MAY 1997

POPULAR COMMUNICATIONS

Landing High-Flying Aircraft Comms

- Uncle Sam Intervenes—The Scoop on the Scanner Crack-Down
- Drake Announces New Receiver!
- Delaware: Home of Scanning Opportunities
- Sangean's ATS-909 Shortwave Receiver in the Product Spotlight

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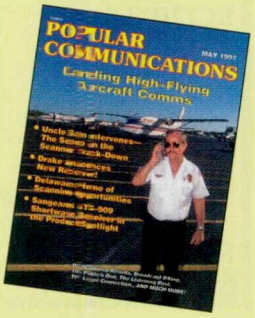
MAY 1997 VOLUME 15, NUMBER 9

page 20

ON THE COVER: Key West, FL International Airport's Fire Chief, Steve Stoddard uses his radio to stay in touch with the base from the flight line. Take off with Bill Mauldin on a fascinating tour of aviation radio on page 20. (Photo by Larry Mulvehill).



FEATURES

page 28

page 8

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Tuning In

AN EDITORIAL

BY HAROLD ORT, N2RLL, SSB-596

What Price Privacy?

After February's House Oversight Hearing on Cellular Privacy, it occurred to me that it's all about money and the effectiveness of a well-heeled and strategically-placed smoke-screen. When you get right down to the nitty-gritty, most of the hearing was much ado about nothing. The bottom line was really about how the industry and our legislators can enforce an ill-conceived law that is no more than a paper tiger, and further bolster that law with additional legislation aimed at "illegal" monitoring. Clearly they have duped millions of Americans into a false sense of privacy by the federal law known as the Electronic Communications Privacy Act (ECPA) of 1986. The Senate hearing should have been called "Don't Confuse Us With Facts, Our Mind Is Made Up."

You'd think after 20 years in the Army and seeing the government in action, nothing could amaze me. Wrong. Like most meetings and hearings, this one could have been wrapped up in about a half-hour and everyone could have gone home or taken a long lunch. But politicians love to hear themselves talk, and talk they did!

At the heart of this privacy issue is the Cellular Telecommunications Industry Association's Mr. Thomas E. Wheeler, who, in a very animated and enthusiastic presentation, made it very clear that scanner listeners are, in his words ". . . nothing short of electronic stalkers." Here's a fellow who takes himself too seriously! Later, he even talked about the ban on listening and remarked that it should be ". . . extended to *all* frequencies." He certainly got my attention with that shot across the bow! So as law-abiding monitors, let's respond to this bit of public relations wizardry he tossed out for public consumption by setting the record straight, and not taking it with our headphones on!

True: There's a federal law on the books that prohibits cellular monitoring. True: It's illegal for a company to sell a scanner (after April 1994) that receives the cell frequencies or is easily modifiable to receive them. True: The ban on receiving has recently been extended to cordless phone frequencies.

"The Senate hearing should have been called 'Don't Confuse Us With Facts, Our Mind Is Made Up.'"

But what about the other side of the equation—the part the politicians, the CTIA and FCC hate with a passion? These are only *some* of the multitudes of questions that *need* to be asked. Why isn't the cellular industry being held accountable to the public for not taking the initiative *at the onset* to create digital systems that would thwart monitoring in the first place? The CTIA would respond that NOW they're doing so and looking into it, but why did it take so long? How did it come to pass that this relatively insignificant portion of the spectrum got declared off-limits? How can we stop the illegal cloning of cell phones, a problem that is far more serious than scanner monitoring? Shouldn't that *real* problem be the focus of our legislators? Has anyone ever considered hearings into the criminal use of cellular systems licensed by the FCC? To what extent is the government held accountable for its eavesdropping? Certainly the legislators wouldn't dream of telling us that "well, they are accountable, because it's illegal" would they?

