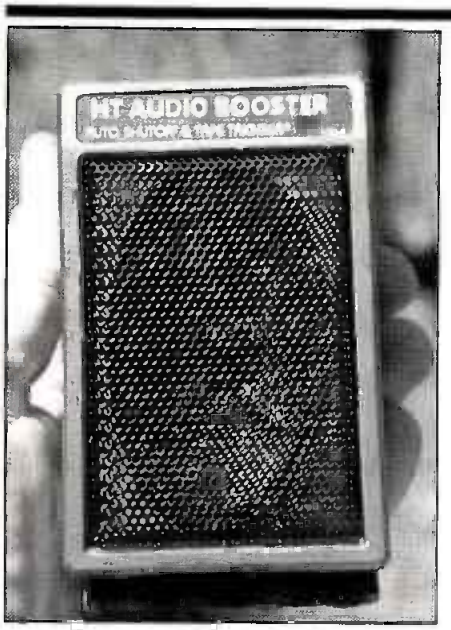
Built-in battery compartment for the Naval Electronics speaker system.

DSP Speaker

If you are into shortwave listening or worldwide ham radio operating, you can appreciate digital signal processing (DSP) and what it can do to reduce the noise floor from covering up weak incoming signals. But DSP is not magic — doing YOUR best to minimize noise will certainly help any incoming weak signal get through.

A speaker called "Clear Speech" is a digital noise-canceling speaker using digital signal processing technology with everything built into the small speaker box. AM-Comm, Inc. (Lakeside, Montana, 888-803-5823) claims that their DSP circuit could remove up to 90 percent of background noise from received audio. I have tried their clear speech speaker system on the 75-meter, very noisy, ham band, and it takes my local powerline noise and drops it to nearly S1. Out of nowhere, I can again begin hearing incoming voice and data signals.

BY GORDON WEST, WB6NOA



The Naval Electronics handheld speaker for any portable radio.

Pryme/ADI base station mics are great performers when away from an antenna.

Although this is a $150 box, its built-in, active, digital signal processor with adaptive noise removal really helps pull out the weak ones. By the way, AM-Comm is the same company that makes the Yaesu motorized antenna controller that works the Yaesu ATAS-100 high-frequency antenna system with ANY transceiver.

Rich "Base"

Are you into AM shortwave listening and want to squeeze out the very best of audio characteristics? If so, the Alpha Delta variable-response speaker might be just the thing for you! (Alpha Delta, 888-302-8777) Their Model VRC is a 5-watt, tuned-port speaker with a built-in audio amplifier and audio equalizer, plus peak and notch filters to improve audio response and kill the heterodynes. The big speaker box is heavy, constructed of aluminum, with all sorts of knobs and colorful light-emitting diodes to show you exactly where you have all of the controls set. It requires 13.8 volts DC, and comes with a wall plug power adapter.

". . . it's like listening to AM signals in a concert hall."

I use the big Alpha Delta VRC for shortwave monitoring, and it's like listening to AM signals in a concert hall. All of the adjustments allow me to tailor the audio exactly as I would like to hear it, and there is even provision for plugging in a set of headphones. It's a couple hundred bucks, but if you're looking for the ultimate in reception and the capability to notch out a whistle, the Alpha Delta VRC does it easily.

Alpha Delta's big amplified base station speaker.

Better TX

Plenty of people I work on ham high frequency comment about the "depth" of my transmit signal. They usually ask what type of microphone I am using, and I tell them it's the new Heil Goldline dual-element studio mike. Bob Heil has found that 2 kHz is the hot spot for good transmit audio, and provides a 6 dB, 2 kHz, mid-range peak with a microphone working from 60 Hz to 16 kHz. But the beauty of the mike is the ability to select from full fidelity to DX capabilities with the flip of a switch. In the "DX" mode, your voice sounds more pinched, but it really seems to stand out in the pile-ups. I normally run it in the mellow mode unless I am trying to establish a specific contact that can't quite make out my call sign.

You can order the Heil microphones from your local radio dealer, but you MUST tell them what type of radio the

The Heil mike may be ordered to match any type of two-way radio.

The Heil dual ear-headset for dispatch and contest operating.

The popular Adonis base mike works well with almost all radios.

ADI/Pryme mobile boom microphone with shifter-mounted PTT switch.

An external speaker will enhance your operating pleasure.

microphone is intended for so that you end up with the right mike cable kit. Same thing with the Heil Pro headsets; the dealer from whom you order the equipment MUST pull the right cable adapter to connect directly to your specific CB or ham radio, or for that matter, aeronautical, marine, or business band radio.

Speaking Of Mikes

We haven't seen the big equipment manufacturers doing much with new fancy base microphones, but we certainly have seen some snazzy base microphones from Adonis USA, a Division of RF Limited, as well as Pryme, also known as ADI, Inc. Both companies have engineered similar-looking base microphones; and as long as you are certain to order the right base microphone with the right cable connection for your particular style of two-way radio, you should be all set to add your new base mike with plug-and-play capabilities.

But there is something you need to know about base station microphones as an aftermarket product from Adonis and Pryme — things may look better than how they sound! Just looking at the big needle swinging from left to right is no indica-

tion that what is going out over the airwaves is the nice, sweet sounds of your voice. What you may be putting out is syllables of garbled modulation that even your best friend won't know it's you on the channel.

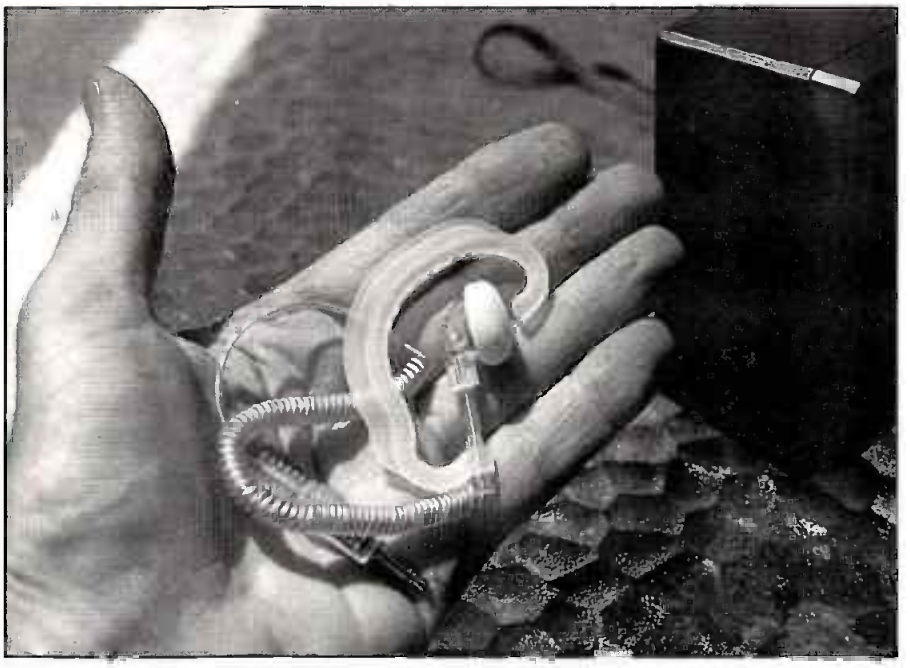
The problem? A common one: radio frequency energy from your antenna system is getting back into the sensitive preamp sections of these new base station mikes. These microphones are made with a plastic body, so there is little to keep the RF out. If your antenna is within 15 feet of the mike, better listen to your signal with a companion receiver before you start announcing your call sign over the airwaves.

But the problem is not futile. You can go to any RadioShack store, or Palomar Engineers (Escondido, California; 760-747-3343), and pick up a set of ferrite and iron powder cores, as well as their RFI tip sheets that show you how easy it is to get the RF out of these new fancy base station mikes. Depending on how much power you're running, how well your antenna is matched, and how far your mike is away from the antenna, the Palomar cores may work for you extremely well. Without them, be prepared for garbled modulation. You won't know it until you actually listen to yourself, or someone comes on the air and makes a blanket statement that whoever is transmitting is totally unintelligible. You just can't tell by looking at the meter!

Safety First!

Here's something for safety. Both Pryme and Adonis offer a $100 vehicle gooseneck mike with a PTT button that goes close to the steering wheel. It allows you to maneuver your vehicle yet stay on the air without having to dedicate one hand to holding a mike and pushing the PTT button. I have operated the Pryme mike, and it works well in canceling out wind noise, and picking up my voice to get it onto the airwaves. But again, make sure to get the right interconnect cable to the particular CB radio or ham radio you wish to hook into this system.

Finally, if you work a lot of parades or public service events, explore all of the different ADI/Pryme (Brea, California 800-666-2654) headsets, VOX headsets, speaker mikes, speakers, and G-man invisible (almost) curly-cord headphones. But again, when you order these products through your dealer, make absolutely sure you are getting the right



The Pryme "Stealth" undercover earphone.

terminating plug for your particular radio. Those of you with Kenwood portable equipment know that a speaker plug for other rigs probably will not fit the extra small Kenwood speaker jack. But fear not, because Pryme/ADI has a plug just for you.

Have a great holiday season, and treat yourself to some nice accessories that I have tried out — they all work well! ■

CLANDESTINE COMMUNIQUÉ

Tuning In To Anti-Government Radio

Hot Kurdish Activity YOU Can Hear!

The National Radio of the Saharan Arab Democratic Republic seems to have settled on the use of **7450**. Unfortunately, sign-on is at 1800 and runs until 0000 or later. North American listeners will have the best chance during the latter hour or two of the schedules. Broadcasts are in Spanish and Arabic at various hours throughout the schedule.

Radio International is a Kurdish-related station affiliated with the Kurdish Workers Communist Party or some similar name. It is currently active on **15550** from 1700–1730 and apparently aired via a government transmitter in Moldova.

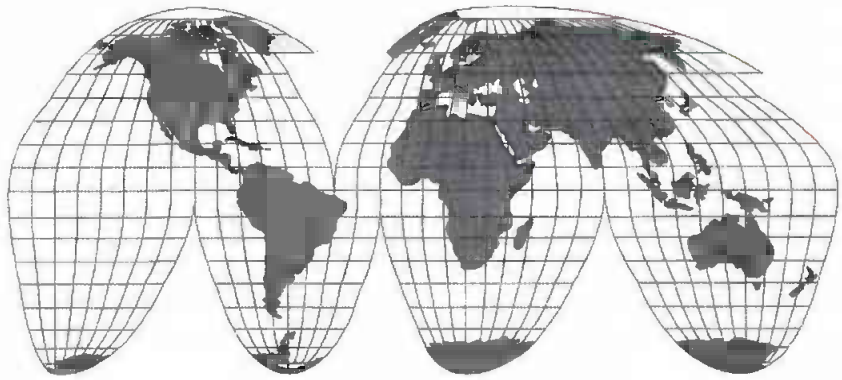
Voice of the People of Kurdistan is now using **6995** from sign-on at 0230 or somewhat earlier. If you're lucky enough to bag this one and want to write to them, the address is Patriotische Union Kurdistan, Postfach 210231, 10502, Berlin, Germany.

The Voice of Iraqi Kurdistan is using **7135** from 1600 or so until closing shortly after 1930 UTC, airing programming in both Kurdish and Arabic. That schedule is not easy for North American listeners, but you can try for a second sign-on at 0230 or shortly thereafter (this station doesn't seem to be very concerned about timing).

The Voice of the Iraqi People broadcasts in both Kurdish and Arabic on **5850 and 7135** from 0300 to 0700 and 1500 to 1900. Note that 7135 is also used by the Voice of Iraqi Kurdistan above, which means it's likely both stations are aired from the same site.

The anti-Vietnam station **Que Hong Radio** is now using **12150** for its Vietnamese language programs from 2300 to 2359. This is believed to be coming from a transmitter owned by one of the governments in Central Asia.

Radio Tele-Liberte (also known as Radio Liberty), the clandestine beaming to the Democratic Republic of the Congo uses **12925** until 1800, when it switches to **15725**. Some East Coast-based listeners, at least, have heard the latter frequency, but several checks haven't turned it up at our Midwest location.



The Voice of Oromo Liberation (anti-Ethiopia) is using **15715**, via Julich, Germany, from 1700 to 1800.

Voice of the People, the new sorta-clandestine aimed at Zimbabwe is apparently using dissatisfied staff members from the Zimbabwe Broadcasting Corporation. The programs are being relayed by the Radio Netherlands station in Madagascar. As is all too often the case, the operational schedule isn't favorable to North American listeners: **7215** from 1700–1730 in the Shona language and 1915–1945 in Ndebele.

Anti-Iranian **Voice of the Mojahed** is now using **8850** (variable) and **9150**, also variable. "Variable" in this instance, means rather widely so — by as much as 50 kHz. The schedule, too, seems pretty jittery — some minutes before 0130 to some minutes before 0530. The same holds for its 1430 to 1730 run.

Radio Rainbow — the Voice of Peace and Brotherhood, beamed to Ethiopia, airs on **9855** Saturdays (UTC) from 0100–0200 and **5995** Saturdays at 0900–1000. Also Fridays from 1600–1700 on 15105, all via Julich, Germany. This effort is run by something called the Research and Action Group for Peace in Ethiopia and the Horn of Africa. The address is RAGPEHA, P.O. Box 140 104, 53056, Bonn, Germany.

The Voice of Ethiopian Salvation uses **15365** (via Germany) from 1600 to 1700. Check **15175** Tuesdays and Fridays at 1630 to 1700 for **Radio Freedom — The Voice of the Ogadeni People**, broadcasting in Somali, via Julich, Germany.

Another one to look for is the **Voice of Democratic Eritrea**/Voice of the Eritrean Liberation Front Revolutionary Council, also via Juelich. Its current schedule for broadcasts in the Tigrigna language is Sunday UTC from 0100–0200 on **9855**, Saturdays from 1300 to 1400 on **6045** and Mondays from 1600–1700 on **15365**.

Dave Jeffery in New York finds the U.S. government's **Radio Free Asia** service in an unidentified language on **15510** at 1629.

Stewart MacKenzie in California bagged a tentative on the Korean clandestine **Voice of National Salvation** on **4120** at 1155 with a man talking in Korean and apparent interference from jamming.

That's it for this time. Remember that we're always very glad to receive your informational input, including loggings of clandestine or semi-clandestine stations, details on any clandestine QSLs you may receive, any background information on the groups and organizations which back or operate such stations which you may receive or otherwise run across, station addresses and station or organizational website URLs — in short, whatever you encounter that would interest other clandestine radio enthusiasts. Thanks for your continued support and cooperation.

Until next month, good listening! ■

BY GERRY L. DEXTER

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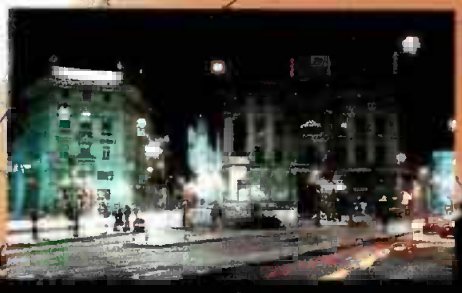
...while in the comfort of your own chair.



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For the avid enthusiast, the top of the line R8B offers serious performance with Selectable Sideband Synchronous Detection and five built-in filters. Available at local dealers or factory direct. Size: 13.13" L x 5.25" H x 13" D.

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For the listener on the go, the Grundig Satellit 800 worldband receiver provides all the advanced features of a table top unit. It is battery powered, portable and includes an AC Adapter and FM Stereo Headphones. Size: 20.5" L x 9" H x 8" D.

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DRAKE

THE RADIO CONNECTION

A Look Behind The Dials

Who Wants To Build A One IC Radio?

I was wondering if there is interest in a simple one–IC TRF-style integrated circuit radio. At one time, the popular ZN414 chip could be had for a few dollars, but the device is no longer in production. This has left a lot of experimenters high and dry, but there is a substitute chip, the MK384, that will work as a direct replacement. Unfortunately, they have to be ordered in quantity, from Hong Kong. I'd be willing to stock up with 50 or so devices if I knew there was enough reader interest so I could at least break even on the deal! The part would cost one or two dollars, plus actual USPS shipping charges. This little chip is ideal for solar-powered experiments — it will run from a small 1-1/2 volt N cell for a very long time! This would be an ideal Science Fair or father-son Cub Scout type project as well. Drop me a line if you have any interest.

Along the top are four boxes for Philmore model 7002 fixed detectors. Just below the boxes are three of the cylinder-shaped 7002 detectors. At lower left is a fixed detector by an unknown manufacturer — a clear cover protects the cats whisker and galena crystal. The device with two mounting ears, second from the left, is an early Erla fixed detector. At bottom right are two views of another style of fixed detector from an unknown manufacturer. A small peephole allows viewing of the setting, and I assume some limited adjustment. (From the author's collection.)

Proton's Mystery Crystal Set Challenge

This month we continue our 1932 Mystery Crystal set project. While Proton, the chap who authored the original newspaper column, described his very unusual crystal set's performance as being mystifying, I suggest his chagrin resulted from his erroneously hooking up the ground and antenna connections while first trying out a set, only to discover that the set worked better when improperly hooked up!

A Replica Fixed-Crystal Detector

Proton used a fixed galena detector in the Mystery Set. As kids we played with crystal sets and probably used either a germanium point-contact diode such as the 1N32A, or an adjustable type detector. Adjustable detectors featured a fragment of galena, which is lead ore, that is probed with a fine wire, called a cats whisker, to find the hot spot on the crystal surface that gives the loudest and most sensitive detection. The galena ore was normally set in a special metal slug made from Wood's metal, a special alloy that *melts* well under two hundred degrees F, that is below the boiling point of water. Subjecting galena to higher temperatures will cause loss of sensitivity, or even worse, melting! So folks claim good luck using molten solder in wood forms to mount their own galena detectors, but I fear this risks damaging the sensitivity. You've probably seen Wood's metal in novelty stores and never realized it, where tricksters could purchase spoons made of the material that would magically melt when immersed in hot tea or coffee! The slugs are sized so one-size-fits-all; thus regardless of the manufacturer any brand of galena crystal would be compatible in any competitor's crystal stand.

All galena ores contain some sulfur, but the best galena for detectors is a galena ore called steel or argentiferous, galena. It is so named because it contains a small percentage of silver ore. Steel galena features a fine crystalline surface structure resembling a section of fractured steel. You can buy a chunk of galena from a mineral dealer, but you will find that not every sample of galena ore will produce good detectors; and not all surfaces on a good ore sample will yield useable detection properties on all of its surfaces. The best material for cat whiskers is 24- to 30-gauge phosphor bronze or silver wire. Heavier gauge wire was often used for other types of detectors, such as silicon or iron pyrite (fools gold or iron sulfide), but the finer gauge wire prevents eventual damage to a galena detector caused by continual probing of the surface while searching for the most sensitive point. I've used brass wire sold by the local hardware for hanging small picture frames to make my own cat whiskers.

Galena detectors were very popular with radio experimenters because they were cheap, one of the most sensitive detectors available at the time, and could be purchased for a few pennies from the local radio emporium or from hundreds of

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

Table 1: Common Minerals That Detect Signals

Common Name	*Chemical Composition*
Anatase	Titanium Dioxide
Bornite	Copper-Iron Sulfide
Cerusite	Lead Carbonate
Chalcocite	Copper Sulfide
Chalcopyrites	Copper-Iron Sulfide
Copper Pyrites	Copper Sulfide
Domeykite	Copper Arsenide
Galena	Lead Sulfide
Hessite	Telluride of Silver and Gold
Iron Pyrites or Fools' Gold	Iron Sulfide
Molybdenite	Molybdenum Sulfide
Niccolite	Nickel Arsenide
Octahedrite	Titanium Oxide
Psilomelane	Manganese Manganite
Stibnite	Antimony Sulfide
Zincite	Zinc Oxide
Zirconium	Zirconium

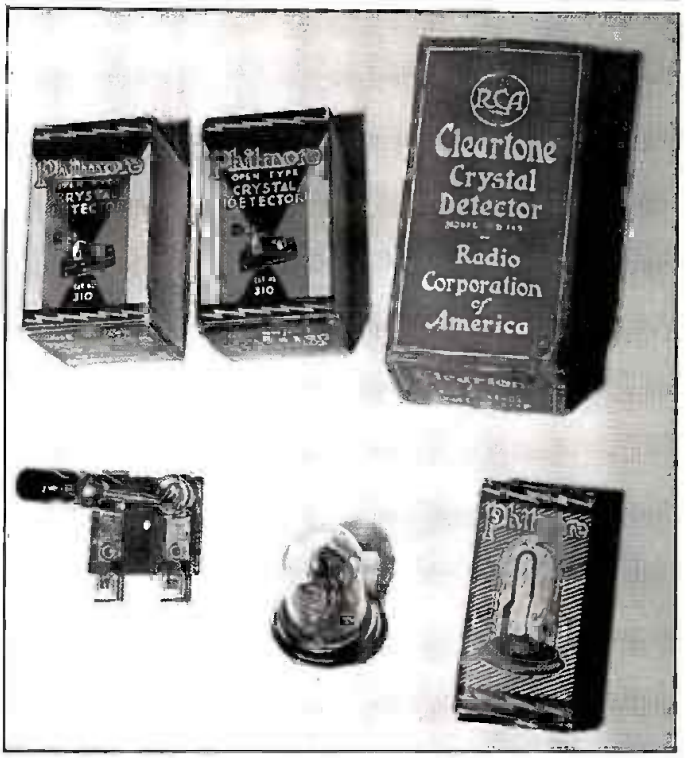
mail order outlets. Despite that these detector crystals were invariably all plain or argentiferous galena, manufacturers invented colorful names and equally colorful advertising claims that their detectors were the best available! Galena detectors were often packaged in decorative tins that are now collectibles in their own right. By the way, if you have any vintage galena detectors in your collection that have apparently lost sensitivity, I've found that gently scrubbing the galena surface using an old toothbrush and alcohol will usually bring them back to life! Apparently long term exposure to the atmosphere forms an alcohol soluble surface-oxide or film that impedes conductivity.

Early commercial wireless stations preferred detectors using iron pyrite, or carborundum. Carborundum is silicon carbide, a man-made product produced in high-temperature electrical furnaces. Carborundum was produced by the Carborundum Company in Niagara Falls, New York. While Carborundum was primarily used to alloy various kinds of steel, the company also marketed the product as a radio detector. These detectors offered several advantages: they were probed by a far stiffer cat whisker wire under higher pressure, and held adjustment over longer periods of time without being bothered by vibration or occasional bumps. Also, the galena detectors were most prone to burnout from the station's spark gap transmitter. Many other common minerals, shown in **Table 1**, are also capable of detecting radio signals.

Other early detectors used two mineral surfaces in contact with each other. The Perikon detector is perhaps the best known example of this type of detector. Perikon detectors popularly paired chalcopyrites and zincite in combination. The Perikon detectors were also fairly immune to vibration problems.

Fixed Detectors

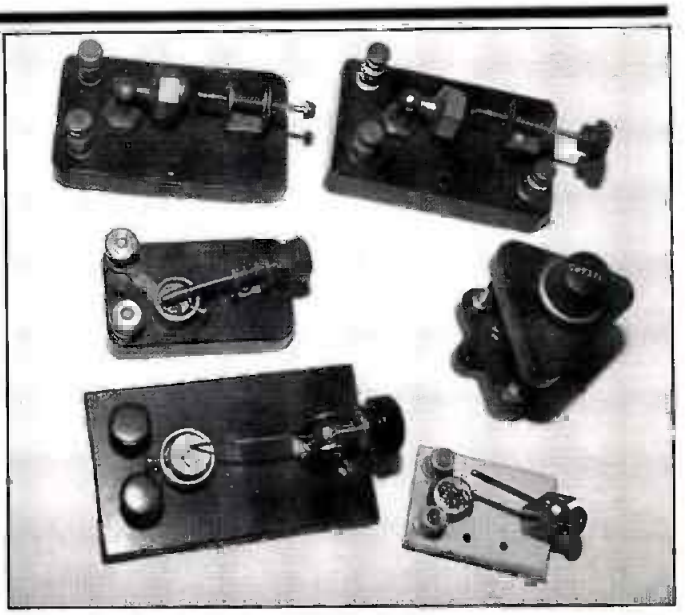
Carborundum detectors were mounted in cartridge-like holders. Carborundum detectors required a small bias voltage to work at their best. Often the Carborundum detector was sold as



Two boxes housing mounted Philmore model 310 adjustable detectors. One of the model 310 stands is shown just below the two Philmore boxes. At top right is a box for an RCA Cleartone crystal Detector. Although the box is empty, the vintage container itself has collector value as a display item. At lower right is a Philmore model 309. Although it was sold as a fixed detector, the glass dome could removed allowing adjustment to the cats whisker, or replacement of the galena crystal. This Philmore 309 also is shown with its original box which greatly adds to the value. New-In-Box (NIB) vintage detectors are very collectable. (From the author's collection.)

More Philmore crystal set components. At left is a box for the Phimore model 7004 mounted galena crystals. Several 7004 galena crystals, mounted in Wood's Metal, are shown. At center is a Philmore model 7010 unmounted crystal detector stand. This is very similar to the model 310 shown in top photo, but it did not include a mounting board. A builder would most likely assemble this detector on a bakelite front panel. (From the author's collection.)

Early galena crystals and related advertising and packaging are becoming very collectable and sought after. At top left is a metal tin for Cymex brand Hertzite crystals, a fancy name for plain old galena. Modern Radio Labs supplied materials, literature, and kits for several generations of crystal set builders. Shown are several MRL envelopes; at top center is an envelope with two galena crystals and cats whiskers. Below are two more MRL offerings for iron pyrite detectors and two special cats whiskers for these devices. Each envelope is priced at 25 cents. At top right are two Pittsco galena crystal containers made from wood. (From the authors collection.)



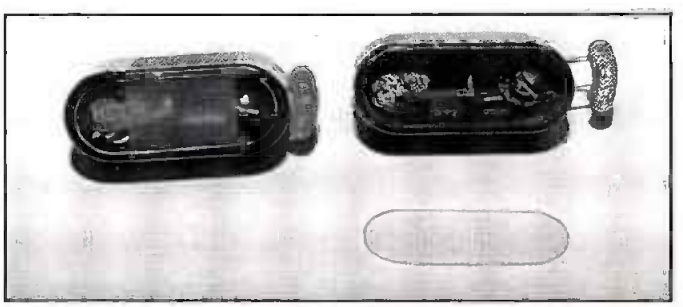
A bevy of early adjustable crystal stands. At top left is an early detector stand by Fidelity. To the right is a very similar stand made by Klein, but note the three thumbscrews for connections. This detector has a phone condenser mounted beneath the base. The detector at center left is from an unknown manufacturer. At center right is an unusual vertical detector stand made by Freshman. A bottom lever moves the galena cup mount, while the knob adjusts the cats whisker. At bottom left is a detector stand by Mesco — the stiff cats whisker and smooth surfaced crystal structure suggest this may be an iron pyrite detector. The remaining detector at lower right is from an unknown manufacturer, and is mounted on a ceramic base. (From the author's collection.)

an assembly comprised of the detector cartridge along with a potentiometer to vary the bias voltage and battery holder. I have several Carborundum cartridge detectors in my collection, and most still work to this day.

It didn't take long for manufacturers to capitalize on a better detector. They produced a fixed detector using galena and a factory-adjusted cats whisker that required no further adjustment after it left the factory! Several Philmore fixed detectors from my collection are shown. Sealed inside each of these cylinders is a piece of galena ore, and a small cats whisker probe. A factory technician adjusted the cats whisker until the hottest point was found, and then the assembly was sealed using a hot tar to stabilize the setting.

Other fixed galena detectors resembled modern 250-volt cartridge type fuses. The Carborundum Fixed Detectors are an excellent example. The detectors were produced with both knurled-nut and clip style mounts. Several years ago a friend of mine and I devised a simple scheme to build replica detectors using renewable-link cartridge fuses. Renewable link fuses have removable end caps that can be unscrewed permitting the fuse to be "*repaired*" by replacing the internal fusible link with a new one. I understand they are still being sold, but I've always been able to scrounge samples from electrician friends for the asking. The cartridges we used are the 250-volt style, and measure about 2-inches long and about _" in diameter.

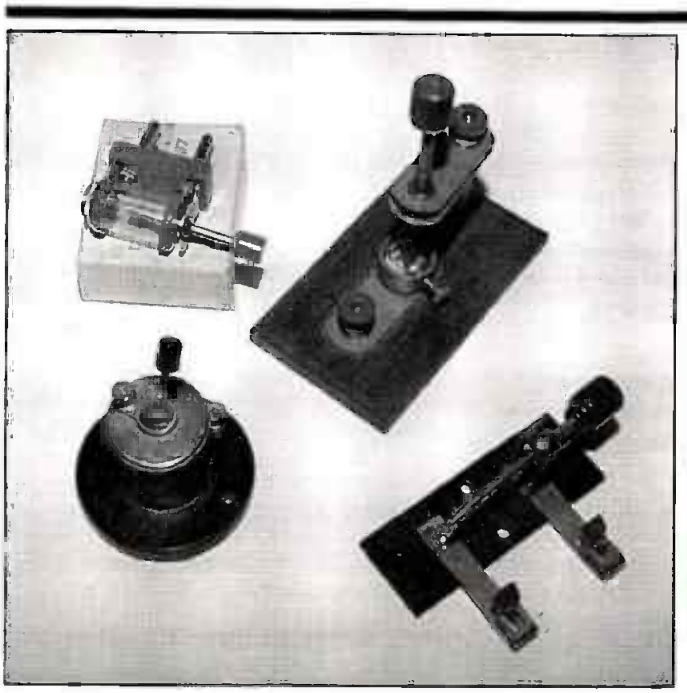
Besides a few renewable link cartridge fuses, you will need a few more items from your local hardware store. I found solid-brass L-shaped corner braces sold in blister packs of four by National Hardware. The size is 1" by 2." They cost less than three dollars each but four brackets will provide mounts for two detectors.



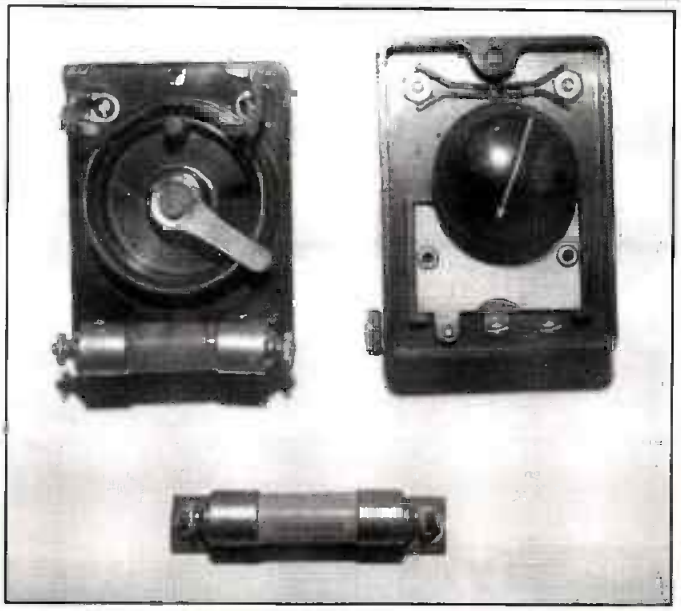
The late Frank Maggiorie, a fellow collector and very good friend of mine, gave me these two very unusual detectors. The cat whisker is adjusted by depressing the red lever, which permits it to be moved forward and backward, with some limited side-to-side adjustment. The original clear covers were not removable, but they have shrunk with age, and are now loose. (From the author's collection.)

You'll also need some brass hardware. I used four brass knurled nuts, two brass hex nuts, four brass screws, and about eight brass washers for each detector. Depending on the detector, I've used anything from 6-32 to 10-32 hardware. I suggest having an assortment of flat and round screws on hand, since each fuse is different, and each end of the same fuse may be different and require a different treatment. Since we are building a replica, the actual detector uses a 1N34A diode, fresh from the parts rack of a local RadioShack store, to substitute for the unseen galena and fixed cats whisker portion of the device.

As a first step, remove the end caps from the renewable link fuse. I've seen two styles, and both are illustrated in the photos. One style features external threads, and in the other, and less



Four more collector stands. The detector at far right is from Germany and is of 1950s vintage. It plugged into a companion crystal set. At center is a vertical detector stand mounted on walnut . I have two of these detectors, the other is used on a primitive homemade set. A lower left is a vertical Pacent detector, and at lower right is a rather plain mounted detector of unknown manufacture. (From the author's collection.)



The Carborundum Company of Niagara Falls, New York, produced Carborundum — a man-made substance — in high-temperature electric furnaces. Besides being used for alloying steel, Carborundum was a very popular detector, but it required a bias voltage for best operation. At the bottom is a Carborundum model 30 fixed-detector that sold for a whopping $1.50, quite costly in those days! At top are both front and rear views of Carborundum Company mounts for the model 30. The mounts include a potentiometer for setting the bias level, a battery holder for the bias cell, and a phone condenser. Unfortunately, neither piece is fully original. For example, the one at left has improper replacements for the knob, pot shaft, pot wiper, and the resistance wire assembly; which unfortunately greatly decrease its value. (From the author's collector.)

common style, the cap is secured by internal threads on the outer ferrules. The renewable link and end washers can be removed and discarded at this point. If there is any advertising labels on the fuse, now is a good time to carefully scrape them away from the cartridge body. This is also a good time to brighten up the exposed brass end fittings so they look shiny new.

The next steps are best done using a machinist's vice and drill press, but careful hand drilling will also work. Be careful not to crush or warp the end caps by exerting too much pressure while clamping during drilling. We need to locate the exact center of both end caps. These are drilled so the desired screw shaft diameter will pass through. Insert a 1/2" long flat or round head brass screw (whichever fits best into the cartridge body) into each end cap. Temporarily secure the screws using hex nuts. Next, take the 1N34A diode and if needed, extend its leads using some 24 gauge tinned wire pigtails. Insert the 1N34A diode into the cartridge, and bend the leads over the ends of the cartridge. Trim the leads flush. The end caps can be carefully screwed back in place, and once they're snugly tightened, the screw heads should hopefully be firmly pinching and clamping the diode pigtail leads in place. If the lead rolls off the edge, repeat the process. You may have to be innovative at this point since several different mechanical arrangements were used, depending on the fuse manufacturer.

As is best illustrated by the photos, the cartridge is mounted using the two brass L corner brackets. The screws from each of the cartridge caps are inserted into the short L brass corner brackets. Next, two brass washers at each end followed by the knurled nuts provide a wiring terminal for the detector and also hold it in place. Early detectors were often panel-mounted, and the electrical connections made through the panel. A panel-mount version of the detector can be made by mounting the L brackets to section of thick black Bakelite panel material (black Lucite works well) using additional brass hardware as needed. Use an analog ohmmeter (or digital meter using the diode position) to check that the diode is still properly attached at this point. If you are looking for a simpler mounting method, I suggest salvaging the clips from an open style fuse block made for this style fuse. Early sets used similar clips to mount cartridge detectors, and the vintage Westinghouse Aeriolas used a clip to mount a grid-leak cartridge. By the way, if you look closely at the internal structure of a 1N34A or other similar point contact diode, you will see it is really a miniature fixed-detector in its own right. There is a miniature cats whisker resting on a semiconductor surface — usually germanium — just like the early fixed detectors. The first 1N34 diodes made by Sylvania were a bit larger than their modern counterparts, and had lead-sealed end connections and a finite life span.

Congratulations! You now own a replica detector that will pass muster with most discerning collectors. But, there is one final step — the coup de Gras if you will — that immeasurably adds to the final product! My friend used his artistic talents to draw a small devilish imp on a piece of red paper along with the legends "*Little Devil Detector*" above the logo, followed by "*Hot As Hades*" beneath. The drawing and type were sized to fit the cartridge fuse body when cut and pasted in place. I'm including a crude rendition of the artwork, but perhaps you can be equally creative and come up with a more original design. Send us

your artwork and photos of your finished detector and I'll run them in future columns for other readers to see. If you want to use the artwork shown, you will need to use a reducing copier, and make several sequential reductions until the label fits the fuse body properly. Microsoft Word has a nice drawing program that will allow you make your own custom labels — give it a try.

Readers' Comments

The mailbag has been in high gear all summer, and here's a sampling of what folks have to say.

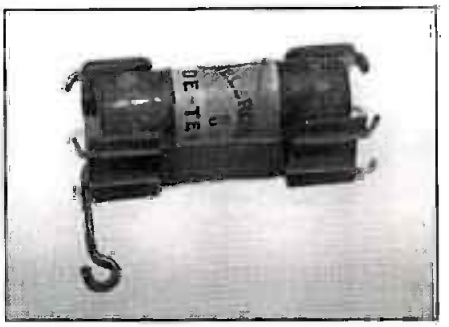
A special thanks to two of our readers, Ralph Gerkhardt and Vincent Rah for offering to help Ronnie solve his vintage Philco problem mentioned in our October column. I failed to note that Ronnie's letter was used sometime after we had received it, and that a replacement dial was in Ronnie's possession long before his letter ran in the column! As a side note, Ralph owns and operates Mountain Vintage Radio Repair and specializes in vintage car radio restorations and he may be contacted at mountainradio@nac.com.

Michael Bayus asks about an unusual Hacker battery-operated radio he discovered in a British shop while on vacation. He mentions the set receives both the standard MF broadcast band as well as the European LF broadcasts. Michael is wondering if anyone can provide more information about Hacker in general, or about his particular model. Drop us a line at radioconnection@juno.com and we will pass the information on to Michael in a future column.

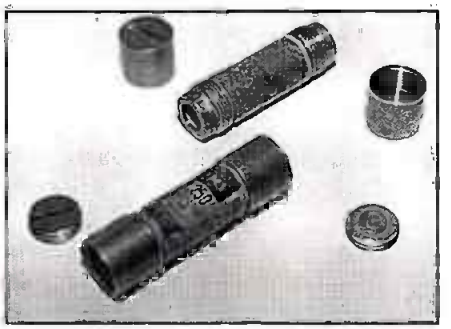
At least one other Pop'Comm reader, Brian Nimens, inquires if we had received any further information on the Canadian Red Cross set featured in our February 2000 "Radio Connection" column. He also has a similar radio in his possession. While we have received some comments about the set, including a letter from the Canadian Red Cross that was forwarded to us, we've seen nothing of any substance that identifies the purpose or history of these mystery radios. I have more avenues to try that may solve this mystery.

Where's The Bosch!

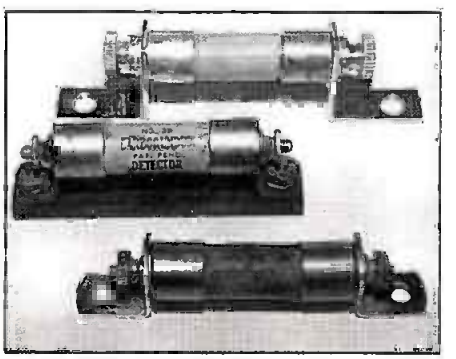
I've had a few requests for information on veneering and how to repair veneer



Another early cartridge-style detector from the Celerum company. The colorful label, printed in three colors, proclaims "Celerum" and "DE-TEX-ITE." What is most interesting about this detector is that it uses clips for mounting. Thus, salvaging clips from an open-style fuse holder would be a proper method of mounting a replica fixed detector. (From the author's collection.)



Here are two styles of renewable link fuse cartridges I've found. At top is the one I've encountered most frequently. It features end caps with internal threads. The fuse at the bottom has end caps with external threads. These caps screw into, rather than over, the fuse-end ferrules. Either style will do for our project.



Three cartridge detectors. The top detector was assembled from a renewable-link fuse as an example for this article. I used 10-32 hardware on this version. In the middle is the commercially made Carborundum Company model 30 detector. At bottom is the "Little Devil" fixed detector made by my friend several years ago. He used slightly smaller brass corner brackets and 6-32 hardware. Once a label is made and pasted on the top detector, it will be ready for the Mystery Crystal Set project next month.

Figure 1. Our first homemade fixed-detector featured a label with a crude hand drawing and print from a manual typewriter. The label was then photocopied onto red paper, cut to size, and pasted over the renewable link fuse body. Modern computer drawing programs make it a cinch to produce professional-looking artwork for this purpose. This example was drawn using my WinDraft schematic drawing software. It needs to be reduced in size and trimmed for best fit before use.

from a few other readers, in particular regarding the in-progress Bosch restoration we have been featuring from time-to-time. The American Bosch is indeed fully restored, and has been for some time. I have oodles of good photos showing this aspect of the restoration, which will run in future columns.

Our last contest prize has been awarded to George Hawkins. George reported his success in building a Lyonodyne Crystal set in an earlier column. I recently received several photos of the set from George, and I liked several innovations he incorporated in his version. We'll be running the winning photos in an upcoming column where space permits. In the meantime, George will be enjoying a one-year complimentary subscription to *Popular Communications*! Congratulations, George! Until next month all of us here at *Pop'Comm* wish you and your family a very Merry Holiday Season! See you in 2001 when we kick off the new Millennium with a new round of vintage articles and radio projects for your enjoyment. ■

THE HAM COLUMN

Getting Started As A Radio Amateur

Today's Homebrew Rigs "Aren't Your Father's Heathkits!"

Not all that long ago, ham radio superstores didn't exist — there were no toll-free telephone numbers and compact multiband, multimode transceivers were a thing of the future — and they certainly wouldn't fit in your car's dashboard with room to spare! Because the commercial rigs of the day cost a heck of a lot of money, many ops built their receivers, transmitters, and transceivers from kits. Companies such as Heathkit, Johnson, Knight, and Hallicrafters supplied affordable do-it-yourself kits that performed well (for the most part!).

Today, of course, our rigs have every modern convenience. Digital displays track our operating frequencies to the nearest hertz, powerful DSP chips filter and massage our receiver audio, and a multitude of gadgets and handy "RF tweaking" controls are never more than a moment away.

Yet for many hams, despite the compelling performance of modern radios, the mystique and satisfaction that accompany building and using radio gear you've built yourself is in a class by itself. Believe me, when you make a contact with a transceiver you've assembled from raw parts, you'll feel a thrill that's on a class by itself.

Unlike kit builders of a generation past, you won't have to build "second-string" radios and accessories that offer fewer features and reduced performance when compared to the finest store-bought ham radio gear.

Quality amateur radio kits ranging from simple station accessories to powerful multiband transceivers are now the norm. More than a dozen companies offer an amazing assortment of high-quality products. The Flagship of the bunch has to be Elecraft's K2 transceiver (see the photo).

If you've always wanted to build your own station hardware, now is the time to get started!

"I Did It My Way"

What about tools? Good news — most kits can be built using a soldering iron, wire cutter/stripper, pliers, a screwdriver or two, and some solder.

If you don't have a well-stocked tool-kit, chances are good that one or more of your ham buddies do. So don't be shy because building kits isn't as difficult as it might seem. Even teeny surface-mount parts can be assembled with a magnifying glass and a little patience. Be sure to study the assembly guide and go through assembly steps one at a time and you'll have few problems, if any.

Regardless of your kit and its manufacturer, the first step in building any kit is to lay everything out on a clean, uncluttered surface and check each part against the parts list. Make sure nothing's missing and be sure the part values are correct. One trick used by veteran kit builders is to write each part's value on a small piece of masking tape (remember to stick the tape to each part). Spending a little extra time at this early stage can save headaches later.

Once you've made sure everything's OK, it's time to dive in and get started. Here are a few tips to help make your kit-building process successful.

• Check off each construction step as you complete it. That way you won't duplicate your efforts.

• Keep your soldering iron tip clean and bright. Wipe it with a wet sponge to clean off the crud and your solder joints will be consistently good. (According to kit manufacturers, poor solder joints are the main cause of non-functional kits.)

• Always bend component leads away from foil pads and circuit traces on the underside of the printed circuit boards, and make sure to trim the leads of soldered components as close to the circuit board as possible. This will greatly reduce the incidence of nasty solder bridges.

• When attaching wires, tin each lead with a bit of solder. This keeps wires from fraying and helps make a strong mechanical connection.

• Although you may never need to use it, owning or borrowing a "solder sucker," a small spring-loaded device to help you unsolder components, can make correcting bugaboos a snap. RadioShack and many parts jobbers sell these (and other useful "de-soldering tools" for only a few dollars.

• Before powering up your new creation, double-check the assembly instructions, look for bad solder joints and solder bridges, make sure there aren't any "left-over" parts sitting around and confirm the polarity of power supply wiring, etc.

Without a doubt, the Elecraft K2 (K1 is on top) multimode, multiband HF transceiver is the pick of the litter when it comes to modern kit-built radios. The little K2 offers commercial-grade performance in a compact package that doesn't take a rocket scientist to successfully assemble and use. Do-it-yourselfers are raving about Elecraft's K-series radios. Get all the details at www.elecraft.com.

BY KIRK KLEINSCHMIDT, NTØZ

High-Tech Ham Kits Sources

The following companies (among others) offer modern, high-performance amateur radio kits.

Elecraft
P.O. Box 69
Aptos, CA 95001-0069
Phone 831-662-8345
www.elecraft.com

MFJ Enterprises
Box 494
Mississippi, MS 39762
Phone 602-323-5869
www.mfjenterprises.com

Ten-Tec
1185 Dolly Parton Pkwy.
Sevierville, TN 37862
Phone 800-833-7373
www.tentec.com

LDG Electronics
P.O. Box 48
St. Leonard, MD 20685
Phone 410-586-2177
www.ldgelectronics.com

Wilderness Radio
P.O. Box 734
Los Altos, CA 94023-0734
Phone 650-494-3806
www.fix.net/~jparker/wild.html

• After inspecting your new kit, carefully apply power and follow any alignment and setup instructions.

• If your kit doesn't work after you've double-checked everything, ask a friend to take a look. I've been embarrassed a time or two when someone else instantly spotted a problem that had left me scratching my head.

What A Rush

Now that your kit is working it's time for a hearty congratulations. Not only do you have a fine piece of ham radio gear that you made yourself, you're a little bit closer to experiencing the original magic of amateur radio — with a modern twist.

Your suggestions, letters, and QSL cards are always welcome. Write to me at "The Ham Column," 25 Newbridge Road, Hicksville, NY 11801. ■

THE PIRATE'S DEN

Focus On Free Radio Broadcasting

Activity Beyond The Normal 6955 kHz

Once again we are sailing in very shallow waters this month. Activity by pirate radio operators continues to be very light, which means there aren't very many reports showing up in my mailbox. Let's hope that changes soon!

Meantime, here's what's at hand:

WHYP, 6955 USB heard at 0230 with Ravi Brownyard and parodies of songs. Also heard on another occasion from 0210 to 0230 with "WHYP Anthology" a history of WHYP, with "Whip H" by Devo and song parodies. (Jack Linonis, PA) *(Welcome, Jack!)* Also on **6950 USB** at 0142 to 0147. Good show. (Jerry Coatsworth, Ontario)

KIPM, 6955 USB at 0200 with ranting and raving by "rather disturbed" man. He mentioned Lula, Georgia, as the drop for reception reports. (Linonis, PA) 0257 to 0302 sign-off. Very well-produced program. The announcer can imitate the guy from the old Outer Limits program very well. Announces Lula, Georgia, address for QSLs. (Coatsworth, ON)

Voice of the Runaway Maharishi, 6955 from 0354 to 0415. (Silvi, OH)

Psycho Radio, 6955 from 0430 to possible sign-off at 0459. (Silvi, OH)

Radio Sunflower. 15810 from 2330 to past 0120. (Silvi, OH) *(This pirate is based in Europe — Ed)*

Skyline Radio, 15070 at 0000 to 0117 and beyond. (Silvi, OH)

Radio Blandengue. 14565 from 0015 tune to 0200 sign off. (Silvi, OH) *(This station relays programming from other stations, including South American pirate Radio Bermudareieck — Ed)*

Blind Faith Radio, 6955 USB from 2120 to 2130. Dr. Napalm back with another metal mania show, including "You Got Another Thing Coming," "Tush," "Owner of a Lonely Heart." ID at end and Dr. Napalm said there was too much dead air and would be back later. Good signal! (Bill Finn, PA)

WRX, 6955 USB from 0303 to 0312 sign-off. Jimmy the Weasel yelling about Y2K and using disgusting language. (Coatsworth, ON) *(I note that readers of Chris Lobdell's pirate column in the North American Shortwave Association's NASWA Journal, voted WRX their "most hated station" — Ed)*

Radio Azteca, 6950 USB at 0230 with a "Music and ID Special" followed by a program number not copied. Various musical selections. (Al Melner, IN)

Radio Metallica Worldwide, 6955 USB at 0100 talking about WBCQ owner *(and former pirate operator — Ed)* Al Weiner. (Melner, IN)

UNIDENTIFIEDS:

6955 USB at 0315 to 0351 tune out. Heard a song mentioning "lottery girl." (Coatsworth, ON)

6955 at 0201–0229 tune out. Heard the "Yo Ho" pirate song, similar to what RFEC used to use, followed by a few other songs and "Superman" — all in the clear but the announcer was barely audible, thus prohibiting any chance to an ID. (Silvi, OH)

6954 (?) **USB** at 0150 with parody of "Superman." Poor modulation and hard to make out much dialogue. (Linonis, PA) *(Sounds like both of you had the same station — Ed)*

Jack Linonis says he also had both **KIPM and WHYP on 13910** later around 0400. I'm not clear on whether Jack meant he was hearing them while they were also on 6955 or whether 13910 was in use and 6955 was not. 13910 is the second harmonic of 6955.

Reader John Jensen wonders if there are any pirate radio websites.

It's hard to name a subject for which there aren't any websites, John! I'll be glad to list pirate station or other pirate-related websites any of you are aware of. Just send 'em in and I'll put 'em in the Pirate's Den column.

Don't forget to keep those dials set on 6955 and the other frequencies frequented by pirates, and let me know what you're hearing. It helps if you can include an item or two of program content. I'm also looking for illustrations to be used in the column — copies of pirate station QSLs or (gasp!) actual pictures!

See you again next month! ■

BY EDWARD TEACH

PRODUCT SPOTLIGHT

Pop'Comm Reviews Products Of Interest

Grundig's Satellit 800

I can't remember a radio that has received more preproduction attention than the Satellit 800. Grundig makes a popular series of receivers, and many lamented the demise of the popular 650 some years back. The 650 was a full-sized sort of "semi-portable" receiver with a great combination of features and audio. For a long time, there was no replacement on the horizon.

Suddenly, there were rumors about a Satellit 800, a new full-sized portable, or tabletop, depending on your perspective (and the size of your table). The wait is over, and the Satellit 800 is finally here. It's been out for a little while, but we thought it would be worth getting a detailed look at this controversial receiver before going to press with a review.

It's BIG. That's a RadioShack DX-398 sitting in front of it, which is not exactly a small portable!

Big!

That's the first reaction of almost everyone who sees it. I took one look at the box and wondered where I was going to put this thing to experiment with it. At a full 21 inches wide and 9 inches high, it's pretty amazing. It looks kind of like a shortwave boom box. However, once you get past that, the controls are well laid out, and easy to access. The large speaker on the left side produces excellent sound.

It weighs in at a hefty 10 pounds. So this is not exactly a pocket portable. In recent years, the term "portatop" has come to be used to describe these larger portables that represent a cross between portable and desktop. When you're sitting in front of the 800, it feels like a solid desktop machine, but there's a carrying handle and a place for batteries (six "D" size) if you'd like to carry it along, or around the house.

The antenna is large too. The telescoping whip extends almost five *feet* from the top of the radio. The antenna is almost like an antenna within an antenna — there are so many sections. Yet despite this, the antenna does not seem flimsy at all, like many lengthy telescoping systems are. When I first started raising the antenna, I had visions of it hitting the ceiling fan before it was fully extended. And it would have had I not moved the radio over. Perhaps this is one telescoping antenna that should include clearance lights for low flying aircraft!

Frequency coverage of the Satellit 800 is about what you'd expect for a shortwave portable, with a slight bonus. 100 kHz to 30 MHz is standard longwave, mediumwave and shortwave coverage, plus the Satellit includes the FM Broadcast band (in stereo when audio is taken from the headphone jack) *and* the civil aviation band 118-137. The Drake SW-8 has this unusual coverage also, and I have found it very convenient on trips

The large front panel spreads controls out quite comfortably. The large knobs are very easy to access, and push buttons are spread far enough apart for even the clumsiest of fingers.

BY KEN REISS <Armadillo1@aol.com>

The display is very easy to read, and well-presented. It's quite easy to keep track of what mode the radio is in as well as current operating frequency. The only thing missing is the ability to display the clock simultaneously with the frequency.

where I've been able to take the SW-8.

Speaking of the Drake, they were a design partner in this radio. It's believed that many of the SW-8's features and circuitry found their way into this receiver, and after operating it for some time, I'm inclined to agree. There have been some ergonomic improvements over the SW-8 (like you don't have to push the F key to enter frequency information), but performance seems very similar. Considering the Satellit is about $300 less than the SW-8, this may represent quite a bargain if you don't mind the different size and shape of the receiver.

Reception

Of course, what matters is how well it picks up the signal, and here the Satellit 800 shines. It seems to do very well on the built-in whip, and is enhanced, like all other receivers, with an outdoor antenna. There was very little overload or other problems noted on the shortwave bands, and the synchronous detector works as advertised. This is probably one of the things that was taken from the SW-8, and it has been widely recognized for some time that the SW-8 has one of the best synchronous detectors on the market.

For those who may be unfamiliar with synchronous detectors, this is an effort through electronic wizardry to minimize the distortion and fading that occurs as a normal part of shortwave reception. Many users swear by them as essential, and a good synchronous detector (or sync as it's often called) can enhance shortwave broadcast reception. The Satellit 800s sync is switchable between upper and lower modes so that interference from a nearby station can be minimized. For listeners who value the synchronous detector, you won't be disappointed with the one on the Satellit 800!

Reception on the mediumwave bands was a bit more troubling. There is some significant synthesizer noise that is audible every time the tuning dial is moved. While it does not affect actual reception, it does make tuning up and down the band a bit uncomfortable, or at least noisy. If you enter a frequency with the keypad and stay in one place for a while, it works fine. This condition was not present on shortwave, making the receiver quite enjoyable on those bands.

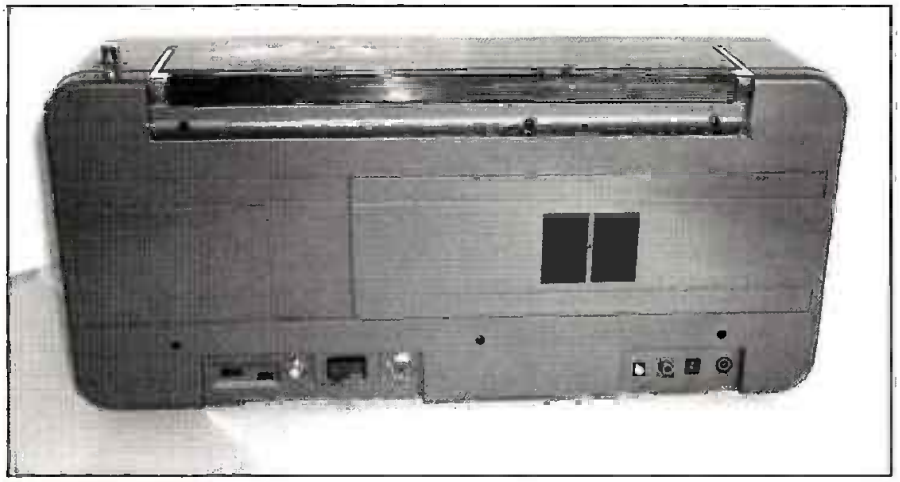
The other complaint I have with the Satellit 800 (and other receivers too) is that the squelch does not work on shortwave. There is a squelch available, although the adjustment for it is inconveniently located on the rear panel. However, this squelch only works on the air band, and won't function on HF. If you listen to utility stations, you'll know that a working squelch is a very convenient feature. Since the radio has SSB modes, and does fairly well with many utility type signals, it's a shame this one detail wasn't thought through.

Quality Reportedly Varies

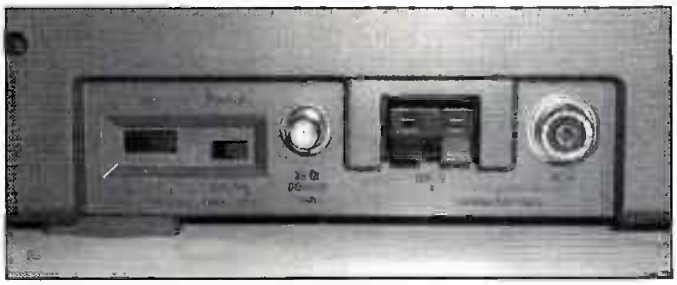
There does seem to be some variation in production models, based on reports in Internet discussion groups and conversations I have had with other owners of the receiver. It is unclear if this is due to different production runs, changes in production cycles, or simply a quality control issue that will be resolved. I have reason to believe that the latter may be the case as many more satisfied users are beginning to talk about their new receivers. It should be noted that I have no particular quality concerns about the receiver we received. It's not built like a Watkins Johnson, but it's not priced like one and not expected to be in use by the military either.

The Bottom Line

Most who have actually tried the Satellit 800 like it. With the reported variation in unit construction, I would recommend you be sure to purchase it from a dealer with a reasonable return policy if you decide it's not for you. I was very pleased with the



The rear panel is mostly empty. The battery cover is seen in the center and slides off to reveal room for six "D" size batteries.



A wide variety of connectors for external antennas are provided. Be sure to set the switches so that the antenna you're attaching will be used on the desired band. The F type connector is for FM and Air band, while the traditional wire and coaxial SO-239 jack is for SW/LW/MW use.

The Satellit 800 dwarfs its older cousin, the SW-8. Note, however, that the Satellit is not nearly as deep, so it's placement on a desk might actually be more convenient.

unit we received for review, and I have heard others say likewise. On a more positive note, most dealers are indicating a low return rate for a new receiver, so it seems perhaps that it's more an individual unit problem than broad symptoms.

How you'll perceive the 800 seems to have a bit to do with what receiver you're coming from, and the type of listening you do. People who are upgrading from portables and other smaller receivers are very happy with the 800. It's really not fair to compare the Satellit 800 with either low-end portables, nor high-end tabletops. It's simply in a different class — one which it has mostly to itself at this point.

This receiver really needs, and deserves, a hands-on evaluation. If you're lucky enough to live near a dealer that carries the 800, go spend some time in their showroom. Or try to find someone locally who has one, or purchase one subject to approval. There are not a lot of other receivers in the same price range as the 800 to make a valid comparison, but it seems to me that it's a solid performer for a $500 receiver.

Having said all that, you owe it to yourself to have a serious look at this receiver if its features are of interest. Check it out and see if a Satellit 800 can find a home in your shack! For more information, contact Lextronix/Grundig at P.O. Box 2307, Menlo Park, CA 94029, phone 650-361-1611 or E-mail at grundig@ix.netcom.com. Visit them on the Web at www.grundigradio.com. ■

Pop'Comm Survey - December 2000

Circle Reader Service #

1. I regularly use the following types of communications equipment: (Please mark all that are appropriate)

All mode, wideband base valued at more than $5,000	1
All mode, wideband base valued at more than $3,500	2
All mode, wideband base valued at more than $1,500	3
All mode, wideband base valued at more than $1,000	4
All mode, wideband base valued at $800-1000	5
All mode, wideband base valued at under $800	6
Handheld wideband valued at more than $1000	7
Handheld wideband valued at less than $1000	8
Handheld "scanner" without trunking	9
Handheld "scanner" with trunking	10
Portable multiband shortwave receiver	11
Dualband handheld amateur transceiver	12
2-meter handheld amateur transceiver	13
Multimode HF amateur transceiver (base or mobile)	14
Mobile dualband or 2-meter amateur transceiver	15
Mobile or base CB	16
FRS handheld transceiver	17

2. Do you keep your copies of *Pop'Comm* for reference or later referral?

Yes	18
No	19

3. Why did you buy THIS issue of Pop'Comm?

I subscribe	20
I purchase it regularly at the newsstand	21
The front cover	22
An advertisement	23
An article interested me	24
A friend recommended the magazine	25

4. Do you use a computer and the Internet?

Yes	26
No	27

5. I'm a licensed amateur operator and active on VHF/UHF

Yes	28
No	29

6. I'm a licensed amateur operator and active on VHF/UHF and the worldwide HF bands.

Yes	30
No	31

7. I'm an active CBer.

Yes	32
No	33

8. I'm a Freebander and not a licensed amateur operator.

Yes	34
No	35

9. I'm a Freebander and also a licensed amateur operator.

Yes	36
No	37

10. I plan on becoming an amateur within the next few months, largely because of the recent rule changes requiring only 5 wpm Morse code.

Yes	38
No	39

11. During the past year I have purchased a communications receiver from a *Pop'Comm* advertiser.

Yes	40
No	41

BROADCAST DXING

DX, News And Views Of AM And FM Broadcasting

Get A Head Start On Winter DXing!

Just a short feature story about call letters this month, as an overwhelming number of DX-cellent logs crossed my desk to kick off the new mediumwave DX season. Use the many logs and QSL reports as target lists for your DX sessions this winter and enjoy.

Rewriting Call Letter History

WMAQ Chicago on 670 is now history, replaced by "The Score" **WSCR Sportsradio**. WMAQ was Chicago's oldest radio station, signing on in 1922 as WGU. Contrary to the popular belief that WMAQ changed its call letters from WGU to avoid confusion with WGN, according to an interview with Judith Waller, WMAQ's first station manager, the change was actually to prevent a phonetic mix-up with City of Chicago radio station WBU. The interview was part of a series of historical segments aired on WMAQ's final day of broadcasting. WSCR now has an established track record of replacing historic Chicago radio stations. WSCR moved to 670 from 1160, which used to be the home of WJJD before WSCR took over.

Taking a closer look at this month's list of call sign changes, a rare FM three-letter call is now history. **KJR-FM Seattle** has become **KMBX**. However that doesn't necessarily mean that the three-letter call couldn't be resurrected sometime in the future. The FCC set a new precedent last March by allowing the return of KHJ Los Angeles on 930. The station first signed on as KHJ in 1922. The call letters were changed to KRTH in 1986 and then to KKHJ coinciding with the sale of the station to a Spanish-language broadcaster. For years the radio station could only be identified as KKHJ in English because "KK" in Spanish is an obscenity. KHJ is perhaps best remembered from the AM radio rock 'n roll era. Known as "Boss Radio" during the '60s and '70s, KHJ was the voice of many popular personalities including Robert W. Morgan, The Real Don Steele, Rick Dees, and Shadoe Stevens. There is another station in California using the KHJ name; KHJJ Lancaster on 1380. By the way, KJR is still alive in Seattle on 950 AM.

WMIB Marco Island, Florida, on **1660** has reserved a call letter change to **WQRS** pending sale of the station. Let's hope the sale doesn't mean an end to the popular DX tests frequently scheduled by WMIB engineers.

XEBACH Tijuana, Mexico, on **540** has changed from "X-Bach" classical music to **"X-Jazz"** relaying the jazz music of KJAZ Beverly Hills, California, on 1260. **KJAZ** just recently signed on after **KGIL** moved from **1260** to the x-band as KGXL on **1650**. KGXL is reportedly now carrying Korean programming.

The fledgling Catholic Family Radio Network has been experiencing financial troubles. The network has been relaying the programs of EWTN shortwave to its AM affiliates in an effort to stay afloat. Listen for religious programs parallel **WEWN Alabama on 5825 and 9455** kHz shortwave.

QSL Information

576 1XLR Southern Star, Hamilton, New Zealand, a beautiful color QSL card in 27 days for a taped report, signed Brian Fergusson-PD. Also sent hand-written letter and nice booklet on Radio Rhema, mentioned first report from USA for Southern Star. Power 2500 watts. New Zealand QSL #102. (Martin, OR)

580 CKY Winnipeg, Manitoba, a really nice full-detail QSL letter, with great info on the history of the station, in 19 days for a taped report, signed George Buzunis-CE. Address: Rogers Broadcasting, Unit #4, 166 Osborne Street, Winnipeg MB R3L 1Y8. Manitoba QSL #14. (Martin, OR)

690 WJOX Birmingham, Alabama, verification letter in 11 days after follow up, signed by Frank L. Giardina, Director of Engineering. Address: 244 Goodwin Crest Dr. #300, Birmingham, AL 35209. (Procop, OH)

740 KTRH Houston, Texas, QSL card with no signature in 24 days. Address: P.O. Box 1520, Houston, TX 77251. (Procop, OH)

850 KOA Denver, Colorado, verification letter in 18 days after follow up, signed by Jan Chadwell, PE, Chief Engineer. Address: 4695 S. Monaco Street, Denver, CO 80237. (Procop, OH)

860 KOSE Wilson, Arkansas, verification letter in 10 days after follow up, signed Ed White, Missco Group Manager (KLCN-AM/KHLS-FM/KOSE-AM/KOSE-FM/KAMJ-FM). Address: Sudbury Broadcasting Group, P.O. Box 989, Blytheville, AR 72316. (Procop, OH)

970 WDAY Fargo, North Dakota, verification letter in 10 days after follow up, signed Lori Becker, Operations Manager. Address: 301 8th Street South, Fargo, ND 58103. (Procop, OH)

1590 WPSL Port St. Lucie, Florida, form letter and bumper stickers in 450 days from Greg and Carol Wyatt-Owners. Address: 8245 Business Park Drive, Port St. Lucie FL 34952. (Martin, OR)

1629 4RF Brisbane, Australia, QSL card in 17 days for taped report to John Wright, 4/33 Kerrie Cresent, Peakhurst NSW 2210, Australia. Only 400 watts, and my 218th Aussie QSL. (Martin, OR)

1630 La Red 92, La Plata, Argentina, color jpeg E-mail QSL in about an hour after follow up, a really nice full detail QSL, with attached letter from Juan Marcelo Escande, LW2ENS. E-mail address: escande@red92.com. This is my second Argentine MW QSL. (Martin, OR)

1630 XEUT Mexicali, Mexico, a beautiful certificate and letter, along with stickers for the FM, program schedule, and poster in three weeks for $1, signed Martha Adriana Marquez, Jefa de Radio Universidad and Gabriel Estrella Valenzuela, Director General. Address: UABC Radio, 233 Paulin Avenue, P.O. Box MSC 5163, Calexico CA 92231-2646. (Martin, OR) Certificate, QSL letter, huge poster, bumper stickers, etc., a shock to say the least. (Jackson, CA)

90.1 WMPR Jackson, Mississippi, verification letter in eight days, signed Charles Evers, General Manager.

BY BRUCE CONTI <BAConti@aol.com>

Pending

New Call	Location	Freq.	Old Call
WIXI	Marco Island, FL	1480	WODX
WQRS	Marco Island, FL	1660	WMIB
WOTA	Walterboro, SC	1080	WALD
WLZX	Northampton, MA	99.3	WHMP-FM
WWCM	Standish, MI	96.9	WSTD
KTAA	Big Sandy, TX	90.7	KBAU

Changes

New Call	Location	Freq.	Old Call
WEUV	Huntsville, AL	1700	New
KUAZ	Tucson, AZ	1550	KUAT
KWRU	Fresno, CA	940	KFRE
KSTR	Grand Junction, CO	620	KRDY
WSHU	Westport, CT	1260	WMMM
KBLI	Blackfoot, ID	1620	New
WXRT	Chicago, IL	1160	WSCR
KXTR	Kansas City, KS	1250	KKGM
WGTK	Louisville, KY	970	WLKY
WVEI	Worcester, MA	1440	WWTM
WTRU	Kernersville, NC	830	WXII
WOEN	Olean, NY	1360	WMNS
KQJD	West Fargo, ND	1660	New
WDBZ	Cincinnati, OH	1230	WUBE
WITK	Pittston, PA	1550	WKQV
WCSZ	Sans Souci, SC	1070	WHYZ
WWON	Waynesboro, TN	930	WTNR
KQQT	Gonzales, TX	1450	KCTI
KUAZ-FM	Tucson, AZ	89.1	KUAZ
KVVS	Mojave, CA	97.7	KAVS
KLVB-FM	Red Bluff, CA	102.7	KEGR
KACD-FM	Santa Monica, CA	103.1	KACD
KXUU	Estes Park, CO	102.1	KRKI
WJNE	Bethany Beach, DE	103.5	WJYN
WQJH	Laurel, DE	95.3	WJNE
WBTT	Naples Park, FL	105.5	WQNU
KSAS-FM	Caldwell, ID	103.3	KARO
WAVQ	Pontiac, IL	88.3	New
WKLO	Hardinsburg, IN	96.9	WBRO
WBRO	Marengo, IN	89.9	WKLO
KRRB	Perry, KS	89.7	New
WPJO	Meridian, MS	88.1	WMAW-FM
KXTR-FM	Kansas City, MO	96.5	KXTR
WKKF	Ballston Spa, NY	102.3	WXCR
WBKX	Fredonia, NY	96.5	WCQA
WNHW	Hatteras, NC	97.1	WYND-FM
WYND-FM	Nags Head, NC	92.3	WNHW
WURI	Manteo, NC	90.9	New
WDKF	Englewood, OH	94.5	WBTT
KOAP	Lakeview, OR	88.7	New
KCRX-FM	Seaside, OR	102.3	KULU
WMYB	Murrells Inlet, SC	94.5	WRNN
WRNN	Socastee, SC	99.5	WMYB
WAEZ	Greenville, TN	94.9	WPJO
KEMA	Three Rivers, TX	94.5	KBPL
WZZU	Lynchburg, VA	97.9	WRVX
KMBX	Seattle, WA	95.7	KJR-FM
KBET-FM	Vancouver, WA	105.9	KKLQ
WLMX-FM	Balsam Lake, WI	104.9	WWLC
CJSU	Duncan, BC	89.7	New
CHVN-FM	Winnipeg, MB	95.1	New

Address: 1018 Pecan Park Circle, Jackson, MS 39209. (Procop, OH)

90.7 KOBC Joplin, Missouri, verification letter, bumper sticker, and flyer in 11 days, signed Sara Ferguson, Traffic Manager. Address: 1111 N. Main Street, Joplin, MO 64801. (Procop, OH)

90.9 KSWP Lufkin, Texas, verification letter, newsletter, KSWP bumper sticker, and KAVX bumper sticker in 11 days, signed Tim Swanson, CE. Address: P.O. Box 151340, Lufkin, TX 75915-1340. (Procop, OH)

96.1 KORQ Winters, Texas, verification letter in five days, signed Bruce H. Campbell, VP and GM. Address: 1740 N. 1st, Abilene, TX 79603. (Procop, OH)

103.1 KKCN Ballinger, Texas, verification letter and bumper sticker in seven days, signed Steve Everett, GM. Address: 36 E. Twohig St. Suite 880, San Angelo, TX 76903. (Procop, OH)

105.1 KWMW Maljamar, New Mexico, verification letter, business card, and rate card in 23 days, signed Will Rooney, Operations Director (KRUI-AM/KWMW-FM/KIDX-FM). Address: MTD Inc., P.O. Box 2010, Ruidoso Downs, NM 88346-2010. (Procop, OH)

106.9 KOES Stamford, Texas, verification letter and bumper sticker in five days, signed Dave Harrison, Program Director. Address: 209 S. Danville, Suite C-104, Abilene, TX 79605. (Procop, OH)

WFOR Miami, Florida, homemade QSL card and business card in 20 days from Henry "Skip" Greene, Transmitter Supervisor. Address: 8900 NW 18th Terrace, Miami, FL 33172. (Procop, OH)

WBRC Birmingham, Alabama, verification letter in 22 days, signed Jerry Thorn, VP Engineering. Address: 1720 Valley View Drive, Birmingham, AL 35209. (Procop, OH)

WXYZ Detroit, Michigan, verification letter, baseball cap, and coffee mug in 17 days, signed Michael Doback, Director of Engineering. Address: 20777 West 10 Mile Road, Southfield, MI 48037. (Procop, OH)

Broadcast Loggings

The mediumwave DX season is indeed in full swing. Check out Patrick Martin's latest transpacific logs! Transatlantic reception of Europe has also been good, despite the fact that we're into the predicted peak of sunspot cycle 23. North Dakota and Idaho are easier targets with the sign-on of two new expanded band stations, **a mystery station** is being heard on **783** at sign-off, and Michael Procop increases his state-count on FM in this month's selected logs. All times are UTC.

531 1XP1 Auckland, New Zealand, at 1245 very good with woman in Samoan, no sign of 2MC. (Martin, OR)

540 2AP Apia, Western Samoa, at 1040 dominant over CBQX LPRT with drum music and man in Samoan. I haven't heard this in quite a long time. (Martin, OR)

550 KMVI Wailuku, Hawaii, at 0828 very strong with Sports Talk at 0828, best heard in a long time. (Martin, OR)

558 R. Fiji, Fiji, very good with nice local island music and occasional man in Fijian from 1230–1330. (Martin, OR)

567 KGUM Agana, Guam, presumed the source of a U.S.-sounding talk show at 1240, under/over 2YA New Zealand. (Martin, OR)

570 KQNG Lihue, Hawaii, at 0856

good and dominant with talk, local spots and "KONG" IDs. Best heard in a long time too. (Martin, OR)

576 2RN Sydney, Australia, at 1310 was looking again for Southern Star-Hamilton, but only 2RN was there, mentioning Australian Eastern Time and the ABC network. (Martin, OR)

590 KSSK Honolulu, Hawaii, monitored at 0915 very good and on top of KUGN with Beatles music, "59 KSSK" IDs, and spot for Ala Moana Shopping Center. (Martin, OR)

610 WDAF Kansas City, Missouri, at 1025 weak with Home & Garden call-in show, then news before fading out. (Gillespie, MI)

738 Radio Tahiti, Papeete, Tahiti, 1230–1330 arm-chair copy all morning with great island music along with a man and woman in French. This one can be a "powerhouse" when conditions are good. Replacing their transmitter a few years back really made a difference! Monitored as early as 0530 until local sunrise. (Martin, OR)

780 YVOD Ecos del Torbes, San Cristobal, Venezuela, at 0030 fair, "Ecos Ciclismo" bicycling talk program (a popular sport in Venezuela), full ID "Esta es Ecos del Torbes . . . YVOC 4980 kilohertz, banda de 60 metros, YVOD 780 kilohertz onda larga, 50 kilowatios, YVSC 9640 kilohertz la banda internacional de 30 metros, en San Cristobal, Venezuela . . . Ecos del Torbes, el sonido mejor de los Andes." (Conti, NH)

783 R. Syria, Tartus, Syria, at 0059 presumed this with chanting, talk, then military-style march or anthem at sign-off; carrier cut at 0100. One of the strongest TA's noted on the dial this evening during generally marginal conditions. (Connelly, MA) At 0045, discussion in Arabic followed by Koran recitations, sign-off at 0100 with brief announcement and militaristic march or anthem — not the Syria national anthem. I have a request out to EMWG correspondents to check this, as both WRTH and EMWG list Syria sign-off at 0045 on this frequency. Reception report also sent to Damascus to try to confirm that this is indeed Syria. (Conti, ME) Not received at least by me so far. Syria follows summertime (April–November) and signs off one hour earlier at about 2340, so this is not Syria. I checked the frequency at 0100 but all I heard was Germany and Spain. (Ritola, Finland) COPE Barcelona, Spain is typically received here too. (Conti, NH)

783 2YB Samoan Capital Radio, Wellington, New Zealand, at 1255 very

good off and on with woman talking about Samoan language and where certain words came from in English and Samoan. (Martin, OR)

820 WBAP Fort Worth, Texas, at 0459 with end of call-in sports talk show and commercials. (Gillespie, MI)

900 KNUI Kahului, Hawaii, at 1245 very strong with nice Hawaiian pop music. Best heard in a while, no sign of CJVI at the time. (Martin, OR)

910 YVRQ "Q-AM" RQ-910 Caracas, Venezuela, at 0412 fair, "Q-AM" IDs and salsa music through WNEZ rap music and WRNL. (Conti, NH) At 0024, "RQ" slogan and Spanish talk atop jumble. (Connelly, MA)

1017 A3Z Nuku'alofa, Tonga, at 0912 good in local buzz with man in presumed Tongan. (Martin, OR)

1089 Talk Sport synchros, England, at 0110 good, "Hello, you're on Talk Sport" and telephone talk with WBAL nulled. (Conti, NH)

1098 R. Slovensko, Nitra, Slovakia, at 0030 fair, woman in Slovak, rock ballad, and telephone talk. (Conti, NH)

1116 SER Synchros, Spain at 0300 "Cadena Ser, servicios informativos" news, time checks for Spain and Canary Islands. (Conti, NH)

1385.92 R. Rurale, Labe, Guinea, at 2348 African-accented talk in French by a man, poor to fair with local WPLM 1390 phased. (Connelly, MA)

1521 BSKSA, Duba, Saudi Arabia, at 2252 male Koranic vocal, already very loud more than an hour before sunset! It was at least 20 dB stronger than any other transatlantic signal noted at the time. (Connelly, MA)

1530 VOA Pinheira, Sao Tome e Principe, at 0300 good (way over WSAI), sign-on with Yankee Doodle marching band music and ID "This is the Voice of America" heard outside the Oceanview Inn in Gloucester. (Connelly, MA)

1580 "Q-AM" Venezuela, unknown site, at 0335 fair, salsa music, many "Q-AM" IDs and mentions of RQ, apparently simulcasting YVRQ "Q-AM" Caracas. (Conti, ME)

1620 KBLI Blackfoot, Idaho, now on the air with talk, IDs for 690 KECN Blackfoot-Pocatello and 1260 KICN Idaho Falls-Rexburg, generally on top with Eastern Beverage at 0200–0300. (Martin, OR)

1660 KQJD West Fargo, North Dakota, now on the air calling itself "Star 1550" parallel with KQWB, nostalgia format, easily heard as KXOL was off tonight with an open carrier. (Martin, OR)

90.9 WILL Urbana, Illinois, classical music and legal ID monitored at 0200. First FM station from Illinois for state #19! (Procop, OH)

93.3 KTCL Fort Collins, Colorado, heard for less than a minute with DJ named Big Nerf broadcasting from KTCL's Free Loaders Concert at 0014. (Procop, OH)

93.5 KKOT Columbus, Nebraska, "When Country Comes To Town" by Toby Keith, "Coyote Country" slogan, the "KKOT Dining and Entertainment Guide" and ads at 0010. (Procop, OH)

93.7 KBRK Brookings, South Dakota, adult contemporary music and "South Dakota's best, B-93.7" slogan heard at 2319. (Procop, OH)

95.9 KZZI Belle Fourche, South Dakota, sports update, sports trivia question, mention of a pizza place in Spearfish, "KZ-Country" slogan, and country music mixing with what I believe was KILR "Killer Bee Country" in Estherville, Iowa, at 2335. (Procop, OH)

101.1 KOSI Denver, Colorado, adult contemporary music and "Kosy 101" slogan with call ID at 0020. (Procop, OH)

104.5 WHAJ Bluefield, West Virginia, Top-40 music and slogan of "The best mix in the mountains, J-104.5" at 0810. (Procop, OH)

Thanks to Mark Connelly, Dan Gillespie, Gary Jackson, Nile Kelly, Patrick Martin, Michael Procop, and Mauno Ritola. 73 and good DX! ■

Tap into *secret* Shortwave Signals

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

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

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

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

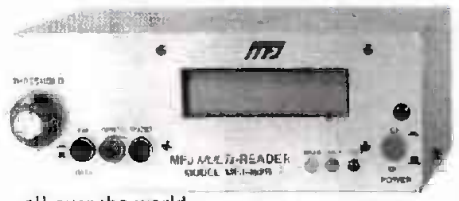
Eavesdrop on the World

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

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

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

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



MFJ-462B **$179.95**

Printer Monitors 24 Hours a Day

MFJ's exclusive *TelePrinterPort*™ lets you monitor any station 24 hours a day by printing transmissions on an Epson compatible printer. **Printer** cable, **MFJ-5412**, $9.95.

MFJ *MessageSaver*™

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

High Performance Modem

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

Easy to use, tune and read

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

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

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

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

Use 12 VDC or use 110 VAC with MFJ-1312B AC adapter, $14.95. 5¼Wx2½Hx5¼D inches.

No Matter What™ One Year Warranty

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

Try it for 30 Days

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

Super Active Antenna

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

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

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

MFJ-1024 **$139.95**

Indoor Active Antenna

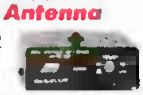
Rival outside long wires with this *tuned* indoor active antenna. *"World Radio TV Handbook"* says MFJ-1020B is a *"fine value... fair price... best offering to date... performs very well indeed."*

MFJ-1020B **$79.95**

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

Compact Active Antenna

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



MFJ-1022 **$49.95**

Detachable 20 inch telescoping antenna. 9 volt battery or 110 VAC MFJ-1312B, $14.95. 3⅛x1¼x4 in.

Eliminate power line noise!

MFJ-1026 **$179.95**

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

MFJ Antenna Matcher

MFJ-959B **$99.95**

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

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

Dual Tunable Audio Filter

MFJ-752C **$99.95**

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

High-Gain Preselector

MFJ-1045C **$99.95**

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

CW, RTTY, ASCII Interface

MFJ-1214PC **$149.95**

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

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

High-Q Passive Preselector

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

MFJ-956 **$49.95**

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Pop'Comm's World Band Tuning Tips

December 2000

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

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

UTC	Freq.	Station/Country	Notes
0000	10940.5	Armed Forces Radio, Sicily	USB
0000	11620	All India Radio	
0000	17615	BBC, England	
0000	17735	Radio Pyongyang, North Korea	
0030	6135	Radio Aparecida, Brazil	PP
0030	9615	Radio Cultura, Brazil	PP
0030	9655	Radio Austria Int'l.	FF/GG
0045	9845	Radio Netherlands	
0100	4960	Radio Villa, Dominican Republic	SS
0100	5060	Radio Nacional Progresso, Ecuador	SS
0100	6480	Radio Altura, Peru	SS
0100	9560	Radio Budapest, Hungary	
0100	9925	Croatian Radio, via Germany	Croat/EE
0100	11915	Radio Gaucha, Brazil	PP
0100	12085	Radio Damascus, Syria	AA
0100	15760	Kol Israel	HH
0130	3280	La Voz del Napo, Ecuador	SS
0130	4800	Radio Buenas Nevas, Guatemala	SS
0130	6060	Radio Nacional, Argentina	SS
0130	11740	BBC relay, Oman	
0130	9737v	Radio Nacional, Paraguay	SS
0200	4819	La Voz Evangelica, Honduras	SS
0200	4980	Ecos del Torbes, Venezuela	SS
0200	9400	Radio Bulgaria	
0200	9570	Radio Romania Int'l.	
0200	9635	Radio Nacional, Colombia	SS
0200	9835	Radio Budapest, Hungary	
0200	11800	RAI Int'l., Italy	H
0200	11885	Radio Romania Int'l.	unid
0200	111610	Adventist World Radio, Slovakia	unid
0200	5012v	Radio Cristal, Dominican Republic	SS
0200	6895	Galei Zahal, Israel	HH USB
0230	4985	Radio Brazil Central, Brazil	PP
0230	7125	Voice of Russia, via Moldova	
0230	7160	Radio Tirana, Albania	
0230	9495	Radio Sweden	
0230	9695	Voice of Vietnam, via Canada	or 9795
0230	12005	UAE Radio, Dubai	AA
0230	12045	Radio Free Chechnya, Russia	RR
0230	15170	Radio Canada Int'l.	
0230	15425	Sri Lanka Broadcasting Corp.	
0300	5745	WHRI, USA	
0300	7110	Radio Ethiopia	Amharic
0300	7225	Deutsche Welle, Germany, via Rwanda	unid
0300	9705	Radio Mexico Int'l.	SS/EE
0300	9755	Radio Monte Carlo, Monaco, via Canada	AA
0300	10320	Armed Forces Radio, Iceland	
0300	11615	Radio Prague, Czech Republic	
0300	11655	Voice of Turkey	
0300	17675	Radio New Zealand Int'l.	
0300	17825	Radio Japan/NHK	
0315	5010	Escuelas Radiofonicas, Ecuador	SS
0315	7305	Vatican Radio	SS
0330	9783	Republic of Yemen Radio	AA
0330	15265	Radio Sweden	
0330	15435	Radio Jamahiriyah, Libya	AA
0330	15470	Radio Prague, Czech Republic	
0330	17650	Voice of Russia	
0400	7265	Sudwestrundfunk, Germany	GG
0400	7265	Voice of America relay, Botswana	
0400	9830	Croatian Radio, via Germany	Croat/EE
0400	11635	Radio Norway Int'l.	NN
0400	11720	Channel Africa, South Africa	
0400	15345	Radio Canada Int'l., via England	
0400	15505	Radio Kuwait	AA
0400	15560	Radio Netherlands, via Madagascar	DD
0400	15640	Kol Israel	
0430	7440	Radio Rossi, via Moscow	RR
0430	9390	Reshet Bet, Israel	HH
0430	9680	Radio Taipei Int'l., Taiwan, via WYFR	CC
0430	9730	China Radio Int'l., via Fr. Guiana	
0430	11635	Radio Denmark, via Norway	DD
0445	9905	Swiss Radio Int'l., via Fr. Guiana	
0500	5010	Radio Garoua, Cameroon	FF/EE
0500	6115	La Voz del Llano, Colombia	SS
0500	7275	RTT Tunisienne, Tunisia	AA
0500	11710	Radio Canada Int'l.	EE/FF
0500	15585	RDP Int'l., Portugal	PP
0500	15590	Radio Japan/NHK	
0500	4920v	Radio Quito, Ecuador	SS
0530	4955	Radio Nacional, Colombia	SS

UTC	Freq.	Station/Country	Notes
0530	6010	Radio Mil, Mexico	
0530	6055	Radio Exterior de Espana, Spain	SS
0600	3300	TGNA — R. Cultural, Guatemala	SS
0600	4915	Ghana Broadcasting Corp.	
0600	5995	RTV Mali	FF
0600	6080	Voice of America relay, Sao Tome	
0600	6105	Radio Universidad, Costa Rica	SS
0600	6185	Radio Educacion, Mexico	SS/EE
0600	9530	Radio Rossii via Magadan, Russia	RR
0630	9645	Vatican Radio	
0630	11755	YLE/Radio Finland	Finnish
0630	12050	Radio Cairo, Egypt	AA
0700	5025	Radio Rebelde, Cuba	SS
0700	7120	Italian Radio Relay Service	
0730	9870	Trans World Radio, Monaco	
0800	11770	Voice of the Mediterranean, via Italy	
0845	5025	Radio Quillabamba, Peru	SS
0900	4965	Radio Alvorada, Brazil	PP
0900	9585	Radio CBN, Brazil	PP
0900	11765	KNLS, Alaska	
0930	4950	Radio Baha'I, Ecuador	SS
0930	9610	Adventist World Radio, Italy	
0930	9710	Radio Vilnius, Lithuania	
1000	4915	Radio Coro, Peru	SS
1000	5055	RFO Guyane, French Guiana	FF
1030	3985	Radio East New Britain, Papua New Guinea	Pidgen
1030	9970	RTBF, Belgium	FF
1030	12085	Voice of Mongolia	
1030	4717v	Radio Yura, Bolivia	Quechua
1100	3945	NSB — Radio Tampa, Japan	JJ
1100	4000	Nei Menggu PBS, China	CC
1100	4120	Voice of National Salvation, (Korean clandestine)	KK/JJ
1100	4835	Radio Tezulutlan, Guatemala	SS
1100	4890	NBC, Papua New Guinea	
1100	4960	Radio Vanuatu, Vanuatu	
1100	5020	Solomon Islands Broadcasting Corp.	
1100	5055	TIFC — Faro del Caribe, Costa Rica	SS
1100	7260	Radio Thailand	Thai
1100	9540	Radio Nacional Venezuela	various
1100	12020	RDP Int'l., Portugal	PP
1100	15425	Voice of America Philippines relay	
1100	17835	Radio Pakistan	
1130	9520	Radio Veritas Asia, Philippines	CC
1130	15095	Far East Broadcasting Co., Philippines	various
1130	15125	Radio Republik Indonesia	II
1130	15345	RTV Marocaine, Morocco	AA
1130	18960	Radio Sweden	
1145	11945	BBC Singapore relay	EE/CC
1200	9955	KHBN, Palau	
1200	11550	WSHN, USA via Taiwan	
1200	15250	Radio Romania Int'l.	Romanian
1200	15295	Radio Tashkent, Uzbekistan	
1200	15305	Radio France Int'l.	FF
1200	15660	Radio Free Asia, via Kazakhstan	VV
1200	17775	Radio Tashkent, Uzbekistan	various
1230	12000	Central People's Broadcasting Station, China	CC
1230	21810	Radio Sweden	
1300	6150	Radio Singapore Int'l.	
1300	7130	Radio Taipei Int'l., Taiwan	CC
1300	7580	Radio Pyongyang, North Korea	KK/JJ
1300	15135	Deutsche Welle, Germany	GG
1300	15445	Far East Broadcasting Assn., Seychelles Is.	unid
1330	10330	All India Radio	Hindi
1330	11650	Radio Australia	
1330	15315	UAE Radio, Abu Dhabi	AA
1330	15400	YLE/Radio Finland	Finnish
1345	15775	Rikisutvarpid, Iceland	Icelandic
1400	9535	Qatar Broadcasting Service	AA
1400	9580	Radio Australia	
1400	15115	HCJB, Ecuador	
1430	9535	Radio Veritas Asia, Philippines	Telugu
1430	11760	Radio Republik Indonesia	II
1430	17525	Adventist World Radio — KSDA, Guam	
1500	11655	RTT Tunisienne, Tunisia	AA
1500	13730	Radio Austria Int'l.	GG
1500	15245	Congolaise Ntl Radio, Kinshasha, Congo	FF
1530	9575	Swiss Radio Int'l.	FF
1530	11690	Radio Jordan	
1530	15084	Voice of Islamic Republic of Iran	Farsi
1600	11570	Radio Pakistan	
1600	11708	Broadcasting Svc of Kingdom of Saudi Arabia	AA
1600	15100	Radio Pakistan	
1600	21605	UAE Radio, Dubai	
1630	15220	Bangladesh Betar, Bangladesh	Bangla
1630	17665	Voice of the Islamic Republic of Iran	unid
1700	15475	Africa Number One, Gabon	FF
1730	12925	Radio Liberte, Dem. Rep. of Congo	FF
1800	15315	RTE, Ireland, via UK	
1800	17870	Channel Africa, South Africa	
1830	15190	Radio Pilipinas, Philippines	Tagalog
1900	11640	World Beacon, via S. Africa	
1900	12060	Voice of the Mediterranean, via Russia	
1930	9540	Radio Polonia, Poland	
1930	9965	Voice of Armenia	
1930	11990	Radio Kuwait	AA
2000	9515	Radio Novas de Paz, Brazil	PP
2000	9675	African Beacon, via England	
2000	11625	Vatican Radio	
2000	13610	Radio Damascus, Syria	
2000	15485	Voice of Russia	
2030	15160	Radio Algiers Int'l., Algeria	
2130	17705	Voice of Greece, via Delano, CA	GG
2200	9695	Radio Rio Mar, Brazil	PP
2200	11595	Macedonian Radio, Greece	GG
2200	11915	Radio Bandeirantes, Brazil	PP
2230	9990	Radio Cairo, Egypt	
2230	11655	RDP Int'l., Portugal	PP
2230	11875	Radio Yugoslavia	Serbian
2230	15345	Radiodifusora Argentina al Exterior, Argentina	SS
2230	15565	Radio Netherlands via Bonaire, NWI	
2230	15565	Radio Vlaanderen Int'l., Belgium, via Bonaire	
2245	15280	RAI Int'l., Italy	II
2300	6060	Radio Tupi, Brazil	PP
2300	11402	Rikisutvarpid, Iceland	Icelandic
2300	11885	Voice of Turkey	TT
2300	17680	Voz Cristiana, Chile	SS
2330	9505	Radio Record, Brazil	PP
2330	15435	Radio Jordan	AA
2345	7325	Global Sound Kitchen, England	

BY HAROLD ORT AND R.L. SLATTERY

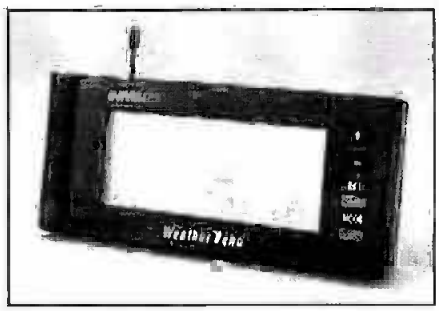
PRODUCT PARADE

Review Of New, Interesting And Useful Products

Davis Instrument's New Weather Echo™

This new portable display unit lets you view the weather wherever you like! The new Weather Echo™ lets you view multiple weather conditions all on one easy-to-read screen. Designed for use with the Davis Weather Monitor II and Weather Wizard III home weather stations, it's a compact wireless display console that fits in the palm of your hand. Its low price means that you can afford to add multiple units throughout the house. Put one Echo in your kitchen, another in your bedroom, and yet another in your shack — you'll always know what the weather's like outside, no matter where you are.

Setup is a snap. If your Weather Monitor or Wizard isn't already one of their wireless models, just add the Davis ConsoleLink wireless transmitter. Then pop in the battery, set the station ID, and you're ready to go. On the display screen,



The new Davis Weather Echo™ is a great addition to any home!

you'll see barometric pressure, temperature, wind speed and direction, wind chill, humidity, dew point, and rainfall. You can also see highs and lows for seven days, and even get the local forecast using your own backyard weather data.

Davis' Weather Echo™ is available in two models: the standard Weather Echo and Weather Echo Plus. Prices start at $125. For more information check out their website at www.davisnet or give them a call at 800-678-3669. Davis is located at 3465 Diablo Avenue, Hayward, CA 94545.

New Release Of PROBE Version 6.0 Software

DataFile Inc. announces a new release of its popular PROBE software, Version 6.0. PROBE works exclusively with Optoelectronic's Optocom, Optoscan 456, 456 Lite and 535 "computer-to-scanner" interfaces. PROBE V6 is the realization of over six years experience developing software exclusively for Optoelectronic's Optoscan and Optocom. Many of the new features in each version of PROBE are the direct result of the feedback received from the many PROBE users at large. Here are some of the new features for PROBE V6.0:

Mouse Control — Now you can use your mouse to control PROBE. Works

in both DOS and in a Windows "DOS Window." And for diehard keyboard fans — don't worry. No sacrifices were made to PROBE's unique mnemonic keyboard control – you don't need a mouse to use PROBE, but you may find it convenient.

Hypergroups — This feature was rated as "hot" by beta testers. Now you can switch between any 10 "Groups" on the fly directly from the scanning screen. Assign any of the "F1" through "F10" keys to your 10 favorite groups. Once scanning, pressing Alt-H provides a pick list of groups. Or you can use the key combination of <Alt> and any of the preassigned "F" keys to go directly to a group. The applications for Hypergroups are limited only by your imagination. Consider the potential power this feature offers. Switch instantly between each group, each group having up to 99 banks, 1,000 frequencies per bank, 10 Hyperbanks per group, and each Hyperbank can contain different configurations for up to 70 settings and specific bank selections for up to 99 banks. This is the ultimate in letting you choose what you want to monitor and how you want to monitor it — all in an instant!

VFO Keys — This new feature provides immediate access for those most important frequencies from the scanning screen or the manual tuner by using key combinations <Ctrl><Fn>. Up to 10 individual frequencies can be assigned to the F1 through F10 keys — called "VFO Keys." In addition to a frequency, each VFO key can store the mode, tone, step rate, and a description for each frequency. <Ctrl><V> provides a handy VFO key pick list. Once a VFO key is pressed, the associated frequency is immediately tuned in the Manual Tuner where it can be changed, or stepped up or down, based on the step rate you programmed into the VFO key. Tone squelch control is also provided. A new "Setting" called [V] keys allows you to choose access between "global" and "local" VFO files. Each group can have its own VFO key assignments or groups can share the same frequency assignments.

Templocks Improved — Templocks now stay active during entire session — they are not cleared when you change groups or after using the frequency viewer from scanning screen.

"Active Priority Frequency" Enhancements — An "Active Priority Frequency," when active, can now be "paused" by pressing the <Enter> key.

Added Delay Time to "Settings Priority"— An "Active Priority Frequency" can be delayed by a specified amount of time before scanning resumes. This new setting, like the other "Settings," can be memorized in a Hyperbank key. Each group can now have its own custom column order. The ability to save changes to frequency and log viewer column orders for "Current" or "All" groups after the new column orders have been selected has also been added.

Added Enhancements: Added a new index for "Agency" to the log file. Now you can view the log file in "Agency" order. A "Bearing" indication has been added to the scanning screen. Indicates bearing in degrees from "Location" to transmitter when latitude and longitude data is provided in both "Configure — Location" and in the frequency record.

PROBE Version 6.0 comes complete with printed documentation and is available exclusively from DataFile Inc., P.O. Box 20111, St. Louis, MO 63123, or send an E-mail to Datafiles@aol.com for more details, current pricing and upgrade information. ■

THE LISTENING POST

What's Happening: International Shortwave Broadcasting Bands

AFN Presents: New SW DX Country

It seems that satellites haven't worked out all that well for (U.S.) Armed Forces Radio. All of a sudden AFN signals began popping up on out-of-band frequencies all over the dial, bringing many new targets and one new radio country. At this writing, things still haven't been completely sorted out as far as who's where and at what times. Some of the frequencies listed below may actually be in use by two sites at the same time. Here's the picture as we have it so far:

4278.5–Florida (Key West Naval Air Station)
4319–Diego Garcia (night)
4993–Sicily (Sigonella) (Italy) (day)
5765–Guam (night)
6350–Hawaii (Pearl Harbor) (night)
6458.5–Puerto Rico (Roosevelt Roads)
6847.5–location unknown
10320–Hawaii (Pearl Harbor) (night)
10940.5–Sicily (Sigonella) (Italy) (night)
12579–Diego Garcia (day)
12689.5–Florida (Key West Naval Air Station) (24 hrs)
13362–Guam (day)

Florida and Puerto Rico were, of course, previously active. All the transmitters are located at U.S. Navy installations and all broadcasts are transmitted in upper sideband mode. There may be some schedule overlap between day and night frequency usage. The broadcasts consist of programming from the various U.S. domestic networks — ABC, CNN, etc. — with AFN public service announcements dropped into the commercial breaks. The various stations do not carry the same line-up. There may well be at least two additional sites on the air by now: Iceland and Puget Sound, Washington state. The new shortwave country mentioned is **Diego Garcia**, an island in the Indian Ocean.

Reception reports can be sent to the Naval Media Center, NDW Anacosta Annex, 2713 Mitschner Road SW, Washington, D.C., 20373-5819. It's probably a good idea to ask that the reply specifically confirm the site you heard. We'll try and keep you up-to-date on any additions or changes as they turn up. Pretty neat stuff!

Radio Havana Cuba hasn't changed QSL designs in a long, long time. Pete Nelson in Michigan received the standard RHC card earlier this year.

There's still more happy news to pass on — namely, the return of United Nations Radio to shortwave. (Not counting the various UN Radio programs some stations have carried in the years since U.N. Radio discontinued its regular broadcasts over VOA facilities.) U.N. Radio is now airing daily 15-minute programs via Merlin Communications, as follows: In French at 1700 on **6120** to Madagascar via Meyerton, S. Africa; **17580** (England) to West Africa and **21490** (Meyerton) to Kinshasha. 1730–1745 in English on **6125** (Meyerton) to South Africa, **15265** to East Africa and **17710** (via Ascension) to Nigeria. And at 1830–1845 in Arabic on **16265** (England) to Egypt and **17565** (England) to Morocco and Algeria.

Reception reports for U.N. Radio can be sent to David Smith, U.N. Radio, Secretariat Building, Room S-850-M, United Nations, New York, NY 10017.

Radio Minurca, the UN-related station in the Central African Republic has been replaced by **Radio Ndeke Luka**, which means Bird of Luck in the local language. The station will continue to serve as a link between various help organizations and the local population. Radio Minurca operated on **9900** but it's unclear at this point whether Ndeke Luka will be using that frequency.

More potential activity from Central America may be in the offing. Supposedly **Radio Fides** in Costa Rica plans to operate on **9955 kHz**. The station — call letters TIAC — is a Catholic broadcaster which operates an AM and FM outlet.

World Christian Broadcasting, which operates KNLS, Anchor Point, Alaska, plans to add another 100 kW transmitter and also double their antenna capacity. Once in operation, the station will be on the air 20 hours a day, one transmitter airing mostly Chinese and the other mostly in Russian.

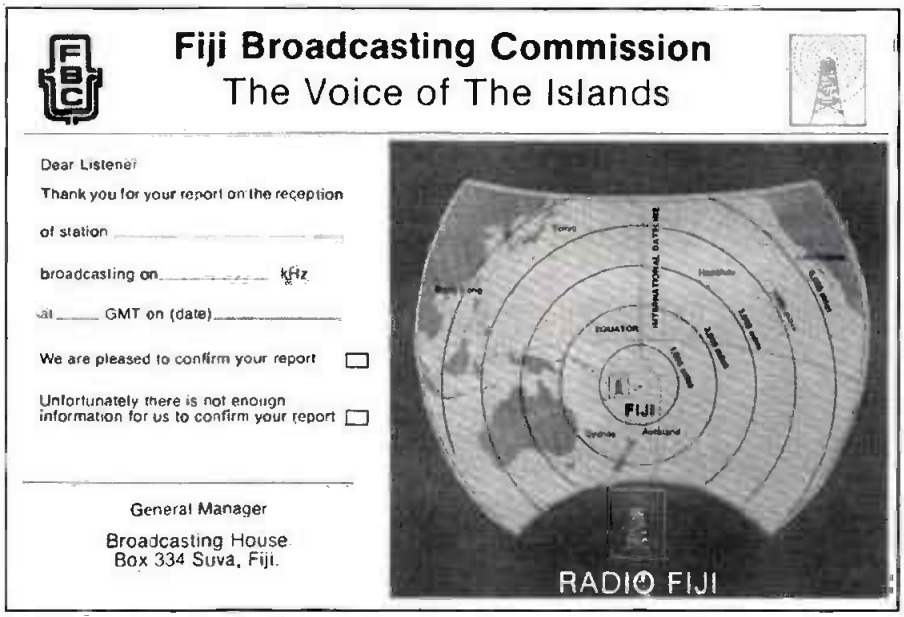
Check **4960** for **Radio Villa**, Santo Domingo, in the Dominican Republic, which has returned to the air after having been gone for much of this year.

The **Voice of Nigeria's** sojourn on **7265** was mighty brief. They're back on the old **7255**, with their usual sign-on just prior to 0500.

The current schedule for the U.S.-

BY GERRY L. DEXTER

R.C. Watts in Kentucky QSL'd the "Fritz Love Radio" special broadcast over Deutsche Telekom and got this listing with his reply.



The Fiji Broadcasting Commission – long gone and much missed.

based **African Beacon** service is: 0430–0630 on **6115**; 530–1800 on **6145**; 1800–2200 on **3230 and 9675** and 1900–2200 on **5925**, all via Meyerton, South Africa, except 9675 which is from the Rampisham site in England.

African Beacon's sister service, **European Beacon**, is scheduled from 1600–1800 on **15445** and 1800–2000 on **15585**, both transmissions from Skelton, England; and 1900–2200 on **7360** via Krasnodar, Russia.

The Danish Shortwave Clubs have put out the second edition of their *Domestic Broadcasting Survey*. This very useful reference booklet is edited by long time and well-known DXer Anker Peterson. It lists all the non-international broadcasts and broadcasters on shortwave, from **2310 kHz on up to 21570**, along with operating hours, parallel frequencies, powers, and other info. All the stations listed have actually been heard during the months preceding publication. To get a copy, send a $10 bill to DSWCI, Tavleager 31, DK-2670 Greve, Denmark. You'll receive your copy in a couple of weeks, via return airmail.

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

This month's book winner is Mike Miller of Issaquah, Washington. Mike gets the 2001 edition of *Passport to World Band Radio*, courtesy of Universal Radio — the people who have everything a shortwave fan needs for full enjoyment of the hobby. Their huge catalog has over 100 pages of gear, gadgets, and other goodies. To get a copy, call 614-866-4267 or write them at 6830 Americana Parkway, Reynoldsburg, OH 43068.

Remember your reception logs are always welcome. Just be sure to list items by country, do a minimum double space between each (so we can navigate scissors more easily) and add your last name and state abbreviation after each item. Incidentally, Bruce Burrow in Washington has suggested that reporters include a mention of the receiver/antenna they use. If you'd like to do that, we'll try and include the information as part of the credits at the end of the column. By the way, it's a good idea to include your full address in your report because envelopes sometimes aren't forwarded to us. Other things we can put to good use are spare QSL cards you don't need returned, station photos and other items from stations, including schedules, brochures, etc. And, hey — how about a photograph of you at your listening post? As always, thanks so much for your continued interest and cooperation!

On with the show! 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.

ALBANIA — Radio Tirana, **7160** at 0234 with news. Buried in ham chatter. ID at 0239. (Burrow, WA)

ARGENTINA — Radio Nacional, **6060** at 0159 with SS music, time pips. (Miller, WA)

ASCENSION ISLAND — BBC relay, **9410** with sports at 0622. (Becker, ID)

AUSTRALIA — VNG time signal station, **8368** at 0703 and on **16000** with time beeps at 0703. (Becker, WA) **16000** at 0449 with announcement. (Miller, WA) Radio Australia, **9580** at 1400 with news. (Northrup, MO) **11650** at 1345 with country/western songs. **11880** at 1705 with news. (Miller, WA) **12080**

Stations in both of the Congos are tough to hear, but Radio Congo Belge, in the former Belgian Congo, could be heard everyday on 6380.

This nicely arranged shack belongs to John Grew of Ohio. (So where's your photo?)

at 0900 in EE and Tok Pisin. (Ziegner, MA) **15415** at 0232 with news. (Jeffery, NY) **15515** at 0417 with news and **17580** with live sports event. (MacKenzie, CA) **17580** at 0510 with "Pacific Beacon" program. (Becker, WA)

BANGLADESH — Bangladesh Betar, **15220** at 1635 in Bangla. Music with a man announcer, then talk by man. (Jeffery, NY)

BELGIUM — Radio Vlaanderen Int'l, **9925** at 0559 with IS, ID at 0600. (Becker, ID) **15565** via Netherlands Antilles, at 2252 in EE and 0443 in DD. (Miller, WA)

BOTSWANA — Voice of America relay, **7265** at 0400 with opening ID, into VOA News. Poor, under Sudwestrund-funk (Germany). (D'Angelo, PA) **7275** at 0300 with news. (Brossell, WI)

BRAZIL — Radio Alvorada, **4965** at 0915 with mix of sports talk in PP and music, ID by man. (D'Angelo, PA) Radio Aparecida, **6135** at 0802 with music program hosted by a man with frequency, IDs, time checks, commercial announcements, and jingle IDs. Fair here, weak on // **5035.3** and poor on **9630**. (D'Angelo, PA) Radio Gaucha, **11915** at 0111 with sports in PP. (Miller, WA)

BULGARIA — Radio Bulgaria, **9400//11700** at 0217 with report on the lack of interest in the electoral process by Bulgarian citizens. (Burrow, WA)

CANADA — Radio Canada Int'l., **15345** via England monitored at 0410. "Venture Canada" business report. (Paszkiewicz, WI)

CHILE — Voz Cristiana, **6070** at 1121 in SS. (Miller, WA) **11745** in SS at 0220. (Brossell, WI) **17680** at 2300 in SS. (MacKenzie, CA)

CHINA — China Radio Int'l., **5145** in CC at 1223. **7405** in EE at 1330. **9730** *(via Fr. Guiana — Ed.)* in EE at 0440, **9770** in CC at 1740. (MacKenzie, CA) **11900** at 1340. (Miller, WA) **15260** in CC at 1330. (Northrup, MO) **17890** in CC at 0504. (Becker, ID) Central People's Broadcast-ing Station, **4525** in CC at 1200. *(Nei Menggu PBS listed — Ed.)* **4850** in CC at 1205; CPBS-Beijing, **5030** in CC at 1220; **5955** (Shijiazhuang) in CC at 1240; **7170** in CC at 1320. (MacKenzie, CA) **12000** at 1230 in CC. *(Lingshi and Kunming both listed as operating at that time — Ed.)*

CONGO (DEMOCRATIC REP.) — Radio Nacional Congolaise, Lubumbashi, **7205**, with political discussion in FF, news. (Miller, WA)

Sunrise (or sunset) and some of the towers of Vatican Radio.

COSTA RICA — RFPI, **15050** at 0535. (Becker, ID) 1840. (MacKenzie, CA) Radio Universidad, **6105** in SS at 0603 with ID theme music and then either a change in power or beam direction because the signal lost a lot of strength. (Becker, ID) Faro del Caribe, **5055** with music and religious message in SS at 1111. (Miller, WA)

CROATIA — Croatian Radio, **9925** *(via Germany — Ed.)* at 0100 sign-on, followed by a Croatian language light rock song. (Ephraim, MA) 0104 with news in EE. (Wilden, JN)

CUBA — Radio Havana Cuba, **9820** at 0340 with "DXers Unlimited." (MacKenzie,

CA) 0557 with music. (Becker, WA) **15250** at 1345 in SS. (Northrup, MO) Radio Rebelde, **5025** at 0705 in SS. (Becker, WA)

CZECH REPUBLIC — Radio Prague, **11615 heard** at 0100 with news, discussion on romance. (Miller, WA) 0305 economic outlook for families with children since there is an acute shortage of apartments. (Brossell, WI)

DENMARK — Radio Denmark, via Norway, **11635** at 0430 in DD with ID, news. (Burrow, WA)

DOMINICAN REPUBLIC — Radio Villa, **4960** monitored at 0014; much music with occasional SS announcer and many IDs "Radio Villa de . . . Santo Domingo . . . Republica Dominicana" Heard while on vacation in Virginia Beach, VA. (Silvi, OH)

ECUADOR — HCJB, **9745** at 0417 with "Musical Mailbag." (Foss, AK) **11960** in JJ at 0455 and **15115** at 0400 with "DX Party Line." (MacKenzie, CA) **15115** at 1410 with preacher; **15140** in SS. (Northrup, MO) Radio Baha'i, **44950.1** at 0923 with nice vocals with flutes, woman announcer with ID and talks, more rustic vocals. (D'Angelo, PA) Escuelas Radiofonicas, **5010** in SS at 0315 with music and announcements. (Brossell, WI) HD2IOA, Guayaquil, **3810** with time signals and SS announcements at 0615. (Becker, WA) Radio Quito, **4920** in SS at 0545. (Becker, ID)

EGYPT — Radio Cairo, **12050** in AA at 0652. (Becker, ID) 2241 with news in AA. (Miller, WA) 0235 with man/woman singing alternately. Also **15285** at 0335 in AA. (Brossell, WI) 1430 in AA. (Northrup, MO)

ENGLAND — BBC, **6020** *(not listed — Ed)* at 1315; **9515** *(via Canada — Ed)* at 1305 and **15220** *(via Canada — Ed)* at 1400. (Northrup, MO) **13745** at 1830 in RR and **17615** at 0045 in EE. (MacKenzie, CA) **15180** at 1807 in FF. (Jeffery, NY) Global Sound Kitchen, via Merlin transmitters, **7325** at 2345. EE DJ with rock, pop and hip-hop. (Watts, KY)

FINLAND — YLE/Radio Finland, **11755** at 0641 in Finnish. (Becker, ID) **15400** at 1351 in Finnish. (Miller, WA)

FRANCE — Radio France Int'l., **15305** monitored at 1225 UTC in FF to Africa. (Miller, WA)

FRENCH GUIANA — RFO Guyane, presumed, **5055** at 1019 in (presumed) FF with a talk by a man. Barely audible under static. (Jeffery, NY)

GERMANY — Sudwestrundfunk, **7265** at 0350 with Cher and Lionel Ritchie numbers followed by time pips, ID, and news in GG at top of hour. Good until VOA Botswana opened at 0400. (D'Angelo, PA) Fritz Love Radio, **9525** at 0000. Special broadcast of Ostdeutscher Rundfunk Brandenburg via Deutsche Telekom facilities. Hip-Hop and GG talk about the Berlin Love Parade. (Watts, KY) Deutsche Welle, **11795** in GG at 0651. (Becker, WA) 15135 in GG at 1350. (Northrup, MO) **15410** (via Antigua) in GG at 2250. (Miller, WA) **17730** (via Antigua) at 1613 in GG. (Wilden, IN)

GREECE — VOA relay, 11820 with Billboard Top 20 at 0220. (Brossell, WI) **15145** at 1802 in unidentified language. (Jeffery, NY) Voice of Greece, **9420** in Greek at 0330. (Brossell, WI) **9420, 12110 and 15630** at 0210 in Greek with music, ID, narrative, and into possible drama. (Burrow, WA) **15455** at 1345 and **17705** (via Delano, CA) at 2145. (Miller, WA)

GUATEMALA — Radio Cultural/TGNA at **3300** in SS with religious music at 0605. (Becker, WA) Radio Tezulutlan, **4835** at 1056, unidentified language; local group and choir. (Miller, WA)

HAWAII — KWHR-World Harvest Radio, **9930** at 1750 and **17510** at 0345. (MacKenzie, CA)

HONDURAS — La Voz Evangelica, **4819** in SS at 1012 with music and man announcer. (Jeffery, NY)

HUNGARY — Radio Budapest, **5980 and 6030** at 0722 with some hot bebop jazz; man host in presumed HH. (Foss, AK) **9560** at 0101 with news in EE. (Wilden, IN) **9835** at 0227 in EE; multi-lingual ID. (Barrow, WA)

ICELAND — Tentative, Armed Forces Network, **10320** at 0300 with news and sports. (Silvi, OH)

INDIA — All India Radio, **10330** at 1336 in Hindi. (Miller, WA) **11620** at 0025 with

Radio Netherlands marked their 50th anniversary with three limited edition QSLs.


LOS TEQUES, ESTADO MIRANDA, VENEZUELA

RADIO MIRANDA

YVLT - 830 KCS. ONDA LARGA
YVLN - 6000 KCS. ONDA CORTA
BANDA INTERNACIONAL DE 49 MTS.

CERTIFICADO DE SINTONIA

RAMON R. ARREAZA A.

If you were listening in the mid '60s, you might have heard Venezuelan Radio Miranda, operating on 6000 (Radio Havana Cuba wasn't there).

music. (Ephraim, MA) 0215 with singing and talks in presumed Hindi. (Brossell, WI)

INDONESIA — Radio Republik Indonesia, **11760** at 1426 with drama in an unidentified language. (Miller, WA) **15125** at 1129 in unidentified language. (Jeffery, NY) *(Probably Indonesian in both cases — Ed.)*

IRAN — Voice of the Islamic Republic of Iran, **9575** at 0037 with singing in AA. (Ephraim, MA) **15084** in Farsi at 1415 and 1530. (Northrup, MO)

IRELAND — Radio Telefis Eireann, (via England) **15315** at 1814 with "5–7 Live." Off suddenly at 1829. (Jeffery, NY)

ISRAEL — Reshet Bet home service, **9390** in HH with pops at 0420. (MacKenzie, CA) Kol Israel, **15640** at 0400 with news in EE. (MacKenzie, CA) **15650//17535** at 1857 in HH with news, IS, ID in EE, and into EE news at 1900. (Burrow, WA) **15760** at 0057 with time pips, news in HH. Also 0448. (Miller, WA)

ITALY — RAI Int'l, **11800** with music and talks in II at 0220. (Brossell, WI) **15280** at 2248 in II. (Miller, WA)

JAPAN — NSB/Radio Tampa, **3925** (Saporo) and **3945** (Tokyo) in JJ at 1144. (Becker, ID) **3925** in JJ at 1150. (MacKenzie, CA) Radio Japan/NHK, **9505** at 1725 in EE, **//12000 and 15355**; **9660** via French Guiana in JJ at 0430 closing; **9835** at 1745 in JJ; **15590** in JJ at 0410; **17825** in EE at 0315. (MacKenzie, CA) **13630** in JJ with JJ-EE language program, ID at 0700, program notes and sign-off. (Becker, WA) **15395** via Gabon at 0524 with JJ—SS language lesson. (Becker, WA) 1621 in unidentified language. (Jeffery, NY)

JORDAN — Radio Jordan, **15435** at 0425 in AA with pops, talk to past 0435. (MacKenzie, CA) 0521 in AA. (Becker, ID) 2340 with music and singing in AA. (Ephraim, MA)

KUWAIT — Radio Kuwait, **11675** with Holy Koran at 0215. (Brossell, WI) **15110** at 1613 in AA with Mideast music, talk. (Jeffery, NY) 1410 in AA. (Northrup, MO) **15495** at 2338–0000 sign-off in AA with pops, talk. (Paszkiewicz, WI) **15505** at 0420 in AA. (MacKenzie, CA)

LIBYA — Radio Jamahiriyah, **15435** at 0330 in AA. Excellent signal. (Brossell, WI)

MADAGASCAR — Radio Nether-lands relay, **15560** at 0415 in DD. Two women talking. (MacKenzie, CA)

MALTA — Voice of the Mediterranean, tentative, via Russia, **12060** at 1910. Very muffled audio. Narrative with many mentions of Malta, into music at 1915, followed by a feature about the summer Olympics. Off abruptly at 1937. (Burrow, WA)

MEXICO — Radio Mexico Int'l., **9705** at 0242 with romantic vocals hosted by man in SS with IDs until English began at 0309. ID, E-mail and website info, weather for Mexico City, national/ international news, sports. (D'Angelo, PA) 0305 with "DXperience" program discussing suitable antenna wire and other SWL topics. (Burrow, WA) Radio Educacion, **6185** in SS with cultural program at 0245. (Miller, WA) 0605 through 0655 with Norteano music. (Becker, ID) Radio Mil, **6010** in SS at 0549. (Becker, ID)

MOLDOVA — Voice of Russia relay, **7125** at 0255. (Brossell, WI)

MONGOLIA — Voice of Mongolia, **12085v** at 0910 in MM with music. 0930 to 1000 in Kazak; 1000–1030 in CC. Into EE 1030–1051 with Festival of Nadaam. (Ziegner, MA)

MOROCCO — RTV Marocaine, **15345** at 1140 in AA; man talking to a woman. (Brossell, WI)

NETHERLANDS — Radio Nether-lands, **9845** (list via Bonaire) 0045 with "Sincerely Yours" listener mail program. (Ephraim, MA) 0046 with hodge podge of discussions. (Wilden, IN)

NEW ZEALAND — Radio New Zealand Int'l., **17675** at 0048 with news update and 0330 with live sports. (MacKenzie, CA) 0150 with classical music and 0456 in EE/Marori with music. (Miller, WA) **17675** at **0305** with live cricket match. (Brossell, WI) 0655 with portrait of a woman Kiwi singer's recordings from the late 1920s. (Foss, AK) **17690** at 0500. (Becker, ID)

NORTH KOREA — Radio Pyongyang, **7580** in KK and JJ at 1335; **9975** in RR at 1755; **13760** in SS at 1832 and **17735** in FF/EE at 0054. (MacKenzie, CA) **11710//13760** in EE at 1900. (Burrow, WA)

NORWAY — Radio Norway, **11635** heard at 0310 in NN with excellent signal. (Brossell, WI) 0408 in NN with narrative, IS, off at 0430 and into Radio Denmark broadcast. (Burrow, WA)

PAKISTAN — Radio Pakistan, tentative, **15100** at 1605 in EE with many mentions of Pakistan, into music (National anthem?) and off at 1611. (Burrow, WA)

PAPUA NEW GUINEA — NBC, **4890** at 1120 with U.S. pops. (Brossell, WI) 1140 with music and announcements. (Becker, ID) 1215 with rock. (MacKenzie, CA) 1315. (Miller, WA) Radio East New Britain, **3985** at 1040 with discussion in Pidgin. (Miller, WA) Radio New Ireland, **3905** in Pidgin at 1043. (Miller, WA)

PERU — Radio Quillabamba, **5025** monitored at 0843. Woman hosting program of romantic ballads. Occasional IDs. (D'Angelo, PA)

PHILIPPINES — Far East Broad-casting Co., **15435** in CC at 0524. (Becker, ID) Radio Veritas Asia, **9520** in CC at 1135. (Brossell, WI) Voice of America relay, **6160** at 1310. (MacKenzie, CA) **15160** at 1230. (Brossell, WI) **15425** at 1105. 50 kW. Higher powered **//15160 good, 9760** poor and **6160** poor to fair. (D'Angelo, PA) Radio Pilipinas, **11720// 15190//17720** at 1850 in EE with local business report, ID. (Burrow, WA) **15190** at 1845 in Tagalog. (MacKenzie, CA)

POLAND — Radio Polonia, **9540** monitored at 1930 with news. Noisy carrier. (Ziegner, MA)

PORTUGAL — RDP Int'l., **11655** in PP

at 2259 and into news. (Miller, WA) **15585** at 0515 with music. (Becker, ID)

ROMANIA — Radio Bucharest, **11885** at 0205 with news in unidentified language. (Miller, WA)

RUSSIA — Voice of Russia, (Petropavlovsk) **17650** at 0350. Also **17690**. (MacKenzie, CA) **17690** via Petropavlovsk at 0457 with ID and sign-off at 0500. (Becker, ID) Magadan Radio, **9500** with Radio Rossii in RR at 0625. (Becker, ID) Deutsche Welle relay, **9700** at 0423 in GG. (Foss, AK) **9900** at 1115 in GG. (Brossell, WI) **15490** at 1137 in GG. (Jeffery, NY)

RWANDA — Deutsche Welle relay, **7225** heard at 0300 with IS, sign-on in an African dialect. (Brossell, WI) **15135** at 1324 in GG. (Miller, WA)

SAO TOME — VOA relay, **6080** at 0603 with news. (Becker, ID)

SICILY (Italy) — Armed Forces Radio, **10940.5** from 1920 fade-in to 0000 tune-out. CNN news, NPR news, and other news and sports, not parallel to other AFN shortwave. None of the three AFN SW frequencies were parallel during two bandscan checks. **6458** had baseball, **12689** had music, **10940** news and sports. (Silvi, OH)

SEYCHELLES ISLANDS — Far East Broadcasting Assn., **15445** at 1325 with Bible talks in unidentified language. (Miller, WA)

SINGAPORE — BBC relay, **11945** at 1145 with a play in EE and translation into CC. (Brossell, WI) Radio Singapore Int'l., **6150** at 1426 with music. (Miller, WI)

SLOVAKIA — Adventist World Radio, **11610** in unidentified language at 0210. (Brossell, WI)

SOLOMON ISLANDS — Solomon Islands Broadcasting Corp., **5020** at 0945 with island vocals and talk by woman until ID and news on the hour. (D'Angelo, PA) 1239 with pops. (Miller, WA)

SOUTH AFRICA — Channel Africa, **11720** at 0409 with news. (Foss, AK) BBC relay, **15420** at 0330 with program on the Congo. (Brossell, WI)

SPAIN — Radio Exterior de Espana, **6055** in SS at 0552. (Becker, ID) **15110** at 2245 with sports news in SS. (Miller, WA)

SRI LANKA — VOA relay, **7225** at 0320 in unidentified language. ID at 0330. (Brossell, WI) **9645** at 1735. (MacKenzie, CA) Radio Japan relay, **11880** at 1818 in JJ. (MacKenzie, CA) Sri Lanka Broadcasting Corp., **15425** at 0251 with country/western, man announcer in EE. (Paszkiewicz, WI)

SWEDEN — Radio Sweden, **9495** at 0229 with ID, report on the arts. (Burrow, WA) **15245** at 0311 with news in SS. (Miller, WA) **15265** at 0350 with a report on the exploding rat population due to heavy rains. (Brossell, WI)

SWITZERLAND — Swiss Radio Int'l., **9575** at 1531. German ended, into FF. (Miller, WA) **9905** (via French Guiana) at 0445 with "Capitol Letters." (MacKenzie, CA)

SYRIA — Radio Damascus, **12085** at 0116 with AA singing. (Ephraim, MA)

TAIWAN — Radio Taipei Int'l., **7130** (direct) in CC at 1320 with announcer and pops. **9680** via Florida in CC at 0435. (MacKenzie, CA)

THAILAND — Radio Thailand, **7260** monitored at 1125 in presumed Thai, ID at 1130 and "Welcome to the Voice of America in Indonesian." (Brossell, WI) BBC relay, **5990** at 1250 in JJ/EE. (MacKenzie, CA) Voice of America relay, **9550** at 1750. (MacKenzie, CA)

TURKEY — Voice of Turkey, **9445** at 0310 with songs in TT; **11655** at 0310 with news in EE. (Brossell, WI) 0318. (Burrow, WA) **11885** at 2300 in TT. (Ziegner, MA)

UNITED ARAB EMIRATES — UAE Radio, Dubai, **12005** at 0230 with Holy Koran. (Brossell, WI) UAE Radio, Abu Dhabi, **15315** at 1340 in AA. (Northrup, MO) *(NOTE TO ALL REPORTERS: When you report UAE receptions please indicate whether you had Dubai or Abu Dhabi. They are two different stations — Ed.)*

UNIDENTIFIED — VOA, **4930** at 0300 with VOA Music Mix program and news at 0400. No listing for this and did not appear to be parallel to other VOA EE frequencies audible here at the same time. (Silvi, OH) **11630** — 0200–0215, very strong code-type signal. Off at 0215 with five strong dots. The same type of transmission was noted again at 0300 on **9380**. The only commonality is that both frequencies are used by the People's Republic of China. (Brossell, WI)

UZBEKISTAN — Radio Tashkent, **17775** heard at 1206–1500. Various languages, traditional Uzbek/Tajik music, Holy Koran. (Ziegner, MA)

VATICAN CITY — Vatican Radio, **7305** at 0320 in SS. (Brossell, WI)

VENEZUELA — Ecos del Torbes, **4980** at 0240 in SS. (Brossell, WI)

VIETNAM — Voice of Vietnam, **9695** *(via Canada — Ed.)* at 0230 with ID, news in EE. (Burrow, WA)

YUGOSLAVIA — Radio Yugoslavia, **11875** at 2234 with Serbian music. Into EE at 0000. (Ziegner, MA)

And there goes the whistle! A couple of gazillion thanks to the following folks who did the right thing this month: Michael Miller, Issaquah, Washington; Sue Wilden, Nobelsville, Indiana; Robert Brossell, Pewaukee, Wisconsin; Tricia Ziegner, Westford, Massachusetts; Pete Becker, Clarkson, Washington (also listening from Idaho); Lee Silvi, Mentor, Ohio; Marty Foss, Talkeetna, Alaska; Dave Jeffery, Niagara Falls, New York; Richard D'Angelo, Wyomissing, Pennsylvania; Stewart MacKenzie, Huntington Beach, California; R.C. Watts, Louisville, Kentucky; Sheryl Paszkiewicz, Manitowoc, Wisconsin; Mark Northrup, Gladstone, Missouri; Bruce Burrow, Snoqualonie, Washington, and a welcome to Barry S. Ephraim, Worcester, Massachusetts. Thanks to each one of you!

Until next month, good listening! ■

SCAN TECH

Trunking, Tips, Techniques, And Mods

'Tis The Season For Malls And Getting Radio Goodies!

It's getting to be holiday time again, but this is probably not news to you. By this time, you've probably been overwhelmed with holidays and we still have a month to go. I can't blame you for that, but we can do a couple of things to make it a bit more tolerable.

The first thing you should do, if you haven't already, is plug in the frequencies for your local mall. Or malls if you're in any sized metropolitan area. Even small shopping centers have maintenance people and often security for the holidays that use radios.

You can find store and mall security on just about any business frequency, so you may have to do some hunting to find just what you're after. If you have one of the FCC data CD-ROMS, you can do a search for the frequencies if you know the real licensee of the communications equipment. I say this because sometimes the malls are operated by a company other than the name of the mall, and sometimes the security and other services are contracted out to another company who might actually have the license for any radio equipment in use.

Another good place to look is the itinerant frequencies, particularly within individual stores (larger stores all have security staff of their own these days). Equipment operating on these channels is widely available to anyone. They are required by definition to operate at low power levels, and while it's plenty to carry the signal within a building, you may not be able to hear them unless you are close by. Larger centers will have dedicated frequencies, possibly several channels to keep security and maintenance functions separated. Two of our local centers even use repeaters which makes listening all that much easier since you can hear both sides of the conversation.

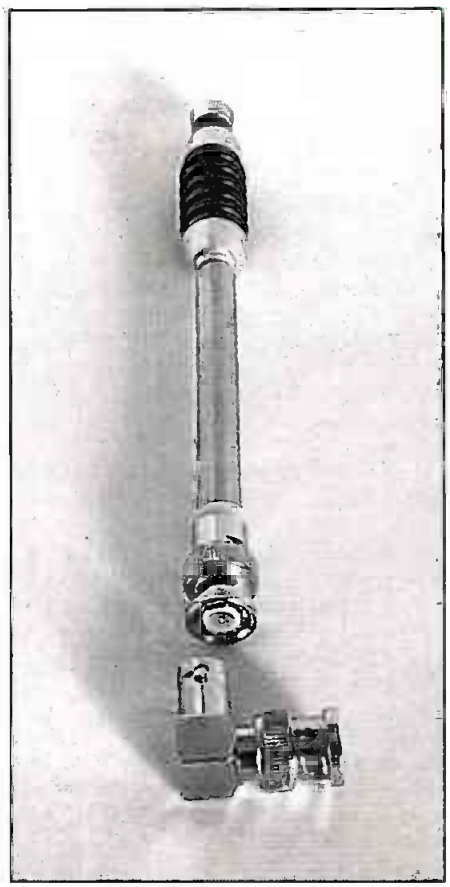
Finally, you may have some luck finding frequencies in more traditional references like *Police Call* and *Monitor America*. Both of these excellent references should be in your library as a good starting point for frequency information. For some cities, *Monitor America* actually lists mall and shopping center frequencies directly.

It's pretty interesting listening from time to time, and *very* entertaining the rest. Most of the security officers and others heard on the radio are not professional communications specialists, to say the least. And during the holidays, there are likely to be a number of part-time staff added to help with the increased workload. Part-time staff who need directions and answers to questions that customers may ask hundreds of times a day, but for this particular employee hasn't come up before, and must be answered over the radio by a senior employee. Sometimes it's answered for the 100th time by that particular senior employee and the answer is somewhat "less than polite."

Our particular mall also runs into parking problems around the holidays, and a whole detail of folks is dedicated to helping solve that problem and transporting staff and guests to other off-site parking that is available. And to say the least, security is tighter and there are likely to be more problems in general during the holiday shopping season with so many people coming and going, and unfortunately, more opportunities for unscrupulous types as well.

Check it out. If you don't have the frequencies already, it's a bit of a fun challenge to identify them. If you can't find anything listed at all, or don't have access to the frequency directories, go have a look around the store or mall you're interested in. See if you can spot any antennas on the roof, or if you can spot someone using a handheld radio. The length of the antenna MAY give you some indication, but not always.

In the good old days, you could tell just by how long the antenna was on the handheld transceiver what frequency band they were operating on. That information was very helpful to narrow the search. However, today's modern antennas, particularly on portables, have many shapes and sizes and don't always correlate well to the band they're designed for. As an example, I have an 800-MHz rubber duck antenna that's much longer than several VHF-Hi antennas that are common. Perhaps you can find a friendly mall employee and get them to let you look at the radio itself. Sometimes they have meaningful labels (sometimes even the frequency itself), but sometimes not. Good hunting!



Always a good standby for any scanner enthusiast, this collapsible antenna can be quite versatile. Add a right angle BNC adapter if you'll be using it with your base radio, or if you want to lay your handheld down. (RadioShack No. 20-006 and about the best $10 investment you'll ever make)

Holiday Wish Lists

There are always a few new products that come out during the year, but many of us are too busy doing day-to-day things

BY KEN REISS <armadillo1@aol.com>

to keep up. Or perhaps what you need isn't particularly new, it's just one of those accessories you haven't gotten around to getting for yourself yet. It's always nice to get something related to your hobby for the holidays, even if you have to treat yourself. Besides, how many ties or socks do you really need?

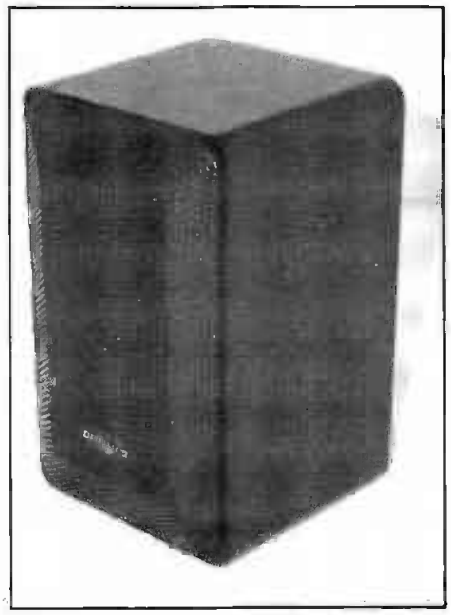
Antennas

Scanner nuts can never seem to have enough antennas. Of course, on a handheld, they're easy to change, so swapping back and forth can be advantageous for various conditions or frequencies of interest. Base users can also gain some mileage by changing antennas from time to time too. Perhaps you've been using a model that you're not quite satisfied with, or perhaps you've got a second scanner that could use a little signal boost too. On the other hand, if you're hearing all that you care to, a new antenna is probably not a good choice.

Handheld antennas are self-contained, so the only real issues are performance versus what you're willing to be seen walking around with. Some of these antennas get to the point of being larger than the radio, and that always makes me wonder just how practical they are. If you don't have a telescoping antenna that can be adjusted for various frequencies, you probably should. If you're still using the antenna that came with your radio, you are really a good candidate for an upgrade. Look around and see what strikes your fancy, but keep in mind the other major consideration in handheld antennas — frequency coverage.

All antennas, not just handhelds are built with particular frequency ranges in mind. The telescoping system that I mentioned has the advantage of having adjustable length, which means adjustable frequency response too. I have a tendency to use ham antennas for my scanners because they are so widely-available, and because they are close to the frequency ranges that I'm interested on the scanners. You may be able to get significant performance increases on a single band by using commercial antennas built for just that frequency range, but you are quite likely to sacrifice bandwidth — the ability of the antenna to perform over a wide range of frequencies. On a handheld, that's not a major concern, depending on what the intended use for the antenna is. For instance, if you mostly listen to stuff in the 154–158 range, finding a commercial antenna that operates in that range will probably improve performance. You many not hear much outside that range, however, so you'll have to assess the frequencies you listen to. Trunktracker users who listen mostly to the trunked system in their city tend to benefit considerably from an antenna designed for the 800-MHz range. Unfortunately, the source I had for them is no longer available, so I don't have any to recommend.

Base antennas, however present a whole different set of problems. The major concern with a base antenna is likely to be performance over a broad range of frequencies that you are interested in, followed by how much room the antenna takes up in the attic or outside. Are you going to have to add structural support to the mast or tower in order to support the "wind load" of the antenna? It's something to keep in mind as you're shopping.



Now discontinued, this RadioShack Optimus PRO7AV makes a wonderful speaker for SWL use, and many folks like it for scanner use too. The good news is that it has been replaced by the PRO-X33AV (40-5000) which looks the same and works just as well from all reports. For your scanner, you may prefer the sound of the smaller XTS-50AV (40-5024).

Speakers, Headphones And Other Audio Accessories

If you're all set in the antenna department, perhaps you'd rather look at some accessories designed to help with the output end of the scanner. External speakers come in all shapes and sizes and for all purposes. If you've never used anything but your scanner's built in speaker, I'll warn you that you might not want to try this — it's addicting!

External speakers can do a number of things for you. Most scanners have the speaker mounted facing up or down. Up is definitely better, since that's where we're more likely to be listening to it, but up doesn't direct the audio out into the room (or car) as well as it might. By using an external speaker that faces forward, you can hear more of the sound.

Speakers can also be tailored to the voice range that you listen to on your scanner. Sometimes, depending on the radio you have, just a bigger speaker will make the audio a bit easier to listen to. Sometimes you might want a communications speaker available from the major retailers for a variety of applications. Even RadioShack has a few speakers that work well for scanner applications. I have been using the RadioShack Minimus 0.3 (40-1254, now discontinued) with some success for years. While not the best possible speaker, it does serve the purpose of getting the audio out into the room, and is cheap and small enough that a number of them can be used without making a major dent in shelf space.

If you can't get enough audio from your radio, you might consider any of the various amplified speakers that are on the market. With the proliferation of multimedia computer systems, amplified speakers are available everywhere in all price ranges. Keep in mind that you don't need a real high-fidelity speaker to reproduce the voice information that most of us listen to on our scanners.

In fact, a high fidelity speaker may work against you. These speakers will often have a "whine" or ringing sound to them. There isn't anything wrong with the speaker, but rather the speaker's attempt to reproduce some of the CTCSS or squelch tone that your scanner is allowing through to the audio amp. It's annoying to listen to, but doesn't hurt anything either.

Finally, external speakers can be used to separate the audio. That is, if you have more than one radio, the simple concept of using your ears to determine where the sound is coming from can help you distinguish what radio is active. External speakers can be mounted in the ceiling or walls, or can just be placed at opposite ends of a desk. The idea is to put them in spots where you will hear the difference.

Depending on where your scanner is located in relation to the rest of the house, and more importantly the activity in your

house, it might be helpful for domestic tranquility to have a set of headphones around. These can come in very handy for those late night listening sessions, or for listening to the scanner while others are watching TV nearby. Some shortwave listeners find that they prefer listening through headphones all the time, while others almost never use them. The only slight problem I've found with headphones is that picking a pair that you'll be comfortable with might be a difficult task for anyone but you.

Also be aware that headphones come in stereo and mono (mostly stereo for obvious reasons). Some of our receivers will support the stereo headphones by putting the signal into both ears, but most do not — you'll only get audio in one ear under these circumstances. There are adapter plugs to solve this problem, or you might prefer a pair of headphones that are optimized for communications listening, which are available from any of the major manufacturers of ham and shortwave equipment.

Another audio accessory that I get asked about with some regularity is audio filters. For shortwave listeners, these are a great help, depending on your receiver's capabilities. However, for scanner listeners, I don't think they are quite as useful. Every once in a while on the AOL conference (Thursday night 9—11 ET at keyword SCAN — follow the links for conferences or chat) someone will come forward and say that they use this or that audio filter and really like what it does for them, or not, but for the most part these tend to be an expensive white elephant for your scanner.

In my opinion, you'll get much more mileage out of a pure amplified speaker (which I think is how a lot of scanner listeners wind up using filters anyway). If you also listen to shortwave you might well find a use for one, and then you can hook it to your scanner to see how well it works. Some units, including the TimeWave 599+ have dual receiver inputs. By the way, if you're into shortwave listening, that TimeWave filter has recently been upgraded to include enhanced audio filtering just for SWL, and it's dynamite! And if you have an older 599+ there is an upgrade available for $59.95 plus shipping. Contact TimeWave directly for the upgrade.

Finally, one other audio accessory might be of interest. The NiteLogger (BMI $69.95 available through many dealers including Universal Radio in Ohio) allows you to set up a tape recorder and only record the activity, not the quiet times. This can be a great way to find active frequencies, or to help identify traffic on an unknown frequency, or a channel that's only busy when you're at work or asleep. Of course, you'll need a suitable tape recorder to go with this accessory, but hey, maybe Aunt Lou can provide that instead of the usual fruitcake?

If you use a lot of mobile or base units with 12-volt supplies, you might find this power strip a handy item. You can replace a whole slew of wall wart supplies with a single 12-volt converter, and use a power strip like this MFJ-1116 to make connections easy. Your radios will run cooler too!

Handheld Accessories

If you do most of your scanning with a handheld, there are a few other items you might be interested in. Lots of manufacturers and third party companies are making carrying cases. Some of these are made specifically for the radio, while others, like the "Pouch" line are generic enough to be used with almost any radio. You'll have to look around a bit to see what strikes your fancy, but it can certainly help protect your radio should the unthinkable happen.

A new set of batteries might be in order if you've had your radio for some time. Particularly if your scanner operates off of an internal rechargeable pack, like many of the Uniden models, there's a good chance that the pack is not performing at its peak, as they do lose efficiency over time. In addition, several third party companies, including MetroWest, offer battery packs made from NiMH or batteries that will outperform the factory NiCd packs any time.

Some models also have a drop-in charger available as an option, either from the manufacturer or from third party companies. These chargers can sure make life easier if you cycle your battery often, and some can even help in the long term care and maintenance of your battery. Again, MetroWest is the leading supplier of scanner related chargers and batteries, but there are other companies as well. Maha makes a line of batteries and chargers mostly for the ham market, but some models work just fine with your scanner and its batteries.

Decoders And Other Special Tools

If you've been scanning for a while, you might be getting a bit bored with the ordinary. How about a decoder of some flavor to spice things up? There are several multi-mode decoders that will receive ACARS and other digital data with appropriate software. You can also use things like the Optolinks interface's data decoder with shareware and freeware software to decode a variety of protocols. Check into these before you leap in with both feet, as it can be a bit of a challenge.

Resources

Another item you might want to consider for your holiday list is scanner "resources." These are publications and information that might be of interest to you or provide information about your hobby. These range from subscriptions to excellent magazines, like *Popular Communications*, to frequency directories like *Police Call* and *Monitor America*. *Police Call* is available at RadioShack, so that shouldn't be hard to find, and *Monitor America* is available from most of the major radio outlets via mail order, if not from a local supplier.

You might also consider adding one of the many CD-ROM collections of FCC data to your arsenal. If you don't yet have one, they can be quite a valuable research tool, assuming your computer is so equipped. Several of the more popular ones would include Percon's Spectrum and regional collections (depending on the amount of data you're interested in),

Lots Of Action On 154.845!

Our "tell us who's on frequency" question is off to a great start! We received many answers to our first frequency of **154.845**, some even confirmed each other. Great work!

Location	Service
Lauderdale County, AL	Sheriff
Tuscaloosa, AL	City police F2 or computer frequency
Corona, CA	Police
Coronado, CA	Police
Imperial County, CA	East Dispatch
San Bernardino, CA	County Sheriff portables
Watsonville, CA	Watsonville Police
Carterville, IL	John A. Logan College
Oelwein, IW	Police
Chattooga County, GA	Fire Department paging and communications
Genesee County, MI	Flushing City local channel
St. Louis, MO	St. Louis County Precinct 3
Polk County, NC	Rutherford County Sheriff
Suffolk County, NY	Huntington Station Police
Springfield, OH	Clark County Sheriff/ Springfield Police F2
Ontarion, OR	Malheur Co. Sheriff
Williamsport, PA	Lycoming County Tactical Security & Detective Agency
Pharr, TX	Police (KNDT261)
Chesapeake, VA	Chesapeake Police Detective and Traffic Bureaus
Brown County, WI	Police
Brooke County, WV	Sheriff's Dept. (KNBD582)
Follansbee, WV	Police (WNPI538)
Wellsburg, WV	Police (shared frequency)

Scanner Master and Mr. Scanner's collection, as well as the *Police Call* CD-ROM available from RadioShack (I understand there's a revision in the works which may be available by the time you read this column. The first version was very disappointing).

Most of these CDs have very similar data in terms of the information that's there and the number of records (it's all based on government data, so it's only so accurate), but each has very different presentations of that data and searching/exporting capabilities.

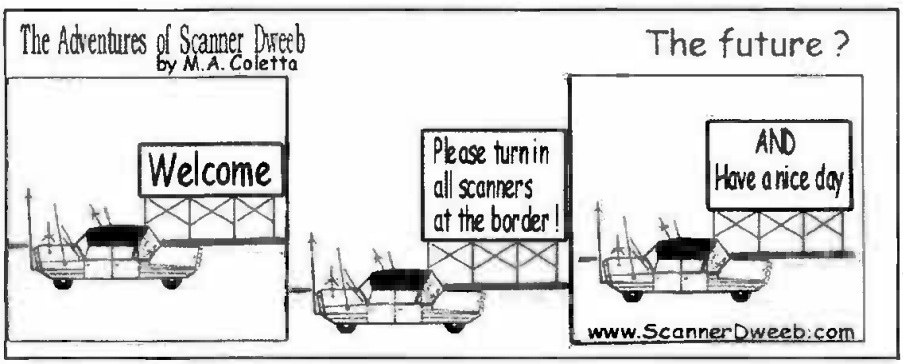
While we're on software, you might be interested in a program just to help you manage your own frequencies. There are several available from the major radio suppliers, or you might consider a generic database application to build your own. I have eventually decided that this is the best, as no two people seem to keep the same information or want it displayed in the same way. Microsoft's Access is an excellent program for this, although a bit intimidating for new users to get started with. Another database that seems to be gaining in popularity with radio enthusiasts is FileMaker Pro (one of the few that is available for both the Macintosh and Windows platforms). It's fairly easy (as databases go) to get started with, but has the capability to grow with you as your needs and knowledge expand. We'll take a closer look at this topic in an upcoming "ScanTech" column. If you have a computer-controlled scanner, this might be an opportunity to upgrade your control software.

If you have all the frequency publications you need, but are still looking for new frequencies, perhaps a more active approach might be in order. Frequency counters ranging from the simple unit at RadioShack to more scanner focused items like the Scout and Xplorer from Optoelectronics might just be what you need to get out there and find those missing frequencies. Of course, these gadgets range in price from just under $100 (including the micro counter from Optoelectronics) to about $900 for the Xplorer, so you won't want to make this decision lightly. But if you have a rich uncle that's looking to further your hobby, it might be worth a mention.

A Completely Different Resource!

If you're looking for something completely different as a scanner accessory, how about a subscription to America On-Line? What? Well, the "Radio Listener's Conference" is one of very few dedicated to the hobby of listening on all frequency ranges. It meets every Thursday night, 9 to 11 Eastern Time in the Conference Room of the HAM RADIO forum. If you need instructions on how to get there, just E-mail me from your America On-Line address and I'll be glad to give you a hand.

Every week, we meet for a two-hour block to discuss radio listening as a hobby and anything else that might come along. Most weeks, we have a topic that starts at the top of the second hour and runs until people run out of questions. The first hour is always an "open discussion" and sometimes the entire two-hour block is open. There are topics ranging from antennas to bank usage to how the receiver works, and even an occasional "cyber-dxpedition" where everyone tunes in and reports what they're hearing. On shortwave and medi-



umwave, there's a good chance that you'll be able to hear the signal someone else has found. Join us for the discussion, or just to drop in and share your knowledge of a particular topic. It's about the most fun you can have relating to scanners without actually scanning. It's hosted by yours truly, (under the screen name HOST HBBY Dillo) so I may be just a bit biased.

Last Minute Panic

Of course, lots of folks leave that shopping until the very end. This tends to have a detrimental effect on hobby gifts because few of us are blessed with having a major store in town besides RadioShack. So you might want to keep that RadioShack catalog handy as you're making your recommendations, just in case it gets left until the end. More than once, I've gotten shirts and ties because I failed to come up with a list in time for the UPS folks to make the trip.

Our First Winner

We received lots of input to our "tell us what's on frequency" contest. Many responses even confirmed each other, which is great. You can see some of the highlights in the sidebar.

In the meantime, Christian Bryant of Georgia wins a free extension to *Popular Communications* for being the lucky entry pulled from the random number generator here at *Pop'Comm* central. Congrats, Christian!

If you've just joined us, let me explain how all this works. I came to the conclusion long ago and far away that for me to keep a central database of frequency information was simply not practical. There's just too much of it out there, and there are many sources of license listings — www.perconcorp.com is an excellent resource if you don't try anything else.

So we decided to play this backwards. I give you the frequency, you tell me what's on it in your area. What you see here is just a sampling of the entries for this particular frequency. And everyone who sends in an entry benefits because they find out what's on that frequency, and we throw all the names into the *Pop'Comm* random number generator to pick a real winner from time to time

Frequency Entry

Our frequency for this month will be **162.400**. Now you may be a step ahead of me and recognize this as a National Weather Service Frequency, so it seems pretty obvious what you're going to hear. However, I recently did some traveling and found that in many places of the country, you can't hear any weather transmitter, but in others you can hear several if you check out all the channels. In one spot, I could hear three different NWS offices, and wasn't really sure which one I should be listening to for my area.

So this month, I'll take entries on any of the NWS channels. Let me know what you can hear, and if possible, the call sign of the transmitter. We'll put them all in the drawing when it comes up!

Your Input Needed

"ScanTech" is your column. Please don't hesitate to write in with questions or suggestions. Send things via regular mail to Ken Reiss, 9051 Watson Rd. #309, St. Louis, MO 63126, or questions and suggestions via e-mail to armadillo1@aol.com. Until next month, good listening!

How I Got Started

Congratulations To Carl Davis, W9CR, Of Illinois

QSL cards in this 1937 photo submitted by reader Carl Davis of Illinois.

"My fascination with radio began with a visit to Everett Anderson, W9KX in the early '30s. He was the pioneer of radio in my small village."

worked fine, as shown by the QSL card photo. The one in the upper right is from DJE. The photo was taken in 1937 when I was a sophomore in high school.

I currently use a Sangean ATS-818 and my wife also has one. I also use a PRO-2010 with an MFJ antenna and preamp. I have a five-tube Silvertone with a tuning eye that I rebuilt. It has fine audio on the broadcast band and is surprisingly good on shortwave." ■

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

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

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

Our December Winner

Pop'Comm reader, Carl G. Davis of Georgetown, Illinois, says, "My fascination with radio began with a visit to Everett Anderson, W9KX in the early '30s. He was the pioneer of radio in my small village. He let me listen to his receiver and tuned up his transmitter for me using a coil and bulb — the bulb lit up even when it was a foot away from the set! In the 1920s, he had the only set in town and would broadcast prizefights and election returns over a speaker in his front yard to gathering crowds. Many disbelievers were converted on the spot.

His son, Brice, W9PNE, helped me build a three-tube regenerative receiver which used type-30 tubes. Several of the coils were wound on tube bases. He eliminated hand capacitance by winding fine wire around a spool to make an RF choke. A Kurtz-Katch dial helped slow tuning. Twisting wire around the antenna lead eliminated antenna loading. So it finally

Utility Radio Review

News, Information, And Events In The Utility Radio Service Between 30 kHz And 30 MHz

Equipment And Techniques For Ute Monitoring

This month's column comes to you during the time of year one often thinks about either building or upgrading a monitoring station. I'm going to be looking at a number of issues that are important if you want to setup a successful utility monitoring station.

Over the past few months I've been talking to a number of people about this subject, and have received some interesting pieces of information. One thing that certainly stands out is that there is a big difference between the type of equipment one uses for Ute monitoring and regular short-wave broadcasters.

Surprisingly the real requirement for successful Ute monitoring is not an expensive radio. All too often a well meaning Ute fan will go out and get the "best" radio and end up being greatly disappointed once they hook it up and turn it on. Too often the performance of the new radio is not that different from the one they just replaced.

However, in the hands of a different person that same radio pulls in all of the action that one would expect from the Ute services. What's the difference? Read on and find out.

And I have logs! As you saw last month people are finally beginning to understand — if you don't send them in I can't publish them. So they did, and you saw the results. So there is the formula; you send me your logs and I will publish them. The more logs that are sent, the more pages of logs you will see. It's as simple as that.

There are letters too, which we'll get to next month It's good to see people share their experiences and opinions here. After all, it is your utility column and I welcome your news, views, and opinions.

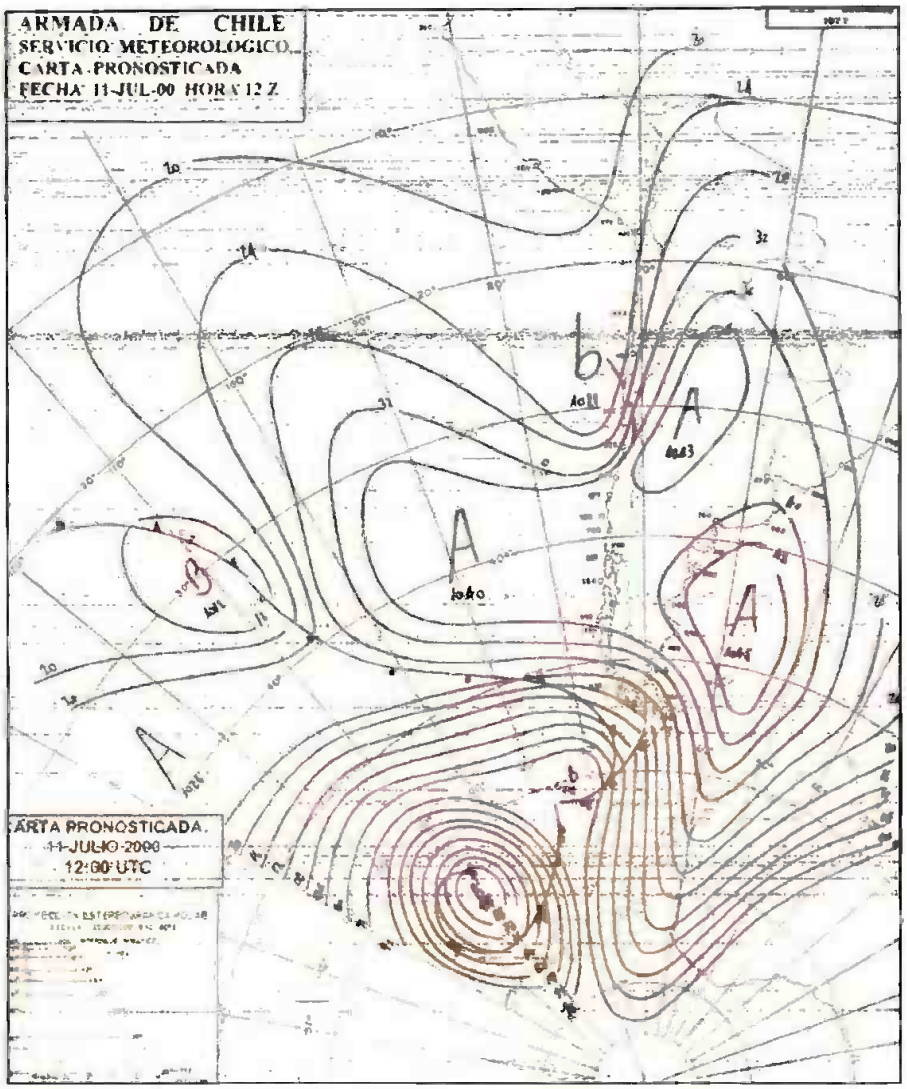
Two issues back (October) when I took a look at stand-alone digital demodulators, I promised you that I would provide some information about software based demodulators. Very simply it's turned out to be a bigger topic than I ever expected, and I'm still in the middle of my research.

Hang in there if you've been waiting, the results will be worth the wait. I've got some real interesting things to talk about on that topic.

Do check out the end of the column where I talk about what comes next month. We've got a New Year just ahead (and in my opinion the real start of the 21st Century) and I want to outline where the column is going during 2001.

To give a glimpse, there will be more guest writers, club logs, technical articles, and some contests and certificates planned. If all goes well, its going to be a very exciting year — with your help.

So, enough of the housekeeping, let's get on to the real thing.



Interesting radio FAX of Chilean weather captured by reader Enrique A.Wembagher of Argentina using Wefax software.

Today's Utility Monitoring Station

What is the most important thing that you should be striving for when setting

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

up a good utility monitoring station? The answer, surprisingly, is silence.

This doesn't mean that you have somehow managed to keep the kids and neighbors noise level under control. Rather, silence is what you want to hear when you are listening to the radio's speaker or through the headphones.

With utility monitoring — silence is golden. When you have your receiving rig hooked up to your antenna and all fired up, what you should hear is next to nothing. Just the slightest amount of background noise imaginable.

When you begin to tune to target frequencies, what you should be hearing next are signals from utility stations — more than you have ever heard before.

To put all of this information into acceptable technical jargon, what you are trying to obtain when you build up your monitoring station is an ideal signal to noise ratio. That is the most signal and the least amount of noise.

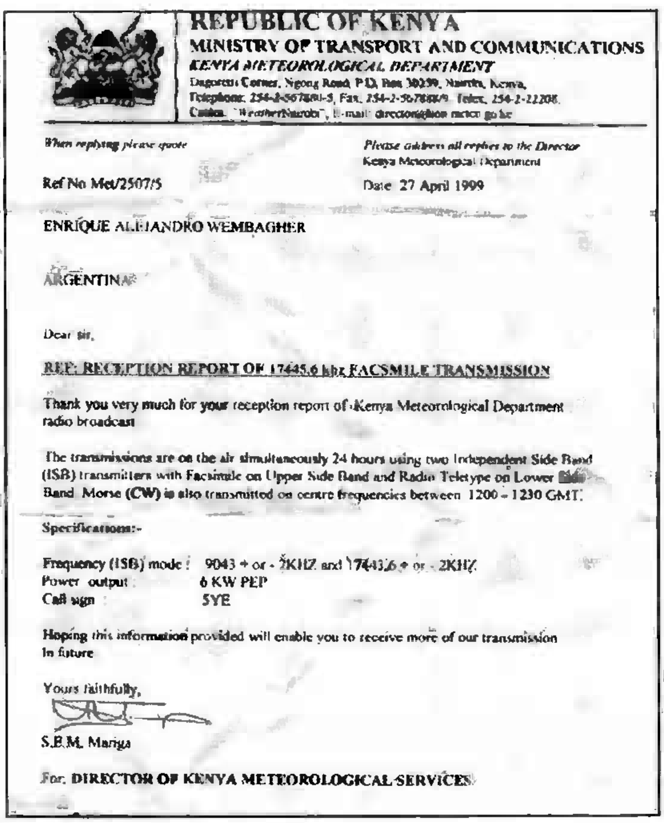
The problem is that a good many people who try to listen to utility stations don't realize this and end up frustrating themselves needlessly. The sad fact of the matter is that the rate of returns of newly purchased short-wave radios runs between 10 to 50% at stores that sell them. The primary reason for such returns — "I didn't hear anything!"

Lets take a look at a few reasons why this happens.

The Wrong Way To Monitor Utility Stations

There are three basic things that will make good Ute monitoring difficult, if not impossible, to do. These are having;

- The wrong antenna for Ute monitoring
- The wrong radio for the task
- The wrong accessories for the radio and the antenna



REPUBLIC OF KENYA
MINISTRY OF TRANSPORT AND COMMUNICATIONS
KENYA METEOROLOGICAL DEPARTMENT
Dagoretti Corner, Ngong Road, P.O. Box 30259, Nairobi, Kenya,
Telephone: 254-2-567880-5, Fax. 254-2-567888/9. Telex. 254-2-22208.
Cables. "WeatherNairobi", E-mail: [illegible]

When replying please quote
Ref No Met/2507/5

Please address all replies to the Director
Kenya Meteorological Department
Date 27 April 1999

ENRÍQUE ALEJANDRO WEMBAGHER

ARGENTINA

Dear sir,

REF: RECEPTION REPORT OF 17445.6 khz FACSMILE TRANSMISSION

Thank you very much for your reception report of Kenya Meteorological Department radio broadcast

The transmissions are on the air simultaneously 24 hours using two Independent Side Band (ISB) transmitters with Facsimile on Upper Side Band and Radio Teletype on Lower Side Band. Morse (CW) is also transmitted on centre frequencies between 1200 – 1230 GMT.

Specifications:-

Frequency (ISB) mode : 9043 + or - 2KHZ and 17443.6 + or - 2KHZ
Power output : 6 KW PEP
Call sign : 5YE

Hoping this information provided will enable you to receive more of our transmission In future

Yours faithfully,

S.B.M. Mariga

For: DIRECTOR OF KENYA METEOROLOGICAL SERVICES

A QSL from Kenya Meteo sent to Enrique Wembagher of Argentina.

This might seem to be common sense, but the fact of the matter is that most people hardly ever sit down and plan out their monitoring station. Sure they may read the catalogs, and talk to their friends, or ever read the product reviews in the radio magazine. But most of the time people build their monitoring stations up a bit at a time.

The problem with this approach is that a lot of the times what people end up with (unless they are really lucky) is a string of compromises. For example, someone may have a great radio, but they have it hooked up to a random wire antenna using coax that they picked up "real cheap" at a ham radio swap meet.

Likewise, others may have spent a good deal of money on a great sloper antenna, only to compromise its performance by having a long run of coax that goes right past house wiring and some electrically noisy equipment, such as a TV set or a dryer.

Worse, the person may have setup a perfectly good station, but felt uncomfortable about how quiet it sounds. So off they go to purchase an RF pre-amp that will place +20 dB of noise over top of the signals they thought were just too faint to be heard.

Just to be ironic, these same people who dump the pre-amp noise into their receiver then spend a small fortune on a DSP (Digital Signal Processor) in order to get rid of the noise they made in the first place.

Given all the tweaking and twiddling of their radios that these people have to do in order to hear anything, is it no wonder that many just say to heck with it and give up?

Planning The Station

If there is one important starting point in setting up a utility monitoring station, its deciding right from the beginning that this is what you will be doing. This might sound self-evident, but the problem is that most people don't do it that way.

If you follow the careers of most people who get into radio monitoring as a hobby, they start of with the obvious listening targets — short wave broadcasters. In general they will buy a good new or used world band radio, put up a reasonably priced antenna, and have a great time logging stations, and getting QSL cards.

Over time they get really good at monitoring the broadcast stations, and maybe they have begun to get curious about what they will hear outside of the bands they have been listening too. So they begin to tune around the areas where they have been told Ute activity is, and they hear — nothing. Then they go back to their regularly scheduled broadcasters.

Others will get serious about Ute monitoring and begin to read the logs here and elsewhere and then program the frequencies into their radios (if they can). Soon they are chasing after their own loggings — for a while. What they often run into is the design limitation of their world band radios.

Sure they may have paid a good dollar for what they have, and they may even have set up their stations perfectly. But with their antennas tuned optimally for world band radio, and their rig is designed to handle strong signals, the Ute stations become next to impossible to be tuned in properly.

This is even more apparent when trying to tune utility stations with portable receivers. It is simply not practical to do so, no matter how expensive the set. Experience has shown that they are simply not selective or stable enough to monitor weak Ute stations. The matter becomes even worse if you try to demodulate RTTY stations using portable sets no matter what method you use to do so.

In short, if you are serious about Ute monitoring, only use desktop sets as they contain the fewest compromises in design for what you want to do. Portables are great for SW broadcast DX, but not Ute.

So here is the first starting point in designing a good Ute station; get an antenna and radio that is proper for the job and connect them with a short run of proper coax. Really and truly, if you get these three things right then you don't need a lot of the accessories you see advertised — like DSP and pre-amps.

Lets start at the beginning and look at what is best for a Ute station.

The Ute Monitoring Antenna

[Note: Erecting antennas can be dangerous. Never raise an antenna near, or place wires over, power lines. Always use properly designed safety equipment when installing an antenna. Always exercise good sense when raising an antenna and always read the manufacturers instructions when available].

The antenna is what receives the radio signal, not the radio receiver. In fact, you want to keep the radio receiver as isolated from radio waves as you can — except the one's you want to hear that are present on the antenna.

This is a fact that goes back to Heinrich Hertz's original demonstration of the existence of radio waves. His receiving rig was nothing but an antenna — a ring with a gap to show the received spark of radio frequency energy (or RF).

The same holds true today for any receiving station. If the signal cannot arrive at the antenna, then it cannot be heard. Likewise for a signal to be usable, it must be greater than the background noise that an antenna also picks up from natural and man-made sources.

In order for an antenna to be able to provide the receiver with a good signal, that antenna must be in resonance with the frequency that that signal is being transmitted on. When that takes place, something special happens with the antenna.

Putting it simply, an antenna will increase the signal to noise ratio for the frequency that it is resonant at. Thus any signal that is transmitted at that resonant frequency, and ends being registered as an electrical current or voltage on antenna, will be generally stronger than the background noise.

Why is this so? Because background radio noise is randomly spread across the radio frequency spectrum. When it hits the antenna it is "broadcasting" on no specific frequency, thus it cannot be amplified in strength through the resonance of the antenna — or at least so under ideal conditions.

The problem is that many antennas can be noisy do to their design, location, and the materials used in construction. The issue is that in each case something takes place that will prevent the antenna from achieving resonance at the desired monitoring frequency.

The most common reason why short wave antennas fail when used for Ute monitoring (whether you build them or buy them) is due to the simple fact that they are not resonant at Ute frequencies. All the person hears is noise, because the Ute stations simply cannot be "tuned-in" by the antenna.

The two worst offenders of this type are the "tuned" random wire and the world band radio antenna. The former is simply too compromised by its random length to be resonant. Sure you can improve the impedance by tuning it so that you can hear the noise better, but for anything other than a high-powered broadcast station they are just too compromised.

The same goes for the world band radio antenna. These are excellent for what they are designed for — listening to the shortwave broadcast frequencies. However, once you move off band the noise levels also go up just as in the case of the random wires.

Yes, you can add pre-amps, tuners, and put a DSP at the radio's speaker. But in each and every case, the accessory will be working with the noise on the antenna — not the signal.

So, the bottom line for being successful at Ute monitoring is that you have to put up an antenna that is going to resonate at the proper frequencies, e.g. those that are being used by Ute stations.

The problem is that utility stations use a lot of RF real estate that is spread over a very broad range of frequencies; more so than any other service including ham and shortwave broadcasters. Indeed you will find a lot of legitimate utility stations trespassing all over other services—RF territory.

The solution, as in anything to do with radio, is a compromise. You must either put up an antenna that is cut for a specific narrow band of frequencies that you wish to monitor, or find a good broad band design that can resonate at multiple frequencies with out too much compromise.

Fortunately, there are several antenna designs that are available today that will provide the Ute monitor with a good broadband or narrow band compatibility. Over the coming months I'll be looking at some high performance antenna designs that you can try out. (I'll be making some suggestions as to what would comprise the "ideal" Ute monitoring station later in the column).

Right now I'm certain that I'm hearing people say "well that's all very nice if you've got a few acres for an antenna farm — or at least a back yard. What about those of us who live in apartments or condominiums? Or those of us who live in neighborhoods with anti-antenna covenants or laws?"

I'll be looking at that too in the up coming months. There are some excellent active antennas that are now available. I'm not talking about the noise amplifiers that are far too common, but proven designs that perform close to that of a good resonant wire antenna.

However, to get the most out of these types of amplified antennas you have to set them up and use them properly. I'll be providing some important information on how to do this.

The Ute Radio Receiver

Well, if the antenna is what receives the signal, then what does this thing called "the radio receiver" actually do?

Well simply put, it pulls a desired signal off the antenna, amplifies it, and then demodulates it. Once it has been demodulated then it can be sent off to a speaker or earphones so that it can be listened to. Sounds simple? I only wish it were.

Even though an antenna may be picking up and amplifying a signal through its resonance, the fact of the matter is that there are a lot of signals out there that are interacting with that antenna. If you followed Mr. Hertz's original antenna/receiver design, you'd have a lot of energy coming out of your antenna's coax. But you would not be able to make any sense of it because it would all be in the same place at the same time — so to speak.

What the so-called receiver does is select out a narrow range of frequencies that are available to the monitor via the antenna, and then amplifies and demodulates the signals found there. Truthfully what a receiver's role should be is to deliver a desired signal to the speaker or headphone with the greatest degree of fidelity possible. That is — to reproduce the original sound as precisely and as accurately as possible.

The problem today is that modern receivers don't do that.

Instead of providing excellent sound reproduction, as they should, their designs focus on making up for all the compromises that are found in today's antenna design. So as a result we are now seeing receivers that are really antennas in disguise.

Rather than taking a good strong radio signal from the antenna and reproducing it, the receiver of today spends far too much time pre-selecting it, pre-amplifying it, post-amplifying it, and then processing it. After all of that, it gets to demodulated and further processed via some DSP attachment.

Is it no wonder that people often have great difficulty hearing the stations that they desire to monitor given how much a signal has to go through just to get to the sound reproducer?

The fact of the matter is that the radio engineers who design today's modern receivers know what they are about. They work with the truth that today's radio monitoring environment has become terribly compromised.

Most engineers know that the people who buy shortwave radios will be one of two types; those who plug their sets into less than optimum antenna arrangements and those who will not. So you will find that the features found in today's SW radio will reflect one of these assumptions in some way.

Likewise, they also know that most shortwave radios that are used for hobby monitoring today are operated in electrically noisy environments. The personal computers, television sets, microwave ovens, and a host of other modern appliances add their contributions to the background radio noise of the planet — with some devices operating on very popular frequencies to boot.

This differs greatly from the environments in which professional monitoring take place. Most of the optimization takes place at the antenna, with little compromise on the design. From there, every effort is made to isolate the coax and the radio from stray RF.

Even the rooms where the monitoring takes place are electrically isolated so that the receiver gets only the signal from the antenna. Compare that to the average home where hobbyist radio monitoring takes place.

The point of this discussion is to show that owning a "professional" grade radio by itself is no guarantee of success in Ute monitoring. Each component must be fitted to the next with intention of ensuring a strong signal at the antenna being transferred cleanly to the receiver, where it is demodulated with the least amount of compromise to its original sound.

The "Best" Ute Station

So given all this theory that I've covered here, what is the "best" equipment for a Ute monitoring station that is suitable for the dedicated hobbyist? Which antenna and radio present the fewest compromises with out requiring that you spend a fortune on a special monitoring room that has been isolated from all stray RF in order to make it work?

I'm going to make the following suggestion:

Receiver: Drake R8B
Antenna: Alpha Delta DX Ultra
Coax: RG 8X

The Drake R8B — is this the best communications receiver for utility radio monitoring?

The reason for my choice is simple; the set is designed for the serious hobbyist and it will work in "real world" conditions. I've looked at and listened to other radio receivers that are more expensive. However, to perform properly they need to be integrated into monitoring environments that most people would find difficult to provide.

The R8B is designed to work well through out its entire frequency range of 10 kHz to 30 MHz, rather than show preferences for a particular band. The focus of the design is on reproducing the signal, no matter what its capture frequency, as accurately as possible.

Rather than presenting you with a lot of "finger candy" on the faceplate for you to twiddle with, operations are simple and to the point. It can be summarized in this way: tune and listen. The radio worries about the most optimum way for you to hear the signal, rather than you.

One of the most ideal features for the serious Ute monitor is the 1000 frequency memory. More importantly, it is not just the frequency that is stored but, mode, bandwidth, RF amp setting, antenna used, and so on.

Once the frequencies have been programmed in along with their supporting information, you can then scan using one of nine distinct functions. Scanning speeds are fast at up to 40 channels per second, and there is a provision for scanning a user-selected list.

What all this allows is what the Ute monitor needs: simple broadband operation that allows a wide range of frequencies to be scanned in an organized way. The radio is also well-designed for target tuning of difficult stations (RTTY, weak AM, SSB and even FM). The stability and accuracy of the frequency tuned also make it ideal for supporting the accurate demodulation of digital modes.

Plus the radio is capable of working around a compromised antenna system. What features you do have on hand to work with whatever antenna (with in reason) you choose to throw at it include a built-in pre-amplifier, attenuates, and a regular RF amplifier. It also includes a pass-band offset control and notch filter for eliminating offending signals that can come from a noisy antenna.

Speaking of antenna, this is where the Alpha Delta DX Ultra comes in. Rather than being cut for the shortwave broadcast bands, this model is truly broadband. Designed to work from the bottom of the standard (AM) broadcasts band to 30 MHz, this antenna will let you tune utility services with a minimum of compromise to the signal.

More importantly, there is little reason or need to use a tuner with this antenna. This is ideal for scanning multiple frequencies with the R8 that may be scattered over a number of bandwidths. Best of all, the antenna promises to be very low in noise pickup due to its ability to maintain resonance across such a wide range of frequencies.

Don't forget to get the most out of this broadband antenna by using top end coax — with RG-8X being suggested. The only other thing that you need to look at would be a good static and lighting protectors, which can be obtained based on the suggestions of who ever sells you the antenna and radio.

The full range of specifications and technical information can be obtained

from Drake and Alpha Delta. Check out our advertisers for further information on how to contact the manufacturers and retailers of these products.

One final point here — I own a Yaesu FRG-100 and have no commercial interests with Drake or any retailer of its products. Likewise my antenna is the Alpha Delta DX-SWL sloper (it's what I can fit into my back yard along with my G5RV). So what I am presenting here is, in my opinion, some objective information about the R8B based upon research, interviews, and investigation.

What do you think? The debate is far from over simply because I've made my case for the Drake R8B. Do you have a better solution in mind based upon your particular monitoring station setup? Send me your ideas, and I'll include them in the letter section during the upcoming months.

Reader's Loggings

1118.1: JAILBAIT: Hickam GHFS 0404z USB Jailbait tells Hickam "Modem TE 204." Jailbait says "No joy; we will call you again tomorrow night and try again." (ALS)
2598.0: VCP: Canadian Coast Guard Placentia Bay 0737 USB w/MIB. (MADX)
2670.0: NMF2: USCG Group Woods Hole 1010 USB w/MIB. (MADX)
2749.0: VCO: Canadian Coast Guard Sydney 0740 USB w/MIB via Charlottetown xmsn site. (MADX)
3195.0: Russian single letter CW channel Mkr, "A" and "R," somewhere and Izhevsk, MX, Russia, at 1744. On another day unid stn JJT88 sending V-mkr at 0930 in hand sent CW. (TY)
3440.0: U/I stn sending 5FGs in progress and rapid CW at 1045, using short zeros, also noted on 4567, 5600, 6785kHz. Abruptly started "V ABYZ DE 6PXJ" in CW at 1050 on all parallel freq. Japanese monitors believe that 6PXJ stns are coming from Mainland China. (TY)
3455.0: Tokyo Volmet, Japan, w/avian wx in EE at 2140. (TY)
3458.0: Beijing Volmet, China, w/flying wx in distorted EE at 1445. (TY)
3538.0: U/I stn L9CC rptng "V CP17 DE L9CC" over and over in CW at 1750. (TY)
3658.0: Russian single letter CW channel Mkr, "V," Khiva, MX, Russia, sending nonstop Vs in CW at 2035. This stn heard a lot at East Asian midnight. (TY)
4270.0: PCD, Israeli Mossad, E10, in USB at 1900. (TY)
4331.0: 4XZ, Israeli Navy, Haifa, sending V-Mkr in CW at 2049. (TY)
4600.0: Presumed South Korean/YL nbrs in powerful AM at 1500. (TY)
4880.0: ULX, Israeli Mossad, E10, in USB at 1700. (TY)
5154.0: Russian single letter CW channel Mkr, "C" and "S" (TY)
5170.0: Abnormal Mossad transmission. VLB2, Israeli Mossad, Rptng callsign for more than 30 mins in USB at 1745, also on 6370 kHz. (TY)
5339.0: SYN2. Israeli Mossad, E10, in USB at 1945, also on 7445, 8641kHz. (TY)
5371.0: The CIA Counting nbrs, E5, in faint but just readable USB at 1800, also on 8125kHz. (TY)
5386.0: ZKST, ZKST41, ZKST44, ZKST46 & ZKST54 : Civil Defence net, Christchurch, Karamea, Franz Joseph, Haast and Inangahua SI New Zealand 2252 UTC USB with weekly check-ins on CH# Alpha. IJ)
5389.0: ZKST53: Civil Defence net Whakatane NI New Zealand 2105 UTC USB acting as alternate net controller for weekly check-ins from various NI CD Northern Zone stations.(IJ)
5407.0: ZKST: Civil Defence net Christchurch SI New Zealand 2232 UTC USB with weekly net check-ins with various SI CD stations on CH# Sierra. (IJ)
5422.0: The Lincolnshire Poacher nbrs, British MI6 and SIS, E3, Cyprus, in pretty good USB at 19000, also on 6485, 8464 kHz. (TY)
5466.0: Russian single letter CW channel Mkr "R," Izhevsk, Russia, MX, in CW at 1755. (TY)
5550.0: Presumed South Korean/YL nbrs in powerful AM at 1600. Started w/a Korean pop song, followed by female Korean nbrs in distorted and over-modulated AM. Ended w/ "That's all. Thank you" in Korean. First time I've ever encountered presumed South Korean/YL nbrs on this freq. (TY)
5700.0: UNID: U.S. Military station 0912 UTC USB with test counts. IJ)
5715.0: Presumed South Korea I In/YL nbrs in powerful AM at 1400. Start with a Korean pop song, followed by female Korean nbrs in AM. Ended with "Thank you" in Korean at 1410. (TY)
6215.0: Presumed South Korean/YL nbrs in powerful AM at 1400. (TY)
6227.0: Port of New Iberia, Louisiana, in USB at 0002, calling WAF9917, with no joy. (LJM)
6270.0: ULX2, Israeli Mossad, E10, in USB at 2100. (TY)
6346.3: FUE, Fr. Navy, Brest, France, in Baudot 144/850 w/RYs at 0105. (LJM)
6370.0: MIW2, Israeli Mossad, E10, in USB at 2015, also on 5230 kHz. On another day CIO2, Mossad, in USB at 1915. (TY)
6385.0: FUO6, Fr. Navy, Toulon, France, in Baudot 75/850, w/RYs at 0155 (LJM)
6428.0: PCD, Israeli Mossad, E10, in USB at 1900. (TY)
6485.0: The Lincolnshire Poacher nbrs, British MI6 and SIS, Cyprus, in USB at 1900, also on 5422, 8464 kHz. (TY)
6491.0: ENIGMA, M21, Russian Air Force, TS, in CW at 1040. (TY)
6498.0: PCD2, Israeli Mossad, E10, in USB at 2115. (TY)
6513.0: VOK, Canadian Coast Guard, Cartwright, Newfoundland, in USB at 0112, OM/EE w/wx followed by same again in FF. (LJM)
6554.3: FOXTROT: Presumed USN Link-11 net 0540 UTC USB with "This is FOXTROT roger we're going to have to wait this out over." (IJ)
6586.0: CORSO 73 (C-130E, PR-ANG "Flying Bucaneros" Muniz ANGB, San Juan): New York Oceanic 1920z USB. Passes position estimates at FL 190. (ALS)
6666.5: Unid Marine net 0715 UTC USB with OM and YL passing on info on one of their YL crew members who didn't return after going diving. Mentioned what prescription pills she had in her possession and if she had a dive buddy assigned to her. OM mentioned the police have arrived and he'd have to sign off until next mornings sked. (IJ)
6676.0: Bangkok Volmet, Thailand, with avian wx in EE at 1940. (TY)
6679.0: Tokyo Volmet, Japan, with avian wx in EE at 1840. (TY)
6724.0: KING 1 (USAF C-130): Dod Cape (Cape Canaveral AFS) 1202z USB Space Shuttle pre-launch comms. Also USS Underwood. KING 2, KING 3. (ALS)
6733.0: SPOTTER 86 and IDR: IN Rome Italy 0526 UTC USB with data co-ord.(IJ)
6786.5: Fishing Boats New Zealand 0810 UTC USB 2 OMs with a chit-chat. One of them mentioned he was 50 miles out of Mangonui. (IJ)
6840.0: U/I stn NYZ Rptng "V Q2M DE NYZ" over and over in CW at 1940. On another day EZI, Israeli Mossad, E10, in USB at 2200. (TY)
6840.0: EZI2: Mossad No. Station 1935 UTC USB with YL repeating EZI2. (IJ)
6848.0: U.S. tuna fishing boats Pacific 0735 UTC USB 2 OMs with a chit-chat. (IJ)
6880.0: Navy MARS stations in Sitor-A, w/tfc lists and message tfc. (LJM)
6885.0: UNID: C/S.American net 0715 UTC USB with 2 OMs in SS. Mentioned Santa Rosa. (IJ)
6900.0: The Lincolnshire Poacher nbrs, British MI6 and SIS, E3, Cyprus, in USB at 2000, also on 10426, 11545 kHz. (TY)
6912.0: MIW2, Israeli Mossad, E10, in USB at 2115. First time I've ever heard MIW2, Israeli Mossad, on this freq. (TY)
6912.0: Abnormal Mossad transmission. VLB2, Israeli Mossad, E10, w/callup only for over 30 mins in USB at 1930, also on 5170 kHz. (TY)
6948.0: PCD2, Israeli Mossad, E10, in USB at 2030. (TY)
6959.0: Lincolnshire Poacher nbrs, British MI6 and SIS, E3, Cyprus, in USB at 2000, also on 9251, 11545kHz. (TY)
6960.0: The CIA counting nbrs, E5, in USB at 2000, unable to find out parallel freq. (TY)
6986.0: ART, Israeli Mossad, E10, in USB at 2030. (TY)
6988.0: Unid commercial stations Australia 0902 UTC USB YL and OM with a chit-chat. Mentioned about fuel prices. (IJ)
7039.0: Russian single letter CW channel Mkr, "C" and "S," Moscow and Arkhangelsk, MXC, at 2030. Not heard usual "F" and "P,"

Vladivostok and Kaliningrad, on this freq at all. (TY)

7337.0: The Lincolnshire Poacher nbrs, British MI6 and SIS, Cyprus, in USB at 1800, also on 9251, 12603kHz. (TY)

7358.0: FTJ, Israeli Mossad, E10, in USB at 2100. (TY)

7445.0: SYN2, Israeli Mossad, E10, in USB at 1945, also on 5339 kHz. On another day SYN2. Also Mossad, in USB at 1945, also on 8641 kHz. (TY)

7539.8: Unid MARS station USA 0650 UTC USB with "MARS exercise alert 2000." (IJ)

7553.0: Unid Telecom Pacific Islands 0812 UTC USB YL with recorded announcement. "This is a radio telephone call please speak after the tone." (IJ)

7583.0: The Cuban "atencion" nbrs in faint AM and progress at 2219. (TY)

7605.0: KPA2, Israeli Mossad, E10, in USB at 1915. (TY)

7668.0: 8BY, French intelligence, St. Assise near Paris, in faint but just readable CW at 2040. Also noted on 10248, 14931 kHz. (TY)

7730.0: Unid C/S.American net 0822 UTC USB with 2 OMs in SS. (IJ)

7832.5: AFA1DA: USAF MARS New Jersey 1423 SITOR-B wkg AFA2DB: USAF MARS Georgia w/op chatter in both directions. (MADX)

7918.0: YHF, Israeli Mossad, E10, in USB at 1800, also on 10648 kHz. (TY)

8025.0: CIO2, Israeli Mossad, E10, in USB at 2045, also on 10352,12747 kHz. (TY)

8095.5: Unid C/S.American net 0820 UTC USB with 2 OMs in SS. (IJ)

8122.0: RAN Canberra control, Exmouth control, Perth Control and Darwin Control Australia heard at 1000 UTC USB with radio checks. (IJ)

8125.0: The CIA counting nbrs, E5, in faint but just readable USB at 1900, also on 5371 kHz. On another day VLB2, Mossad, ISR, E10, in USB at 1545. (TY)

8127.0: SYN2, Israeli Mossad, E10, in USB at 1945. (TY)

8136.0: The Cuban Cut CW nbrs, M8a, in progress and weak but readable CW monitored at 1005. (TY)

8160.0: VNN737: Lake Macquarrie Communications Edgewood, NSW Australia 0740 UTC USB 2 OMs with a chit-chat. Mentioned about the Lakecom net and 4x4 vehicles. (IJ)

8300.0: New Star Radio, Taiwan, V13, YL/CC w/4FGs in AM at 0800. (TY)

8464.0: The Lincolnshire Poacher nbrs, British MI6 and SIS, Cyprus, in USB at 1900, also on 5422, 6485 kHz. (TY)

8495.0: Russian single letter CW channel Mkr, "C," Moscow, at 2000, not heard usual "F," Vladivostok, on this freq for a couple of weeks (TY)

8641.0: SYN2, Israeli Mossad, EJ0, in USB at 1945, also on 7445 kHz. (TY)

8641.0: SYN2, Israeli Mossad, E10, in USB at 2100, also on 7445 kHz. (TY)

8664.5: U/I U.S. Military stations, Delta, Foxtrot, Mike in USB at 0108 re: tactical comsat equipment and alternate freqs. (LJM)

8682.0: J2A9, Djibouti Radio in CW at 0051 w/marker(LJM)

8805.0: PCD, Israeli Mossad, E10, in USB at 1530. (TY)

8846.0: REACH 9192: New York Oceanic Rdo 0036z USB is given permission to deviate for wx. Is passed handoff freq for next dav point: 118.125 (NY ATC). (ALS)

8849.0: Beijing Volmet, China, w/avian weather in distorted USB w/a distinctive hum at 0643. (TY)

8900.0: Algeirs Areadio Algeria 0546 UTC USB calling Air Afrique 995. (IJ)

8945.0: Armed Forces of the Philippines (AFP) Counter Insurgency net the Philippines 0935 UTC USB spelling out messages. "ALPHA VICTOR ONE, Commence operations, Comma." (IJ)

8965.5: Unid (fisherman?) in USB with equipment discussion re: antennas splitters, etc. Occasionally overpowered by adjacent ALE signal. (RRM)

8971.0: USB TRIDENT 721 (P-3) wkg GOLDENHAWK (USN TSC Brunswick) and 610 (Six India Oscar) to pass spare groups and receiver orders on spare groups. (RRM)

8971.0: USB FIGHTING TIGER 724 (P-3) wkg GOLDENHAWK (USN TSC Brunswick) to pass spare groups and not being able to receive GOLDENHAWK's "broadcast." (RRM)

8975.0: The Cuban 'atencion' nbrs in vy low modulated AM at 1000. (TY)

8983.0: USB 51A (USCG HH-65) and 38C (USCG HH-60) wkg CAMSLANT to relay information to PANTHER (DEA) regarding law enforcement operations near location Tango 7. (RRM)

8983.0: USB M1N (off freq) in guard comms with CAMSLANT, en route to L5U: 1716 later in comms with CAMSLANT with similar off freq signal — perhaps same aircraft. (RRM)

8983.0: CAMSLANT Chesapeake, USCG Virginia, U.S., wkg A4S, U.S. Customs or DEA helicopter off coast of Florida Keys w/pos report and suspicious vessel info. (LJM)

8987.0: MKL, RAF Edinburg, England in CW at 0009 w/wx broadcast. (LJM)

8992.0: LIMA CHARLIE 085 (P-3C, Brunswick NAS VP-8 "Tigers" Sqdn): GHFS 0303z SB pp DSN 476-2108 Tigers Duty Ofc. ETA 0130 Local. Is told wx may be bad: Duty Ofc wl pass wx info by UHF as LC 085 approaches. (ALS)

8992.0: REACH 7X6 (C-141): Andrews GHFS 0334z USB pp McGuire CP/Metro re 0615z ETA. Rqsts U.S. Customs. (ALS)

8992.0: REACH 4611 (Tail #64611): Andrews GHFS 0407z USB pp Hilda East re ETA 0730z at KHOP (Ft. Campbell AAF, KY) (ALS)

8992.0: PAT 139 (U.S. Army Priority Air Transport): Hickam GHFS 1540z USB is given guidance for landing with brake problem. (ALS)

8992.0: NAVY 496: Andrews GHFS 0638z USB pp DSN 942-3030 Jax NAS VP-30 Duty Ofc. Rqsts Andrews relay msg "Lima Lima 515 (P-3C Jax VP-30) off deck from Rota Spain." (ALS)

8992.0: REACH 7028: Hickam GHFS 0726z USB Tells Hickam CP ETA 1090z, is Maint Status Alpha 2 for #2 HF radio, passes load report. (ALS)

8992.0: KU 297: Hickam GHFS 0605z USB pp DSN 226-3233 (Misawa AB). Reports ops normal. (ALS)

8992.0: CHALICE FOXTROT (E-3B AWACS, Tinker AFB 552ACW/963ACS): Cape Radio 1530z USB pp 884–2011 Tinker AFB CP Raymond 24. Reports database problem; is told they may have EPROMs loaded with wrng baseline. (ALS)

8992.0: Reach 873T: Salinas GHFS 0604z USB pp Hilda East re wx for arrival at Mildenhall at 0910z. (ALS)

8992.0: JAILBAIT: Hickam GHFS 0401z USB Jailbait requests to go to discrete to transmit crypto msg. Hickam asks his present location so as to slew antenna. Jailhait responds: "Southeast of U.S." Hickam tells Jailbait to switch to 11181. (ALS)

8992.0: GIN SOUR: Andrews GHFS 0105z USB pp 1-800-844-0927 "Oil Pump." Andrews unable to complete pp. (ALS)

8992.0: GIN SOUR: McClellan GHFS 0117z USB pp DSN 939-1851 [Nightwatch phone] "Jail Bait." Is passed working freqs z175 primary and z190 secondary. (ALS)

9018.0: SHADO 66 and SHADO 12 (MC-130, Kirtland AFB)in USB with mission related comms and idle chatter/humor. Interesting burst of CW noted, much stronger than the SHADOs and not noted previously on this freq — doubt it came from the C-130s. (RRM)

9090.0: The CIA counting nbrs, E5, in USB at 2200, unable to find out parallel freq. Similar but non-parallel best heard on 9129, 10527 kHz. (TY)

9130.0: EZI, Israeli Mossad, E10, in USB at 2200, also on 6840, 11565 kHz. (TY)

9141.5: RDU: unid prob ANG Unit 1300 ALE clg MGM: ANG Montgomery AL (NGB10). (MADX)

9143.5: JUE: Unid 1238 ALE clg FOE: Unid. Another unid station: API1, logged here in the past. (MADX)

9219.0: The CIA counting nbrs, E5, in USB at 2200, also noted on 10527 kHz. Similar but non-parallel best heard on 9090 kHz. (TY)

9251.0: The Lincolnshire Poacher nbrs, British MI6 and SIS, Cyprus, E3, in USB at 2100, also on 11545 kHz. Unable to find out one more LP lady. (TY)

9292.0: U.S. tuna fishing boats Pacific 0545 LSB with encryption.(IJ)

9323.0: The Cuban Cut CW nbrs in progress at 2015. (TY)

9328.0: The CIA counting nbrs, E5, in extremely powerful AM at 1300, also on 10529 kHz. (TY)

9331.0: The Cuban Cut CW nbrs in progress at 1217. (TY)

9725.0: New Star Radio, Taiwan, in powerful AM at 1200. (TY)

10033.0: Miami Radio, U.S.. in USB at 0205 working Big 8448, aircraft enroute from Caracas, Venezuela to Quito, Equador, w/pos report and SELCAL checks. (LJM)
10046.0: 4XZ. Israeli Navy, Haifa, w/V-Mkr in CW at 2055. (TY)
10066.0: Tawainese fishing boats Pacific 0550 UTC USB 2 OMs with a chit-chat in CC and some EE. Mentioned about windspeeds and currents. (IJ)
10100.8: DDK2. Hamburg meteo, Germany at 0051 in Baudot 50/425 w/RYs followed by meteo tfc. (LJM)
10126.0: The Cuban Cut CW nbrs in progress at 0907. (TY)
10236.0: The Cuban Cut CW nbrs in progress at 0810. (TY)
10248.0: 8BY, French Intelligence, St. Assise, France, sending "VVV 8BY followed by 3FG'S separated by a slant bar" at 2040 in CW. Also noted on 7668, 14931 kHz. (TY)
10301.0: Unid Commercial stations Australia 0912 UTC USB 2 OMs with a chit-chat. (IJ)
10341.5: HEC. Berne R., Switzerland at 0115 w/Sitor phasing signal and CW marker (LJM)
10352.0: CIO2, Israeli Mossad, E10, in USB at 1745, also on 12747, 14750kHz. (TY)
10365.5: RFTJD, Fr. Navy, Libreville, Gabon at 2353 in ARQ-E 48/850. Station idles for hours with no tfc but gives ID near 0000 UTC. (LJM)
10423.0: The CIA Counting nbrs, E5, in USB at 2200, also on 12197 kHz. (TY)
10426.0: The Lincolnshire Poacher nbrs, British MI6 and SIS, Cyprus, E3, in USB at 2000. Also on 6900, 11545 kHz. (TY)
10446.0: The Cuban Cut CW nbrs in progress at 1120. (TY)
10527.0: The CIA Counting nbrs, E5, in USB at 2200, also on 9219 kHz. (TY)
10529.0: The CIA Counting nbrs, E5, in extremely powerful AM at 1300, also on 9328kHz. (TY)
10566.0: The Cuban Cut CW nbrs, M8a, in progress at 1304. (TY)
10583.0: The CIA Counting nbrs, E5, in progress at 2100, also on 11580 kHz. (TY)
10648.0: The Israeli Mossad, E10, in USB at 1800, also on 7918 kHz. (TY)
10780.0: NIGHTSTAR ALPHA (E-8C JSTARS, Robins AFB 93ACW/12ACCS): Cape Radio 1652z USB pp DSN 497-2612 Robins AFB CP Raymond 19. Radar Maint person comes on and assists in try to diagnose RTU problem, concludes nothing can be done at this time. (ALS)
10780.0: USS Underwood: Cape Radio 0937z USB re Eastern Test Range range clearance ops prior to Shuttle STS-106 launch. Also comms with KING 1, 2, and 3 (USAFC-130s), USCGC Blue Fin. Concern about storms approaching launch pad. Cape Radio passes launch working freq 6724. (ALS)
10780.0: PITT 01: Cape Radio 2249z USB pp BLUESTAR (TSCC, Rosey Roads PR). Passes position, heading, speed. (ALS)
10780.0: SOONER 81 (C-130H, OK-ANG): Cape Radio 1744z USB pp DSN 940-5551 Will Rogers Field. En route to McGhee Tyson TN, then OKC. (ALS)
10780.0: REACH M40: Cape Radio 1856z USB pp 800/866-2844 Xt 1114 Little Rock Ops. Reports Takeoff 1823z with 24 pax, ETA Jax NAS 2040z. (ALS)
10780.0: PZ 337 (P-3C, New Orleans NAS USNR VP-94 "Clawfishers" Sqdn): Cape Radio 1630z USB pp DSN 678-3324 VP-94 Duty Ofc. ETA: 1330 Local. (ALS)
10858.0: The Cuban Cut CW nbrs, M8a, at 1205. (TY)
10859.0: LZN6: Presumed Bulgarian military or Russian military tactical station 0430 UTC USB calling. (IJ)
10872.0: Russian single letter CW channel Mkr, "K," "F," and "S" Petroparovsk Kamchatsky, Vladivostok and Arkhagensk, at 1223. K stn is slow-keying w/a dirty distinctive hum. "P" stn, Kalinigrad, is silent. (TY)
11072.0: The CIA Counting nbrs, in USB at 1800, also on 13465 kHz. (TY)
11175.0: LIMA FOXTROT 293 (P-3C Jacksonville NAS VP-16 "War Eagles" Sqdn): Ascension GHFS 2220z USB pp DSN 942-3560 VP-16 Duty Ofc. Updtates ETA to 0840z. (ALS)
11175.0: JU 118 (C-9B Norfolk VR-56 Sqdn): Salinas GHFS 1952z USB pp DSN 564-1419 Xt 228 Maint Ctr. Will be on deck 1710 Local. Has problem with autopilot. (ALS)
11175.0: REACH 283N: Andrews GHFS 2027z USB pp Hilda East: passes load report, ETA LPLA (Lajes, Azores): 2250z. (ALS)
11175.0: REACH JHL3 (DC-10 Air Transport Intl, flight from Patrick AFB): Ascension GHFS 2320z USB Inbound Ascension from Antigua: passes load report. (ALS)
11175.0: JW 800 (C-130T, Brunswick NAS USNR VR-62 Sqdn): Andrews GHFS 2019z USB pp DSN 942-2511 Jax NAS Base Ops. ETA 2330z; rqsts quick gas 'n go. (ALS)
11175.0: CW 740 (C-130T, New Orleans NAS VR-54 "Revellers" Sqdn): Andrews GHFS 2049z USB pp DSN 678-3402 VR-54 Ops. ETA 1700 local. (ALS)
11175.0: LIFTER 17 (C-17 Charleston AFB): Ascension GHFS 0018z USB pp CHS Metro re 1800z wx. Now in Ottawa, following Schenectady airshow. Will depart Ottawa 1600z. Will back up crew flying DV tomorrow. (ALS)
11175.0: MONGOOSE 02: Salinas GHFS 0110z USB pp DSN 831-4536 Rosey Roads PR Duty Ofc, after unsuccessful attempt at pp to BLUESTAR (TSCC). Passes Ops Normal report. (ALS)
11175.0: Braggart, U/I aircraft, wkg Andrews AFB w/pp to Pagentry, U/I airfield in USB at 1936. (LJM)
11175.0: Unknown stations working in LSB (non EE), didn't seem to be affected by EAM on USB or apparent broadcast QRM. (RRM)
11187.0: Headdress and Madeline, U/I U.S. military, in USB at 1754, with 72 baud VFT problems. Much talk of RTTY equipment settings. (LJM)
11214.0: RAZOR 22 (E-8C JSTARS, Robins AFB 93ACW): Trenton Mil 2007z USB RAZOR 22 hails Trenton "in Sector 6" repeatedly with no joy. (ALS)
11244.0: RAZOR 22 (E-8C JSTARS, Robins AFB 93ACW): Trenton Mil 2005z USB. Told to switch to 11214. (ALS)
11253.0: RAF Volmet, YL/EE w/wx for African airports in USB at 0111. (LJM)
11300.0: Tripoli Radio, Libya, wkg Luftansa 8296 enroute Nairobi, Kenya w/pos report and SELCAL check. Also on 5517 kHz as alternate freq. (LJM)
11300.0: Cairo and Tripoli Radio with strong signals but poor readability (unusual nighttime catch from my location in Savannah) (RRM)
11430.0: New Star Radio, Taiwan, V13, YL/CC w/4FGs in powerful AM at 0800. (TY)
11432.0: The Cuban Cut CW nbrs, M8a, in progress at 0818. (TY)
11460.0: SAM 300 (C-20H, Andrews 99AS): Andrews VIP 2117z USB Departed 2100z; estimates blocks 0250z; has DV-2 aboard. (ALS)
11545.0: The Lincolnshire Poacher nbrs, British MI6 and SIS, Cyprus, E3, in USB at 1500, also on 12603, 13375 kHz. (TY)
11565.0: EZI, Israeli Mossad, E10, in USB at 2200, also on 6840, 9130 kHz. (TY)
11580.0: The CIA Counting nbrs, E5, in USB at 2100, also on 10583 kHz. (TY)
12197.0: The CIA Counting nbrs, E5, in USB at 2200, also on 10423 kHz. (TY)
12221.0: The CIA Counting nbrs, E5, in AM at 1100, unable to find out a parallel freq. (TY)
12603.0: The Lincolnshire Poacher nbrs, British MI6 and SIS, Cyprus, E3, in USB at 1500 w/QRM from SVU, Athens R., 12603.5 kHz, Sitor CW ID. Also on 11545, 13375 kHz. (TY)
12615.0: USU, Mariupol R., Ukraine at 0027 w/CW marker and Sitor phasing signals. (LJM)
12615.0: 8PO, Barbados R., Barbados w/Sitor phasing signal and CW marker at 0028. (LJM)
12735.6: LSD836, Argentina R., Argentina w/Sitor phasing signal and CW marker at 0014. (LJM)
12747.0: CIO2, Israeli Mossad, E10, in USB at 1845, also on 8025,10352 kHz. (TY)
12988.0: Unid stn P5O Rptng "VVV P5O 1/2/3/4, followed by unreadable CW" over and over at 2230. (TY)
13030.0: FUF, Fr. Navy, Martinique, in Baudot 75/850 w/RY's at 0001. (LJM)
13258.0: Russian single letter CW channel Mkrs, C and S, Moscow and Arkhangelsk at 2055. (TY)
13375.0: The Lincolnshire Poacher nbrs, British MI6 and SIS, Cyprus, E3, in USB at 1800, also on 11545, 16084 kHz. (TY)
13465.0: The CIA Counting nbrs, E5, in USB at 1800, also on 11072 kHz. (TY)
13528.0 Russian single letter CW channel Mkr, "C" and "K," Moscow and Petropavrovsk Kamchatsky, at 1220. "F" and "P" stns, Vladivostok and Kalinigrad, are silent. (TY)

13555.0: The CIA Counting nbrs E5, in AM at 1400, also on 15732 kHz. (TY)
13575.0: The New Star Radio, Taiwan, V13, in AM at 1200. (TY)
13579.8: ZME: Joint Dept. of Conservation/ Meteo station Raoul Island the Kermadec New Zealand 0525 UTC USB OM and YL with a chit-chat. Mentioned about getting wood from Norfolk Island pine trees and from some of the shipwrecks around the Island for wood turnery. (IJ)
13750.0: New Star Radio, Taiwan, V13, YL/CC w/4FGs in powerful AM at 0800. (TY)
14457.0: The Lincolnshire Poacher nbrs, British MI6 and SIS, E3, Cyprus, in USB at 1300, also on 15682, 16084 kHz. (TY)
14481.7: RFTJ: French Forces Dakar 0823 ARQ-E3 48/400 w/FF nx reports. At 0836, into non protégé tfc. Link TJF to Port Bouet. (MADX)
14577.0: The CIA Counting nbrs, in powerful AM at 1200, also on 16198 kHz. (TY)
14739.0: The CIA Counting nbrs, in AM at 1200, also on 16198 kHz. (TY)
14750.0: CIO2, Isreali Mossad, E10, in AM at 1745. Also on 10352, 12747 kHz(TY)
14905.0: The CIA Counting nbrs, E5, in faint USB monitored at 1400, unable to find out a parallel freq. (TY)
14931.0: 8BY, French Intelligence, Saint Assise, near Paris, sending "VVV 8BY followed by 3FGs separated by a slant bar" in CW at 1240, also noted on 18415, 20946 kHz. (TY)
15388.0: New Star Radio, Taiwan, V13, YL/CC w/4FGs in powerful AM at 0800. (TY)
15682.0: The Lincolnshire Poacher nbrs, British MI6 and SIS, E3, Cyprus, in USB at 1300, also on 14487, 16084 kHz. (TY)
15732.0: The CIA Counting nbrs, E5, in AM at 1400, also on 13555 kHz. (TY)
15919.5: CFH, Canadian Forces, Halifax, in Baudot 75/850 w/NAWS marker at 2313. (LJM)
15980.0: EZI. Israeli Massad, E10, in AM at 1230, also on 17410 kHz. (TY)
16012.5: FDI8. U/I Fr. military, in Baudot 50/425 w/bricks and RYs at 0006. (LJM)
16081.7: LKZGCG: Egyptian Embassy Washington 1332 ARQ w/5LG TGs to MFA Cairo. (MADX)
16084.0: The Lincolnshire Poacher nbrs, British MI6 and SIS, E3, Cyprus, in USB at 1400, also on 14487, 15682 kHz. (TY)
16198.0: The CIA Counting nbrs, E5, in powerful AM at 1200, also on 14577 kHz. (TY)
16332.0: Russian single letter CW channel Mkr, "C," Moscow, MXC. at 1214. (TY)
16838.5: 9AR. Rijeka R., Croatia at 0040 w/CW marker and Sitor phasing signals. (LJM)
16959.0: FUM. Fr. Navy, Papeete, Tahiti, in Baudot 72/850 w/RYs at 2350. (LJM)
17341.0 HLS, Seoul R., South Korea. w/short melody mirror of Beethoven's 9th symphony "Ode to Joy" Mkr between PP in USB monitored at 1010. (TY)
17505.5: ASK, Karachi R., Pakistan, sending poss Pakistani msg in progress and clear CW at 0905. (TY)
18415.0: 8BY, French intelligence, St. Assise near Paris, in faint but just readable CW at 0940. Sending "VVV 8BY followed by 3FGs separated by a slant bar." (TY)
20048.0: Russian single letter CW channel Mkr, "C" and "S." Moscow and Arkhangelsk, at 1214. Welcome back. "F" and "P" stns, Vladivostok and Kalinigrad, are silent. (TY)
20946.0: 8BY, French intelligence, St. Assise near Paris, in faint but just readable CW at 1240. Sending "VVV 8BY followed by 3FGs separated by a slant bar." (TY)
20946.0: 8BY, U/I w/CW marker at 0100. *(This station has been U/I for many years now).* (LJM)
25870.0: RPU: WFLA 970 Tampa, FL USA 2300 UTC NFM with news. IJ)
26243.5: ZLO: Presumed RNZN Irirangi New Zealand 2245 UTC VFT 6028 (Barrie) 75 Bd with all channels encrypted. (IJ)
27680.0: VMR211: Royal Volunteer Coastal Patrol Sydney, NSW Australia 2215 UTC AM OM with WX forecasts. (IJ)
27860.0: VMR265: Volunteer CG Port Stephens, NSW Australia 0110 UTC AM OM with WX forecasts. (IJ)
27860.0: VJV302: Westernport Safety Council Hastings. VIC Australia 0215 UTC AM OM with WX forecasts. (IJ)
27900.0: VMR488: Volunteer Marine Rescue Bundaberg, QLD Australia 2043 UTC AM OM with announcement. (IJ)
27900.0: VMR445: Volunteer Marine Rescue Bribie Island, QLD Australia 2325 UTC AM OM with the boat *Bribie 363*. (IJ)
27900.0: VMR460: Volunteer Marine Rescue Point Danger, QLD Australia 2233 UTC AM with the boat *Holy Mackeral*. (IJ)
27900.0: VMR216: Royal Volunteer Coastal Patrol Lake Macquarrie, NSW Australia 2230 UTC AM OM passing a WX forecast to the boat *Windori*. (IJ)
27900.0: VMR207: Royal Volunteer Coastal Patrol Ulladulla, NSW Australia 0400 UTC AM OM with the boat *590*. (IJ)
27910.0: VMR466: Volunteer Marine Rescue Hervey Bay, QLD Australia 0100 UTC AM OM with the boat *Smokey*. (IJ)
27940.0: VLQ999: Agnes Water Fishing Club, QLD Australia 2126 UTC AM OM with the boat RJ crossing the bar. (IJ)
27940.0: VJ3ND: Newhaven Yacht Squadron, VIC Australia 0352 UTC AM OM with announcement. "All boats change course." (IJ)
27940.0: VMR707: Royal Volunteer Coastal Patrol St. Helens, TAS Australia 0112 UTC AM OM with the boat *Sportfish 7*. (IJ)
29730.0: Unid presumed U.S. Forest Product comms 2240 UTC NFM OM with brief voice burst."Hook it on the other truck." (IJ)
30450.0: U.S. Army Ft. Hood, TX. Range Control 2148 UTC NFM with brief voice bursts. "Target status for maintenance. . . Grid . . . Roger." (IJ)
30625.0: Chinese military 2352 UTC NFM with brief voice bursts calling in CC and raspy audio. (IJ)
30905.0: Chinese program feed 2240 UTC WFM with YL in CC. (IJ)
31000.0: NYC bootleg taxi comms USA 2346 UTC NFM OM in SS with dispatch comms and phone ringing in the background. (IJ)
31200.0: BRAVO: Army Australia 2305 UTC NFM with brief voice burst. "Casualty site over . . .this is BRAVO out." (IJ)
31200.0: 81 ALPHA: Army Australia 2354 UTC NFM with brief voice bursts.(IJ)
31240.0: NYC Bootleg Taxi comms USA 1956 UTC NFM OM in SS with dispatch comms. (IJ)
31390.0: Presumed Asian MUZAK feed 2312 UTC AM playing a continuous loop tape of various classical musical pieces. Including the Blue Danube Waltz. (IJ)
32025.0: Asian Pager 2315 UTC with brief data bursts. (IJ)
32425.0: Russian military 2345 USB with encryption. (IJ)

Contributors:

AS — Alan Stern
LJM — Larry J. McMahan
IJ — Ian Julian
MADX — MidAtlantic DXer
RRM — Roland R. McCormick
TY — Takashi Yamaguchi, MD

Thanks again for everyone's hard work and efforts in making these logs possible.

Final Word

Hopefully during this holiday season everyone will enjoy happiness and good health. As we finally move towards the real beginning of the 21st century, I wish each and everyone of you only the best for this new millennium.

During the upcoming year, I hope to introduce even more innovations in the column, including guest writers, equipment reviews construction projects, and more. One thing that I am definitely going to be doing is rewarding people with (suitable for framing) certificates of achievement for the number of logs that you submit here.

Likewise I am going to be giving away books and other prizes for contributions and logs!

Next month, I'm going to be looking at Longwave — what better way to start off the bottom of the year than by looking at the bottom of the RF spectrum. Perry F. Crabill, Jr. will be my guest next month, sharing with us his experiences in capturing some very interesting NDB logs.

I will have the regular logs too, as long as you send them in. Like I said before — write them, E-mail them, or fax them.

So until then, may all of the monitoring sessions you have in the New Year be greatly successful. ■

CB SCENE

27 MHz Communications Activities

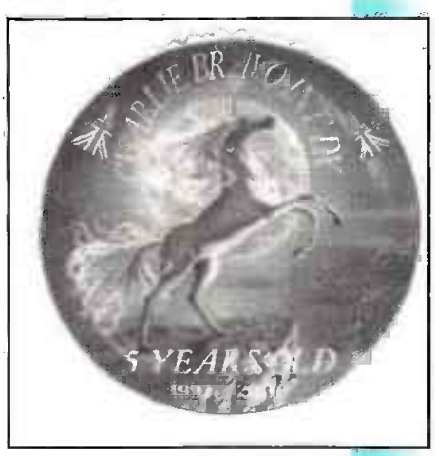
FCC Rejects CB Plea In Order To Protect The Amateur Service

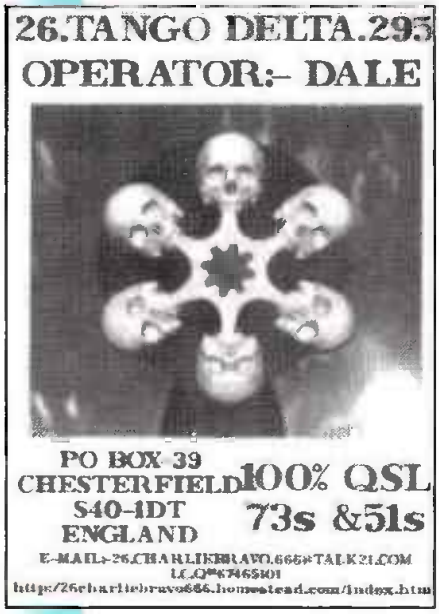
As the firefighters in Yellowstone have said, "We tried and tried, but the park just fried . . ." That is how Alan Dixon, former "Washington Beat" columnist for *Popular Communications*, began his note informing me that his effort to get the 155.3-mile limit on CB communications repealed had failed.

On August 18, 2000, Diane J. Cornell, Associate Chief, Wireless Telecommunication Bureau decreed that "Based on our review of the record, we conclude that issuance of a Notice of Proposed Rule Making and the commencement of a separate proceeding regarding this matter is not warranted. Dixon's request is inconsistent with the purpose of the CB Radio Service and could fundamentally alter the nature of the service. Therefore, we deny Dixon's Petition."

How, you may ask, would the repeal of the 155.3-mile communications limit "fundamentally alter" the nature of CB? Quite simply it would, in the commission's opinion, transform CB into an honest to goodness rival of the amateur service. The Commission reasons that, "if Section 95.413 were revised to eliminate the prohibition against communications between CB Radio Service stations more than 250 km away, then the CB Radio Service would be used by individuals to transmit communications that are similar to those transmitted by amateur stations. This result, we believe, would fundamentally change the nature of the service. In fact, it would be transformed from a short-distance voice communications service, where long-distance communications inadvertently can occur, to an examination-free amateur radio-type service, in which long-distance communications would become permissible communications."

So, what is the problem with that? That is, after all, what we are trying to do. Well, the problem is that the Amateurs, at least their representatives in the American Radio Rely League (ARRL) think that this minor rule change would turn CB into a formidable competitor for the time and attention of radio hobbyists, as if it is not already. They fear that the monopoly granted by the FCC directly to the Amateur service and indirectly to the ARRL could be threatened. As far as they are concerned, when it comes to enjoying two-way radio communications they, the Amateurs and the ARRL, want to remain, at least officially, the only game in town. If you want play, you not only have to play on their field, with their ball and their rules, but you gotta play with them! They want to keep it that way. In other words, they are still bent out of shape about losing the 11-meter band to CB back in the 1950s and intend to do all in their power to keep CB in its place.





Fears that changes in the CB rules would create a "rival" to the Amateur service are unfounded. Internationally, that is exactly what CB has already become. Judging by these QSL cards, the number of participants, and hours of radio enjoyed, amateur radio is already in second place.

BY ED BARNAT <Ed@barnat.com>

I am not making this up folks. This is real. I continue to quote from the Commission's own words. "We note that the Commission stated it had no intention of creating a service paralleling the amateur service when it authorized the Citizens Radio Service, and it did not intend that CB Radio Service stations be used for technical radio experiments or for general contacts of a random nature. In this regard, Dixon and others state that the CB Radio Service already is used for long-distance personal convenience communications and that such use should be permitted. We also note that some individuals used the Citizens Radio Service in this manner before the Commission specifically prohibited CB Radio Service stations from communicating with distant stations. Thus, the concern expressed by the ARRL that this proposal would lessen or eliminate the core distinction between the CB Radio Service and the Amateur Radio Service is a valid concern."

FCC's Solution: Become A Ham Operator

The solution, the Commission proposes, for those who wish to "contact randomly" as nature allows is to, "seek an amateur radio license and use bands that are expressly allocated for these types of communications." Unfortunately, not everyone who enjoys radio can or wants, for a number of reasons, to become an amateur. If they could, or would, they would have already done so. The people attracted to each service are often very similar, but not identical. It would be nice to think that everyone can get along. Sometimes they can, but not always. This is not only true in radio but life as well. That is why we have McDonald's and Burger King, Ford and Chevy, Democrats and Republicans. That is why we need Amateurs and CBers.

Yes, the concern expressed by the ARRL, that the core distinction between CB and Amateur services would be lessened, at least officially, is valid. But, aside from lessening the power and prestige of the amateur service and the ARRL, what harm would that do? Both services, in the real world, already enjoy "general contacts of a random nature." No longer does either really pursue technical radio experiments. The popularity of high quality, low-cost integrated circuit radios have all but eliminated the "Home Brew Station" of earlier this century. Today, most experimenters, in both services, have been relegated to either advanced antenna polishing or seeing how much money they can spend.

The ARRL's concern, however, that the "core distinction" would be "eliminated" is at best exaggerated. No action or lack thereof from Washington, however radical, will ever lessen the "core distinction" between Amateurs and CBers — let alone eliminate it. It is not written on paper. It is written on hearts. The "core distinction" is not a matter of technical expertise. It is a matter of class. It is a matter of money. It is a matter of power.

While it appears at first glance that the losers in this decision are the CBers, the truth is they are not the only ones. We all lost something on this one. CBers lost more than a rule change — they lost a chance to gain respect from the FCC. The FCC lost an opportunity to establish a rapport with the CB community. The amateurs lost a chance to extend a helping had to their bastard child and attempt, at long last, to do the right thing by it.

At least now CBers can say they have tried the reasoned approach. Perhaps, knowing know how out of sync with reality the FCC is and having confirmed who their opponents really are and why, they will try again. Persistence pays and there are other avenues to pursue.

It seems, for the moment, we are back where we started. The bands are out of control. The Amateurs are out of joint. The FCC is out of touch. Life goes on.

Two Way Fined $7000

The Two Way Radio Shop of Kennewick, Washington, has been ordered to pay $7000 to the FCC for selling linear amplifiers according to a Memorandum Opinion and Order released by the FCC on September 14, 2000. The original Forfeiture order was issued on April 7, 2000 after undercover FCC agents were offered linear amplifiers for sale at the shop.

In a Petition for Reconsideration, The Two Way Shop raised one new issue. "It alleges that neither its owner operator nor his wife have spoken with a Commission agent in The Two Way Shop, and, accordingly, could not have offered to sell linear amplifiers to the agent. The Two Way Shop apparently overlooks our statement in the Forfeiture Order that the investigating agents posed as "members of the general public." In this case, the agents' decision to proceed undercover has no

bearing on The Two Way Shop's culpability because the operative terms of Section 302 of the Act and Sections 2.803 and 2.815 of the Rules simply prohibits the offering for sale of the linear amplifiers," reports the Commission.

REACT And ARRL Memorandum Of Understanding

According to a report in the ARRL Letter of August 13, 2000 and Bob Leef of REACT, the ARRL Board of Directors approved a memorandum of understanding between the two radio organizations. The ARRL was on hand July 26–28 for the REACT 2000 International Convention in Kissimmee, Florida. The event included FCC Special Counsel for Amateur Radio Enforcement Riley Hollingsworth, K4ZDH, who presented an FCC seminar.

Reader Needs Schematics

Dave, CBDXR@aol.com has been given a Kris XL50 CB. He is trying to restore it and needs a manual/schematic for the rig. If anyone knows anything about this radio or where Dave can find a copy of the paperwork, please let him know.

Antenna Info Wanted, And Calling All Clubs/Nets

Al & Trudy Deutschmann, al-trudy@mediaone.net want to know what are the differences between 3/8, and 5/8 wave antennas. Me too.

Sometime in the not too distant future, I would like to feature a few clubs and nets here in the "CB Scene." If you are a member of an active club or net and would like to be considered, please let me know.

December And January CB Mixers

If you are looking for a little chatter on the CB make sure to make plans to attend the next, regularly-scheduled, on-air CB Mixer. They are held, wherever you are, on the last Saturday of the month (the next two will be on the 30th of December and 27th of January from 9 p.m. until 10 p.m. local time. SSB operators work channel 36 LSB. AM operators work channel 23.

Well, that is it for now. Thanks for writing me here at the magazine or via the Internet where my address ed@barnat.com. And as always, if you can (especially on December 30th and January 27th) — catch me on the radio! 73 ■

RADIO & THE INTERNET

Pop'Comm's Cyber Sleuth Checks Out Online Resources

Quick Links: Expanded Coverage!

Editor's Note: Remember, all online resources and contacts appearing in Pop'Comm *(plus more!) are available at the Sleuth's Quick Links Site, http:// www.dobe.com/ql/.*

Prior to the October 2000 issue (and "Quick Links"), there were two things that made writing this column somewhat frustrating. First, a limitation on what could included due to space constraints and second, the knowledge that you had to physically type each and every URL presented here. Both had contributed to your not being advised of some very good resources. Hopefully, the "Quick Links" site has solved that dilemma by providing a sound marriage between the printed-paper and online worlds. Now you have quick, no typing, access to all the online goodies referenced, each month in *Pop'Comm*. To the best of my knowledge, this is a FIRST for any printed publication and represents our on-going effort of trying to make "*Popular Communications*" the most useful and enjoyable periodical available for the person who counts most — YOU! And, for those who wrote, essentially, "there has to be a better way" in terms of covering online resources, thanks again for your comments and suggestions. Hopefully, "Quick Links" fills the bill. As time goes on, it will be interesting to see how many other publications clone the concept. (By the way, I'm for hire if you'd like to implement a similar "Quick Links" concept for your printed publication.)

New, expanded coverage now available — see text.

Until now, the "Quick Links" site contained hyperlinks to ONLY that which physically appeared on the pages of *Pop' Comm*. Beginning this month, we've enhanced things a bit to include "expanded coverage" for certain resources. When you visit a "Quick Links" page, if there is expanded coverage for a given theme or resource, a special link to those resources will be placed directly below the corresponding link for the resource printed here. As time permits, I hope to go back and update prior columns with additional resources.

Nextel Goodies

I once heard "The only difference between men and boys is the price of their toys." That might be true (just ask my wife) but the phones Nextel offers are no toys — integrated with their digital network, these babies are for serious and reliable communication. In fact, every Nextel phone is an integrated 3-in-1 communications solution: digital cellular phone, pager, and digital two-way radio. Plus, I just found out they're now set up for wireless Internet service as well. I observed these phones in actual operation and was impressed! While a bit pricey in my opinion, (monthly service charge starts at about $60), the increased functionality might be just the thing for those needing it. The units I saw were like that shown in the screenshot above. As the photo indicates, the phones are not much larger than a standard FRS radio. Included is an "Alert" function that can signal someone is trying to reach you. This could actually be used as a "life saving" device by pressing a single button. An example might be someone at home needing help but unable to speak or "dial" a number. That was the main reason for my friend subscribing to Nextel's service and how I came about seeing a "demonstration" of this new technology. I only wish our new home was in Nextel's coverage area — we'd have a pair for sure! Check out Nextel's site to see if you're in their coverage area and for more information. Visit http://www.Nextel.com/.

Need a "walkie-talkie" with the range of a cell phone?

Free Phone Calls

While we're on the subject of phones, several months ago I mentioned "dialpad.com" where you could gain the capability to make free long distance phones calls via the Internet. Since then, many firms have jumped into the "make free phone calls" arena. Here's an interesting resource that links to the majority of resources currently out there. From the opening paragraph: "Make free long distance phone calls using your PC. Using the same advertisement-based theme as other media, you can make free long distance calls simply by viewing or listening to ads

BY ERIC FORCE <eric@force.net>

before or during a free call. There are many formats available for your use depending on your needs. For the occasional user who calls different numbers there are simple no download programs that you use to place a call from your PC to another regular telephone. There all also some that don't require a computer just your telephone." I haven't tried any of the resources noted (other than dialpad.com) so I can't comment as to what they offer or quality of their service. Regardless, here's the URL and you can take a peek for yourself at http:// www.jumpwave.com/freeld.htm.

The Ontario DX Association

The Ontario DX Association (ODXA) is a club for radio listeners. It was organized in 1974 to fill the need for a club that would concentrate on organizing local SWLs (Shortwave Listeners) by holding meetings and publishing a regular bulletin containing listening tips.

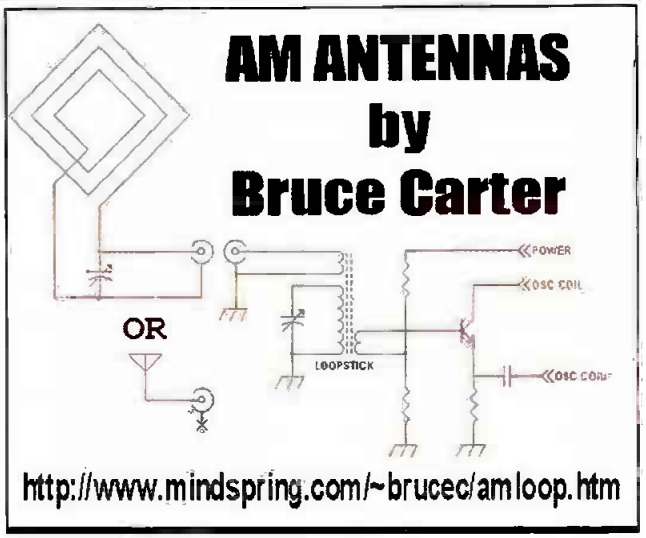
Membership in is open to anyone, anywhere in the world — this is a superb resource!

Listening In is the monthly publication of the ODXA. It covers the Shortwave and Mediumwave (AM) scenes with a number of regular columns that include items of interest to FM, TV, scanning, Ham and Utility listeners, and DXers. Sample copies may be obtained by sending $3 (CDN or U.S.) to the Ontario DX Association. Details are available at their Website. Membership in the ODXA is open to anyone, anywhere in the world.

If you're just beginning with SW or MW DXing, Don Cassel's (VE3BUC) *Beginner's Guide to Medium and Shortwave DXing*, available online at ODXA's site, is a superb resource. Don't miss it! Visit them at http://www.odxa. on.ca/.

AM Antennas

"AM Antennas by Bruce Carter" is a nice tutorial, with illustrations, on the subject of improving your BCB (Broadcast Band) DXing. Starting with: Open any radio with an AM section and you are sure to find a grayish black rectangular or round bar of metal, with wire wound around it on one end. This is the AM antenna. If you are not satisfied with your AM reception, you are probably wondering, "is there anything I can do to improve it?" Well, you have come to the right place!"



Here's a nice tutorial for improving your MW (Mediumwave Broadcast Band) DXing.

I agree. You'll also find information on adding an amplifier and links to other related resources. Visit http://www.mindspring.com/~brucec/amloop.htm.

Scanning

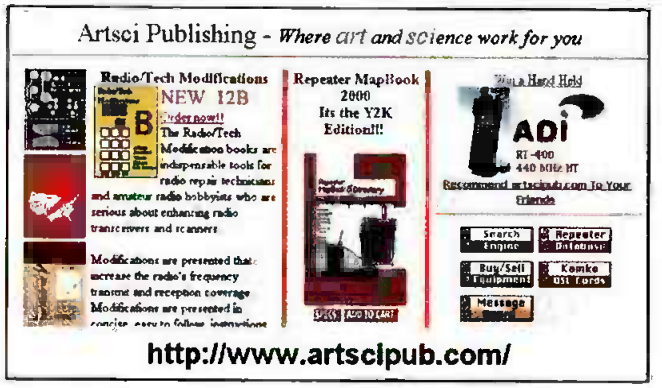
Yes, Jim Fordyce's "Long Island Area Scanning Resources" certainly lives up to its name with superb coverage of Long Island. But, that's only the beginning. In addition, you'll find excellent coverage for the entire Northeast from Maine to Washington DC. But wait, there's more! Also included are sections covering On the Road — Frequencies & scanning information for popular travel destinations, General Frequencies — Marine, Aviation, Cell phones, TV, CB, etc., Aviation Scanning Information — Information & frequencies, General Scanning Information — Helpful information related to scanner monitoring, Links to Other Scanning-Related Pages — Hundreds of links arranged by state/ subject plus a very informative Frequently Asked Questions page. If you enjoy scanning, this is a must visit and bookmark site! DON'T MISS IT! Check out Jim's site at http://www. fordyce.org/ scanning/.

Don't let the name fool you — it's only the TIP of the iceberg.

While we're thinking about scanning, check out "Lights! Cameras! Scanners," an interesting article by Chuck Gysi that appeared in National Communications. The article focuses on the use of two-way communication as used by TV, film and other media production companies. Take a peek and save the frequencies. Visit http://www.dnaco.net/~norms/art05.htm.

Radio/Tech Modifications

If you have an interest in obtaining maximum performance from your gear, the books and other materials available from



Artsci Publishing — where art and science work for you — take a peek.

Artsci Publishing might be of interest. In a descriptive paragraph they state: "Artsci has been producing books for the Amateur radio community since 1989. Our straightforward drawing and instructions make the most complicated aspects of amateur radio simple to understand." To still be in (the publishing) business after 11 years, they've apparently done just that. Take a peek at http://www. artscipub.com/.

Pirate Radio

Audio Pages, Pirate Shortwave and Micro Radio (LPFM) Chat Rooms, Photos, QSLs, Links and more will be found at "The Free Radio Network." Appearing in their FAQ section and responding to the question: Why?, they respond: "The FRN exists for a couple of reasons, first it is here for free radio listeners and radio station operators to exchange ideas and communicate. The FRN is a meeting place for a global community of free radio supporters. Second, the FRN is here to spread the word about free radio and provide information to the community at large. Third, we are here to suppress the uncontrollable urge to burn stuff." An interesting site — check it out at http://www.frn.net/.

Listen to pirate broadcasts — and more!

Here we are again — just about out of space. Regardless, before pulling the plug for this month, one last comment about the "Quick Links" site. You may have noticed that some of the pages are rather lengthy but still load reasonably fast —even with a "slow" modem. The reason for that is the use of an HTML coding technique called "Cascading Style Sheets." This type of coding defines certain text attributes of the displayed text. In many cases, a 50% or more reduction in page (file) size was achieved. Smaller files mean faster loading. That's the good part. On the downside, some older Web browsers may not "understand" style sheets, in which case the pages will probably look ... well ... pretty bad. If that happens to you, you might want to consider upgrading your Web browser since this type of coding is becoming increasingly popular.

Here are links to Microsoft® and Netscape® where you can obtain their latest Web browsers Microsoft's® Internet Explorer: http://www.microsoft.com/ windows/ie/ and Netscape® Navigator: http://home.netscape.com/download/.

If you'd like to know more about Cascading Style Sheets, plus HTML coding in general, one of the best resources out there is Joe Burns' "HTML Goodies" site. If you do your own coding, Joe's site is a DON'T MISS! Visit http://www. htmlgoodies.com/.

Remember to keep those comments and suggestions coming and don't forget to visit the Quick Links site at http:// www.dobe.com/ql/ for easy access to all the resources noted here and the *Pop' Comm* Website at http://www.popular-communications.com/. See you next month. Happy Holidays! ■

PLANE SENSE

Your Link To Aviation Communications

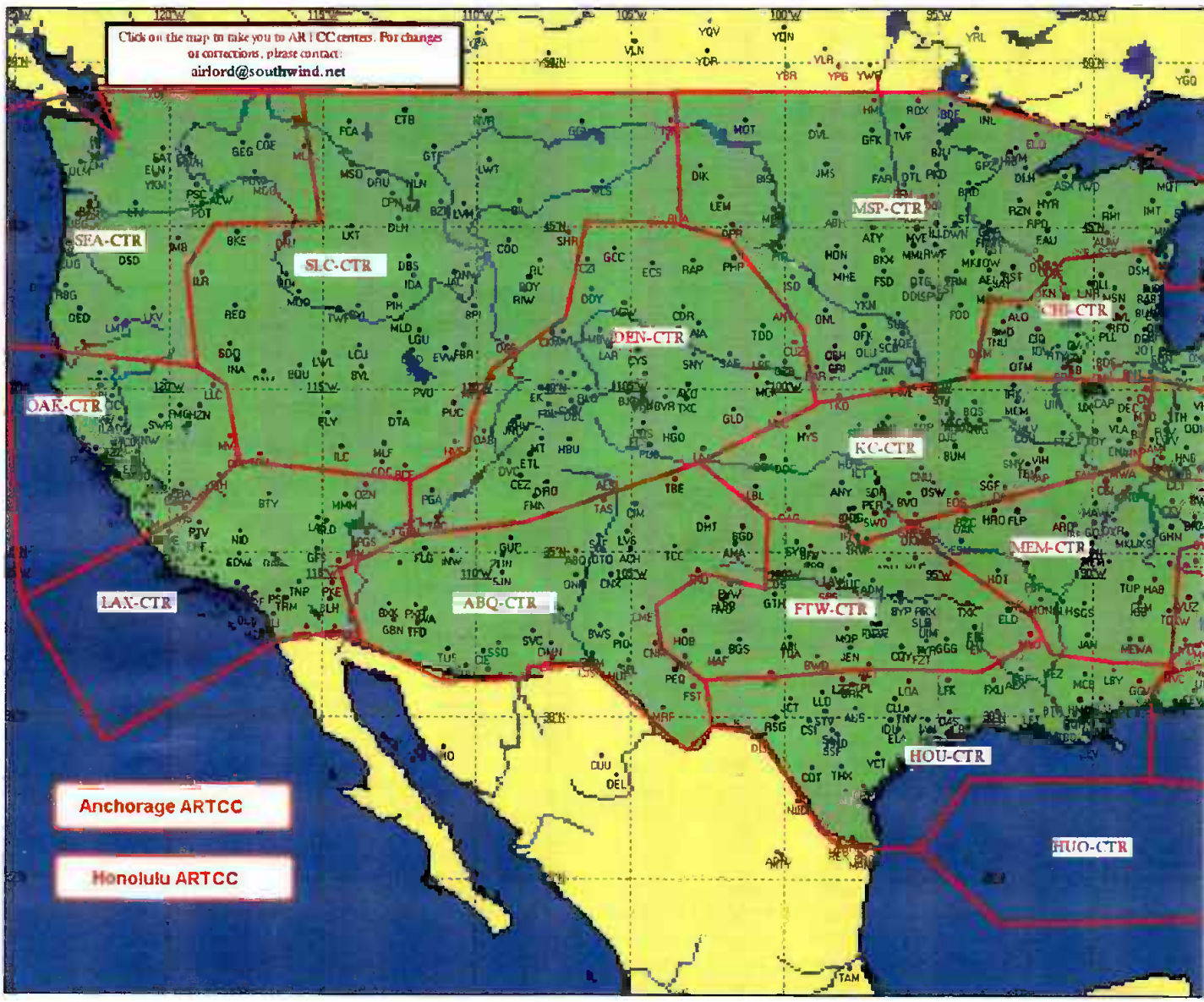
Air Route Traffic Control Centers

It's not going to be that cold this winter here in Florida. My wife Candy and I are discussing just how many cans of fake snow we're going to buy for this year's Christmas tree. To all of you, I wish happy holidays.

This is the fourth and final installment on the ATC system. In August, I showed you what is done at a Flight Service Station (FSS). In September, you saw how controllers at the Airport Traffic Control Towers (ATCT) operated. Last month, the column dealt with Approach Controls (TRACONs, RAPCONs, RATCFs, etc.). This month, I'll deal with the facilities with the most controllers and the fewest facilities, the Air Route Traffic Control Centers (ARTCC), or just Center.

There are 21 Centers and three CERAPs which are Centers with approach controls located in them. The three CERAPs are Agana, Guam; Honolulu, Hawaii; and San Juan, Puerto Rico. The Centers and CERAPs are (with their identifiers):

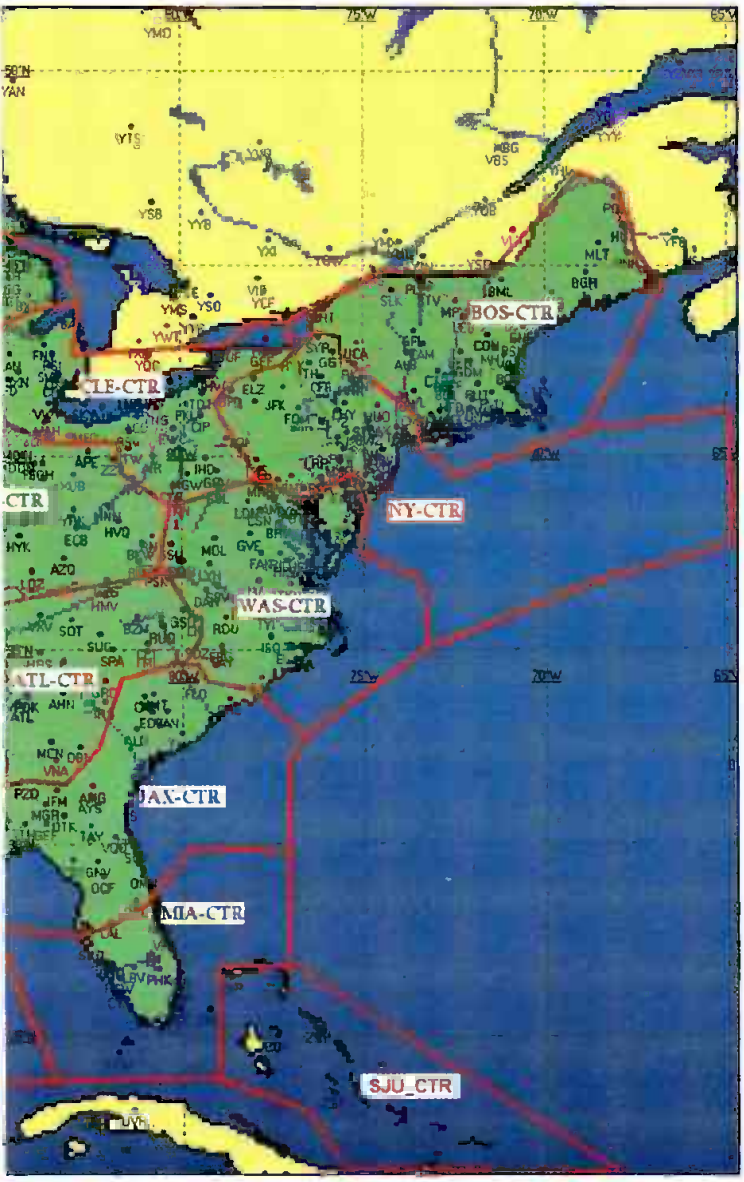
ZAB — ALBUQUERQUE, NM, ALBUQUERQUE ARTCC
ZAN — ANCHORAGE, AK, ANCHORAGE ARTCC
ZAU —CHICAGO, IL, CHICAGO ARTCC



The national airspace system.

BY BILL HOEFER <flacap388@prodigy.net>

ZBW — NASHUA, NH, BOSTON ARTCC
ZDC — WASHINGTON, DC, WASHINGTON ARTCC
ZDV — DENVER, CO, DENVER ARTCC
ZFW — FORT WORTH, TX, FORT WORTH ARTCC
ZHN — HONOLULU, HI, HONOLULU CERAP
ZHU — HOUSTON, TX, HOUSTON ARTCC
ZID — INDIANAPOLIS, IN, INDIANAPOLIS ARTCC
ZJX — JACKSONVILLE, FL, JACKSONVILLE ARTCC
ZKC — OLATHE, KS, KANSAS CITY ARTCC
ZLA — LOS ANGELES, CA, LOS ANGELES ARTCC
ZLC — SALT LAKE, UT, SALT LAKE CITY ARTCC
ZMA — MIAMI, FL, MIAMI ARTCC
ZME — MEMPHIS, TN, MEMPHIS ARTCC
ZMP — MINNEAPOLIS, MN, MINNEAPOLIS ARTCC
ZNY — NEW YORK, NY, NEW YORK ARTCC
ZOA — OAKLAND, CA, OAKLAND ARTCC
ZOB — CLEVELAND, OH, CLEVELAND ARTCC
ZSE — SEATTLE, WA, SEATTLE ARTCC
ZSU — SAN JUAN, PR, SAN JUAN CERAP
ZTL — ATLANTA, GA, ATLANTA ARTCC
ZUA — AGANA, GU, GUAM CERAP



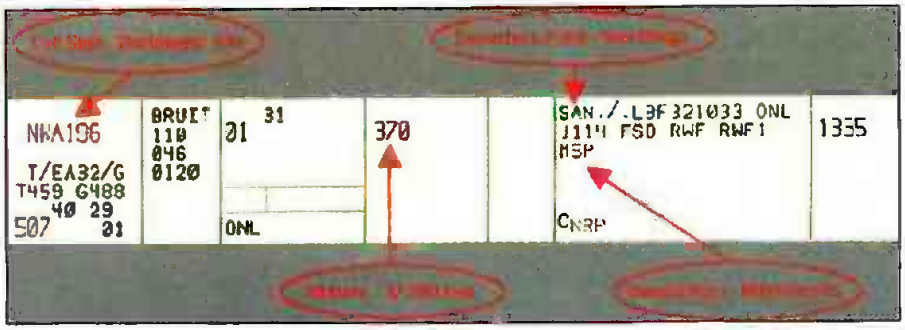
The Air Route Traffic Control Center is defined as "(a) facility established to provide air traffic control service to aircraft operating on IFR flight plans within controlled airspace and principally during the en-route phase of flight. When equipment capabilities and controller workload permit, certain advisory /assistance services may be provided to VFR aircraft." One of the best statements I've found about the center is found on the Denver ARTCC site at http://www.nw. faa.gov/ats/zdvartcc/: "The Federal Aviation Administration has made a long-term investment of your tax dollars by providing the finest air traffic control service in the world. The largest component of the national airspace system is the air route traffic control center. Covering 285,000 square miles of the Mountain West, the Denver Air Route Traffic Control Center is one of 20 such facilities in the United States that provides air traffic service to a multi-state area. This is your facility, built to ensure safe and expeditious air travel. Denver Center is open seven days a week, 24 hours a day and employs a combination of several hundred Air Traffic Control Specialists. Electronic Technicians, Computer System Specialists, Environmental Support Specialists, and administrative staff."

This map shows the boundaries of the ARTCC's in the 48 contiguous states.

Controllers at Centers provide separation for most areas that are not covered by towers and approach controls at low altitudes and also most of the upper level airspace, up to 60,000 feet and higher. (Few aircraft can fly above 60,000 feet, called flight level 600, mainly military jets). Because of the larger areas covered by radar and the altitude of the aircraft involved, separation standards have been increased to compensate. While in the lower airspace normal separation may be three to 10 miles lateral or longitudinal separation or 1,000 to 2,000 feet vertically, this increases to as much as 20 miles lateral/longitudinal with separation of up to 5,000 feet when above 60,000 feet. Like much the air traffic at lower altitudes, the aircraft working with the centers are normally flying under instrument flight rules (IFR) and are normally flying in the victor routes when below 18,000 feet and on jet routes at and above 18,000. (Remember the maps I told you about in July *Pop'Comm*?) Increasingly more aircraft flying at these altitudes utilize GPS and fly a more direct route, rarely having to use the "highways in the sky."

Flight Progress Strips

In addition to the radar used by the controllers there is still the old standby of paper and pencil. In the case of ATC, it is the Flight Progress Strip. These are automatically printed at various sites in all ATC facilities. The one pictured here shows an Airbus (T/EA32/G) with a call sign of Northwest 196 (NWA196) flying from San Diego, CA (SAN) to Minneapolis-St. Paul, MN (MSP) while flying 33 miles northwest of Scottsbluff, NE (LBF321033) among others and flying at flight level 370, or an altitude of 37,000 feet (370). (The flight progress strips at approach controls and towers are a slightly different format, especially for those controllers). With these strips a controller can see at a glance virtually everything he needs in order to keep pilots from occupying each other's space.



A typical flight progress strip.

A controller at approach controls and towers must be checked out at each position in order to be "certified" at the facility. Such is not the case at the centers. As you can see Denver Center alone occupies 285,000 square miles of airspace. Because of this the center's airspace is carved into sectors, both high and low and controllers are only required to be certified in just a few. It is not uncommon for an airline pilot at high altitude to talk to three or four sectors of each center as he flies cross-country.

As you look in the Airport Facility Directories (A/FD) we discussed in the May 2000 *Pop'Comm* and the instrument maps I recommended in the July 2000 *Pop'Comm*, you noticed the many VHF and UHF frequencies. You may notice that some of them are in regular type and others in bold. Bold normally signifies those operated in the high altitude sectors of the centers. Here you find the majority of airlines, biz-jets, and high performance military aircraft.

How It All Works Together

To give you an idea as to how the four parts of ATC work together, let me give you some examples.

Example 1 — A small, single-engine aircraft, perhaps a Cessna 172 flying between two airports, one with a control tower (Albany, Georgia {ABY}) and one without (Thomasville, Georgia {TVI}). He is flying under visual flight rules (VFR). He may contact the Flight Service Station, in this case the Macon FSS (MCN) on his radio or via telephone to get the current local and en-route weather. He then files a VFR flight plan. When he taxis out he uses the local Unicom frequency in order to warn other pilots he is departing. He will contact Macon FSS to activate or "open" his flight plan. He may at the same time give the FSS a pilot report (PIREP) of local or en-route weather conditions. Before he gets within five miles of the Albany airport, he contacts the Albany tower for permission to enter their airspace and land. After he lands his aircraft, he is instructed to contact the ground controller for his taxi instructions to parking. He will contact Macon FSS to "close" his flight plan. This must be done no later than 30 minutes after his estimated time of arrival or search and rescue procedures are implemented. The flight may only be 30 minutes and he has talked to at least three positions at two ATC facilities.

Example 2 — A slightly larger, twin-engine aircraft, perhaps a Beechcraft Baron-58 flying between two airports with towers (Melbourne, FL {MLB} and Orlando Executive, FL {ORL}) in two different approach controls (Daytona Beach, FL {DAB} and Orlando, FL {MCO}). After getting his weather briefing from St. Petersburg, FL (PIE) FSS he files a flight plan. He calls the Melbourne clearance delivery, calls for taxi from ground control and after receiving a release from Daytona Beach approach departs for Orlando. Almost immediately after taking off he changes frequencies to Daytona approach. Shortly he is over a "hand-off" point and control is then given to Orlando where he is given radar vectors away from Orlando International airport and towards Orlando Executive. Before he reaches five miles from his destination, he is given to the local controller at Orlando Executive. After he lands he contacts ground control for his taxi instructions to the parking ramp. This flight may also be 30 minutes, but in addition to the FSS he has talked to three positions at one tower, two positions at another and a minimum of one position at each approach control — at least eight different controllers.

Example 3 — A biz-jet, say a North American Sabreliner flying at 31,000 from Miami International, FL (MIA) to Grand Island, NE (GRI). After his briefing and flight plan filing with Miami FSS (MIA), he receives his en-route clearance, taxi clearance and take-off clearance from the controllers at Miami. After departure he initially talks to Miami approach until he climbs to a specific altitude where he must sent over to Miami Center. He is normally stair-stepped up to his final cruise altitude. This altitude may be changed due to traffic, weather, and/or turbulence. He will talk to Miami (ZMA), Jacksonville (ZJX), Atlanta (ZTL), Memphis (ZME), Kansas City (ZKC) and Minneapolis (ZMP) centers. There is no local approach control for Grand Island. It is operated by Minneapolis center. He will then be told to contact the Grand Island tower local controller and eventually the ground controller for taxi to the ramp. In this case he has talked to one FSS controller, five tower controllers, and at least two or three controllers in each center, for a minimum of 17 controllers from start to finish.

This overview has not been as in-depth as it could be, but I didn't want to confuse or bore you. I enjoy your E-mails. Keep them coming. Next month we'll cover Civil Air Patrol. ■

Frequencies

NEW
Imperial Municipal, NE (IML)
ASOS — 124.175 MHz

Mattoon/Charleston, IL (MTO)
ASOS — 109.4 MHz

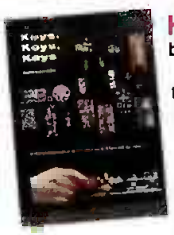
Springfield Capital, IL (SPI)
ASOS — 127.65 MHz

CHANGED
Alpena, MI (APN)
Approach Control — was 118.5 MHz — now 128.425 MHz

Cleveland ARTCC (ZOB)
Altoona High Sector — was 119.925 MHz — now 132.125 MHz

Indianapolis ARTCC (ZID)
Bluefield Low Sector — was 128.4 MHz — now 126.575 MHz
Lynch Low Sector — was 253.5 MHz — now 257.85 MHz

holiday gift ideas



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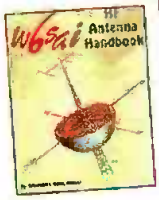

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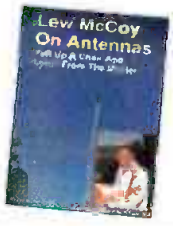
McCoy on Antennas



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WASHINGTON BEAT

FCC Actions Affecting Communications

MURS: A New CB-Like Service On VHF

Changes of command are designed to be smooth, but the ship always knows when one person's hands leave the helm and another takes over. Alan Dixon, whose superb performance in these pages cannot be topped by the likes of me, has relinquished his command of "Washington Beat" and moved on to other pursuits. If you have followed Alan's writings, you know how closely he watched Washington and various government agencies and state legislatures, always alert for the latest communications-related actions of interest to *Pop'Comm* readers. Never losing sight of the real issues, he slogged through pages of government double-speak and tedious federal plans and then wrote about it clearly and intelligently. This column is a product of Alan's hard work and dedication. We salute him and wish him well in all his future endeavors.

"Washington Beat" will continue to follow the course that Alan has charted. We'll keep a close watch on the progress of current anti-scanner legislation in Washington and individual states, as well as looking for new actions that affect all radio hobbyists. We'll also report on new and changed rules and regulations by the Federal Communications Commission, and related agencies, and alert you to other radio-related items of interest in the legal arena.

News relating to radio legislation is always welcome here, so if you come across something from your area specific to radio and the law, please don't hesitate to send it along. I'm also happy to hear from readers about what concerns you, what questions you have about legislation and laws, and what you like or don't like about this column. Though I may not always be able to give you a personal reply, rest assured that I'll pay attention to your comments. And, by the way, as Alan once said, "I'm not a lawyer, nor do I play one on TV." I'm a radio hobbyist like you and though I can't give you legal advice, I'll always try to point you in the right direction for more information. You can contact me at the *Pop'Comm* offices or through E-mail at lauraq@cts.com.

Multi-Use Radio Service (MURS) Debuts

The FCC is moving to implement a new Citizen's Band Service called MURS, the Multi-Use Radio Service. Operating on frequencies in the 150-MHz band, MURS is designed as a private, two-way, short-distance, voice, data, or image communications service for personal or business use by the general public. Though the Federal Register has not yet published the final version of the Rules for MURS, preliminary information indicates that MURS will be part of the Personal Radio Services, which include GMRS (General Mobile Radio Service), Family Radio Service (FRS), the R/C (Radio Control Radio Service), the CB (Citizens Band Radio Service), the Low Power Radio Service (LPRS), Wireless Medical Telemetry Service (WMTS), and the Medical Implants Communication Service (MICS). No formal license is required to transmit with MURS, and stations can operate anywhere CB stations are permitted. The MURS transmitter channel frequencies are **151.820 MHz, 151.880 MHz, 151.940 MHz, 154.570 MHz, 154.600 MHz** with an authorized bandwidth of 11.25 kHz on frequencies 151.820 MHz, 151.880 MHz, and 151.940 MHz. The authorized bandwidth is 12.5 kHz on frequencies 154.570 and 154.600 kHz. Radiated power cannot exceed two watts.

Clear Channel, Inc. Merges With AMFM, Inc.

Clear Channel Communications, Inc. received FCC approval to take control of AMFM, Inc. and its subsidiary licensees, which include 490 radio facilities in the United States. Due to rules covering local radio station and radio-TV cross ownership, 122 radio stations in 37 areas must be sold to third-party buyers or an insulated trust before the merger can officially take place. These stations are located in Albany, NY; Allentown, PA; Austin, TX; Biloxi-Pascagoula, MS; Cedar Rapids, IA; Cincinnati, OH; Cleveland, OH; Columbia, SC; Dallas-Ft. Worth, TX; Daytona Beach, FL; Denver-Boulder, CO; Des Moines, IA; Ft. Pierce, FL' Grand Rapids, MI; Greensboro-Winston Salem-High Point, NC; Greenville-Spartanburg, SC; Harrisburg, PA; Houston, TX; Jackson, MS; Jacksonville, FL; Los Angeles, CA; Miami, FL; Melbourne, FL; New Haven, CT; Orlando, FL; Pensacola, FL; Phoenix, AZ; Providence, RI; Raleigh-Durham, NC; Richmond, VA; San Diego, CA; San Francisco, CA; San Jose, CA; Shreveport, LA; Springfield, MA; Stamford-Norwalk, CT; and Waco, TX.

911 Now Official Emergency Number

On August 29, 2000, the FCC took steps to implement the Wireless Communications and Public Safety Act of 1999. Also known as the 911 Act, it was enacted on October 26, 1999, as part of the FCC's effort to enhance public safety by encouraging nationwide deployment of the 911 system. The Commission has now officially designated 911 as the universal emergency number within the U.S. and is seeking comments on how to best set up transition periods for states that do not currently use 911 and how to best facilitate the transition in those areas.

Fraudulent Private Land Mobile Licenses

An order for hearing was issued by the FCC in late August in the case of Ronald and Patricia Brasher. The Brashers and various relatives are accused of submitting and obtaining fraudulent applications and licenses for the 470–512 MHz Private Land Mobile band. Apparently, this was a move to avoid the FCC limitations on the number of frequencies one entity can possess or control. The Commission will determine the extent of

BY LAURA QUARANTIELLO <lauraq@cts.com>

the fraud and whether or not the parties are qualified to remain or become licensees. An FCC Administrative Law Judge, whose decision can be appealed, will hear the initial decision.

California Ham Antenna Legislation Goes To Governor

Finally, a law we can cheer about! California's SB-1714, incorporating some of PRB-1, would require any ordinance regulating Amateur Radio antenna structures to "reasonably accommodate amateur radio service communications" and "constitute the minimum practicable regulation to accomplish the legitimate purpose of the city or county." This bill passed the California Assembly and moved to the Senate, where it was passed with several amendments. It's now sitting on Governor Gray Davis' desk awaiting his signature. The ARRL reports that unlike similar bills introduced in other states, SB-1714 requires the Office of Planning and Research to prepare a report to guide local officials in drafting amateur radio antenna ordinances. The bill also requires consultation with the ARRL, FCC, and other organizations prior to publishing such a report. Thanks to the ARRL Bulletin for the heads-up on this one.

FCC Amends Part 15 Rules

The FCC has amended its Part 15 rules to permit spread spectrum systems to operate in the 2.4 GHz band (2400-2483.5 MHz). The amendment allows devices to operate on bandwidths up to 5 MHz wide on a minimum of 15 non-overlapping channels. The rule change is designed to allow systems to provide higher data speeds and pave the way for new products such as wireless LANs and cable modems. Currently, spread spectrum systems operate without licensing under Part 15 rules, using frequency-hopping techniques to spread the center bandwidth of a modulated signal. FCC Chairman William Kennard stated in a press release that "the changes we have adopted represent an important step in responding to technology evolution and will foster small business development and further innovation."

Remember, if you have a question or wish to contact me, write to "Washington Beat," *Popular Communications*, 25 Newbridge Road, Hicksville, NY 11801 or E-mail me directly at lauraq@cts.com. See you next month. ■

ADVERTISERS' INDEX

Tuning In *(from page 4)*

redefine the purpose of the CB Radio Service by allowing long-distance CB communications which would undermine the core distinction between the CB Radio Service and the Amateur Radio Service."

Really? THAT's the core distinction? It's news to me. I even need to read that sentence again. Is the Aging Ranting Radio League really saying they'd be upset if CBers were allowed to do legally without a license what hams must get licensed to do? So what else is new?

The NAB also opposed Dixon's petition saying the distance restriction is "... necessary to deter CB operators from operating at power levels in excess of those permitted under the Commission's rules, and that consumers must be protected from illegal CB radio transmissions that interfere with radio, television, telephone, and other forms of electronic communication."

Pop'Comm Exclusive: RM-9807 - We All Lose

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

With the FCC's denial of RM-9807, all radio hobbyists, as well as CB emergency communicators, were left with a bit of a void. Those who commented against repeal of the 155-mile CB distance-of-communications rule argued that DX communications ought to be conducted on the licensed amateur bands. Let's put this into practice right now. I'm up on channel 38, lower sideband. Here in the Southeast U.S., the skip from Canada is rolling in. I'm communicating with my wife a few blocks away. No problem there, but the Canadian station hears us and insists on saying hello. Sorry, Old Man, the law directs me to act, quite literally, in an ignorant manner. I can't talk to you. I can't even tell you that the frequency is in use.

Following opposition commenters' suggestions, I switch to 10-meters. There, now I can talk to the OM in Canada. But he's not there. Neither is my wife. I have plenty of good company on 28 MHz, but neither of the two parties with whom I wish to converse. Does this make any sense to anyone? I thought not. Those who said to take our CB DX communications to the amateur bands essentially told CBers to get off of 11-meters. That concept no more meets federal objectives for the Citizens Band than does allowing long distance contacts on that band. *But DX happens on 11-meters. It is unavoidable.* And folks use CB. That too, is evidently unavoidable.

Now put yourself in the position of the dedicated REACT CB channel 9 monitor. You're at your post in Los Angeles. You hear a call from a stranded motorist somewhere near Interstate 10, in the Mojave Desert. As you leaf through your maps in an effort to pinpoint your caller's location, you realize that he's just over the Arizona state line. A glance at your map's scale of miles quickly tells you that the disabled vehicle is just a bit out of range. What do you do? Tell the rapidly dehydrating driver that you have discovered that your communication with him has been in error, and that you will disregard? Handle the call, perhaps save a life, and receive a heavy forfeiture from the Enforcement Bureau?

In losing RM-9807, the amateur radio community lost a chance to take back the 11-meter band, in a manner of speaking. There would have been nothing stopping experienced hams from invading CB and setting an example for the undisciplined operators. Don't get me wrong here. I am not saying that the bulk of CBers are bad operators. Most of the DXers I hear on 11-meters could give lessons to novice operators in any radio service. CB could have become a QRP DX service, open to all, regardless of training or experience. It would have been yet another avenue of entry for future amateur licensees, where experience could be had without being harassed by the entrenched *old guard* on the amateur HF bands.

That's right. Those of us in the ham community might want to ask ourselves why CB remains so popular, and why DX thrives on 11 meters, with some pretty courteous operators, I might add. Why then, don't these individuals get their ham licenses? Some may say that these folks are just too lazy to study for the exam. Fact is most of these experienced 11 meter operators are so knowledgeable in radio that they could pass the technician test blindfolded. Let us then consider the fate on new amateur licensees. What does the new ham have to look forward to on the bands? Camaraderie? A warm welcome? Some truly helpful elmering? OK, are you splitting your sides laughing out loud yet? Are you crying? You should be.

By my reckoning, amateur radio lost the 11-meter band twice: Once, circa 1959 when the Citizens Band was created, and again in the year 2000. CBers lost too, by being told to get lost. But ham radio has more to lose than the use of a band. Ham radio is losing an entire generation of new operators who are being told by their alleged peers that their licenses are *worthless*. As a licensed commercial radiotelephone operator who got his ticket "the old way," I have not been in a position to experience much of this myself, yet I have witnessed it time and again. I hear it on the air and see it on E-mail reflectors and in Internet discussion groups, repeatedly. Anyone licensed since the inception of the Volunteer Examiner system got in "the easy way." And woe be unto no-code Technicians. You've been awarded the badge of shame for daring to call yourselves hams. And if you upgraded to Amateur Extra class after April 15, 2000, don't even mention it unless you consider the sound of snide laughter and sneers to be a joyful noise.

Someone in Newington, Connecticut needs to wake up and smell the coffee. Let me take you guys to Starbucks. I'm buying.

[Editor's Note: Writer Alan Dixon has filed a Petition for Partial Reconsideration to the FCC in the matter of RM-9807. In it he asks "... for a rule change to specifically permit, and to specifically not prohibit emergency communications in excess of 155.3 miles in the Citizens Band. The original petition was seeking in part, "Modification of 47 CFR §95.418(b) found within CB rule 18, herein paraphrased: "How do I use my CB station in an emergency or to assist a traveler? ... When you are directly participating in emergency communications, you do not have to comply with the rule about the length of transmissions ... You must obey all other rules." That petition was further seeking, "The statement 'You must obey all other rules' is unnecessary, must be stricken, and language inserted that adds in essence, 'You do not have to comply with any rule about communicating with or attempting to communicate with any CB station more than any specified distance away.' This change is necessary to expedite response of emergency services in an emergency, so as not to further endanger life safety or property. This petition again asks for such a rule change."

Stay tuned. We'll be following this issue closely, and hoping for reasonable comment from the Commission.]

Oh, bull. I've said it here before and will say it with my dying breath that this smokescreen blown by the NAB is probably the largest, smokiest crock I've ever smelled in my life! How in Heaven's name does the current rule prohibiting long-distance communications on 11-meters keep CB operators from using higher power levels than some already have? Most CBers are courteous operators operating unmodified radios without power amps. Someone should also tell the NAB there's a separate CB rule regarding high-power operation on 11-meters. I think they're saying that if the FCC gave the green light to long-distance communications on CB, everyone would run out and get a linear amplifier. Hardly. By their same logic, one would believe that drivers on the Garden State Parkway would sell their four-cylinder Hondas and buy new eight-cylinder SUVs because the speed limit was raised. Yeah, right. Many are still legally speeding—so what else is new?

As for protecting consumers from illegal CB radio transmissions that interfere with radio, TV, and phones, they should have checked first with the FCC that should have told them about the voluntary standards of compliance in the industry. Perhaps they should also have called the ARRL, asking for a copy of Chapter 12, pages 12–18 of the Operating Manual (6th edition) which says about amateur transmissions, "RFI — radio frequency interference — is a common complaint of owners of unshielded or poorly designed electronic entertainment equipment." Interestingly, as I said in my official comments to Dixon's RM-9807, the ARRL was quick to point out how poorly designed/shielded home entertainment equipment and telephones are problematic, but when it comes to *CB operators* they change their tune and speak of high power operators and out-of-band operation — a minority of operators. Is this double-speak or what?

So it goes, business as usual in D.C. and Connecticut. If anything, you'd think the bureaucrats would tire of the bad PR created by their own stupidity. Frankly, the more I think about it, I'd rather *not* be in the minds of the D.C. powers-that-be; our cat, Daisy has more common sense. Fact is, if you put a public radio service in a part of the spectrum that sends radio signals around the world and then place deep-pocketed politicians and bureaucratic clowns in charge of the Nation's business, you get the same results: skipping, hopping, bending, and refracting. It's getting late and time to take out the garbage.

Happy Holidays!

It's sure hard to believe it's the December *Pop'Comm* already! Time to send you all a special "thank-you" and Happy Holidays wish. The magazine business is a lot like working in retail — some stores already have holiday displays and merchandise out! As this is written, it's still 80 degrees here in the northeast and the presidential election is about two months away. I'll probably be mowing the lawn again this weekend — and if I'm lucky, perhaps even get busy on some new antennas and organizing the radio shack (again).

Once again, thanks for making *Pop'Comm* your radio magazine — and Happy Holidays! Remember, this is *your* magazine — your input, including loggings, comments, questions, photos, and support are vital! See you next year. ■

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THE LOOSE CONNECTION

Radio Communications Humor

Hamfest Rules Of The Road — Or, Human Nature-101

This past weekend was certainly different. Despite the fact that this is the December Happy Holidays issue of *Pop'Comm*, we're just recovering from a weekend at Virginia Beach and the hamfest with Harold and his wife. I don't know which of them is more organized, the better talker — with or without a radio — or carries more "stuff" in a plastic bag or purse, but we had a great time and learned a lot, not just about his habits and how he somehow managed to wire an Avis rental car to look like a rolling RadioShack storeroom, but about hams, CBers, and people in general. So I've compiled a few of my observations on this page for your eyes only — when you've read this page, please put it in a desk for safe keeping and especially not for viewing by any non-radio person, because they probably wouldn't understand.

After a while at a show — especially on the second day — most hams and even their families look alike. You'd think I'd be able to distinguish tall from short and someone with or without glasses, but it's a lot like walking through a busy airport; you know we all look different, but all I remember is a blur of people with a radio in one hand, plastic bag full of hooks, magazines, brochures, and lunch in the other. So much for being able to distinguish a CBer from a ham!

Then there's the fellow with his name in large red letters on his baseball cap, "George." Trying to strike up a conversation with him I watched another ham exclaim his name, "Hey, George, how ya doing?" This resulted in the proverbial 50-yard stare as George tried in vain to "recall" how this stranger knew his name. Sound like anyone you know?

You never know what you'll need — or *find* — at a hamfest. Case in point — the numerous tables under one large banner that read, "Stuff." There was everything from screwdrivers and nailclippers to PL-259s and larger toenail clippers. I don't know about you, but I'm not leaving the show until I've bought a new ICOM transceiver for myself *and* a pair of nail clippers for my wife. Yeah, right! Guess where I'd be sleeping that night?

"You never know what you'll need — or* find *— at a hamfest. Case in point — the numerous tables under one large banner that read, Stuff."

Why is it that it always rains on one of the hamfest days? Is it a conspiracy of some type? It's usually true at Dayton, too. Count on mud at least one day. Virginia is a great place to live (sort of) but last year was practically rained out by Hurricane Floyd and this year the leftover rain from some tropical depression took aim at the Pavilion on Saturday. Of course, I checked with the Weather Channel a week before the show and they said it looked sunny and clear. I'll bet the forecaster wasn't going to the show! It's common knowledge that the outdoor flea markets suffer if it rains, and indoor vendors do some better. But the opposite isn't always true. If both days are beautiful and 80 degrees all bets are off. Given that, my solution is to move *all* vendors onto the beach — tents are optional. If it rains, it rains. If the sun shines, I sure hope Harold brought some extra suntan lotion because between both of us we'll sure need more than one bottle.

Why does it take the average radio person two days to make up his or her mind to buy a new radio, yet we'll plunk down $100 on an old clunker in the flea market that may not even work? And then we'll walk the perimeter of the hall for two hours picking up nail clippers (see above), eating hot dogs, and trying to sell the old clunker before making the final decision that we know we made a week ago: to buy the new radio anyway.

"What does the average radio shack look like? I don't mean the ones you see on magazine covers, but* real *shacks!"

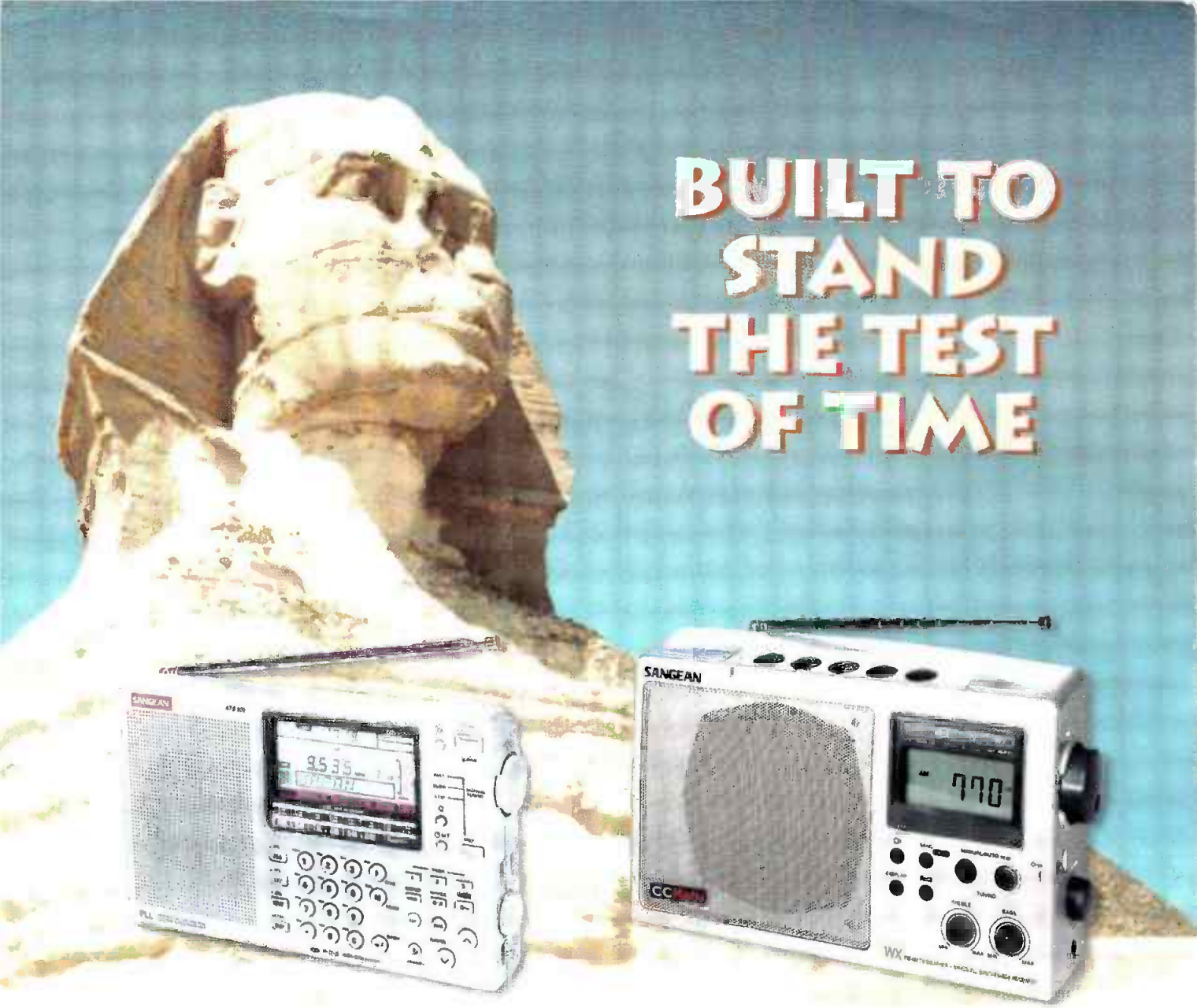
What does the average radio shack look like? I don't mean the ones you see on magazine covers, but *real* shacks! What I'm asking here is where do CBers, hams and scanner nuts put the radios *after* they get them? The kitchen table is out, the bedroom is hopefully not on the list, living room — let's hope not, bathroom — never! So that leaves a spare room or perhaps if you're fortunate, a basement.

I saw one guy carting off a new multimode transceiver, amp, and a pair of external speakers; so much "stuff" he was using a two-wheel cart! (I wonder what *he* does for a living). Why is it you never hear a radio person talking about buying a *new* Sauder desk or working on another homebrew ham radio storage center complete with drawers for storing "stuff?" Are the 7-Eleven stores keeping track of those plastic milk crates?

Have you seen radio people when the doors open at the hamfest? It's as if Barbara Streisand is giving her last live performance on the stage next to the ticket raffle basket or MFJ tables! There we go — get out of my way — I'm getting there before the other guy is first to get that new dualbander!

Do you have any interesting radio stories to tell our readers? We're always looking for folks with funny radio-related tales, so send 'em along. (We promise not tell anyone you've been taking all those milk crates if you don't tell Harold's wife he bought another Philco on his "lunch break" at Virginia Beach.) Happy holidays and see you in 2001! ■

BY BILL PRICE, N3AVY



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