And what about the cellular users themselves? Take your own personal survey and leave your scanner at home. During the next couple of weeks take note of the cell users on the bus, train, in restaurants, shopping, driving, and biking that use the cell phone. I really don't care about the real estate deals, stock transactions and all manner of other personal information overheard in these places, but hear it anyway. With all the cell phones and pagers going off it sounds like the Pentagon's war room! And hearing these one-sided conversations usually nets an earful; often more than I care to know. And they're concerned about privacy? It seems that when the cell users

(Continued on page 77)

POPULAR COMMUNICATIONS

EDITORIAL STAFF

Harold Ort, N2RLL, SSB-596, Editor
(Internet e-mail: PopularCom@aol.com)
Tom Kneitel, K2AES/KNY2AB, Senior Editor
Nancy Barry, SSB-931, Associate Editor
(Internet e-mail: NancyPCmag@aol.com)
Richard S. Moseson, W2VU, Online Coordinator

CONTRIBUTING EDITORS

Richard "RD" Baker, Utility Communications
Ed Barnat, TCA-44, CB SSB
Peter J. Bertini, K1ZJH, Restoration/Electronics
Joe Carr, K4IPV, Antennas
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A publication of

CQ Communications, Inc.
76 North Broadway
Hicksville, NY 11801-2953 USA

Offices: 76 North Broadway, Hicksville, NY 11801. Telephone (516) 681-2922. FAX (516) 681-2926. Popular Communications (ISSN-0733-3315) is published monthly by CQ Communications, Inc. Periodical class postage paid at Hicksville, NY and additional offices. Subscription prices (payable in U.S. dollars): Domestic—one year $22.95, two years $41.00, three years $60.00. Canada/Mexico—one year $32.95, two years $61.00, three years $90.00. Foreign Air Post—one year $40.95, two years $77.00, three years $114.00.

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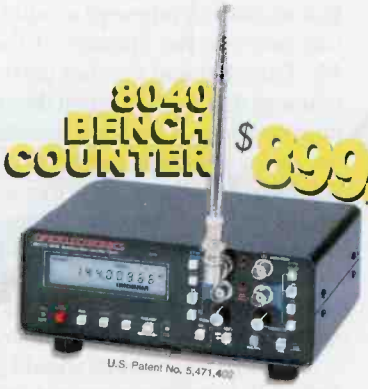

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LETTERS TO THE EDITOR

Will It Affect Our Hobby?

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Dear Editor:

I was just watching C-Span when I saw a couple explaining how they used a police scanner to intercept a cellular phone call between the Speaker of the House, Mr. Gingrich and another party. . . . explaining that . . . had taped the Speaker's conversation . . . using a handheld scanner and a mini tape recorder. I looked in my Police Call and saw that this act is illegal and has been since 1986. The next thing they'll be doing is making the possession of a scanner illegal and all of us law-abiding hobbyists will have to go underground to enjoy our hobby.

I feel that *Pop'Comm* should get all the influential staff together and start lobbying for our hobby. I plan to write my congressman because I don't want my hobby taken away because some individual doesn't feel he should read his instruction manual on the federal laws that go with the radio. In addition, he must have read something that told him how to modify the radio to pick up the cell frequencies. . . . as for my fellow readers, you need to keep up with what this guy (Mr. Martin) is doing—it is going to affect our radio hobby.

Ken Davis, KAL4CH (via e-mail)

Times Have Changed, But Has Uncle Sam?

Dear Editor:

I enjoyed your feature in the January issue about CB. It was well thought out and interesting. I agree with you on most of the ideas—the only exception is your advocating more SSB use. You mentioned "the fun of working distant stations" via skip. The intent of the CB service was for short-range communications only. In fact, as of a few years ago it was stated in the rules. The rules also specifically prohibited working skip. I don't have access to a current set of rules to verify if this is still the case, but I think it is. The intent of the FCC was that if a person wanted to work longer distances on HF they could move over to the amateur service where the licensing program would insure (in theory) technical standards.

Let me say that times have changed and maybe a change in the FCC rules would be appropriate. However, your feature as written encourages CBers to violate the law. As another writer in the same issue pointed out, there is a whole generation of CBers out there who don't even know that there are any rules governing the CB radio service.

Great feature and definitely thought provoking. Yes, I'm a ham, but I started out in CB so I am not prejudiced against the CB service.

73,Gregg, N6PUO
(via e-mail)

Dear Gregg:

Ken's article generated a lot of mail—mostly positive. But there's still that long-standing misconception about the "rules." The CB rules still stand (they're packaged with every new CB along with an owner's manual); talking skip is certainly illegal, but with the FCC's resources and will greatly diminished, chasing CBers for talking skip seems to be a low priority.

Few things in life are certainties, but we can definitely sleep well tonight knowing the FCC's got a handle on the CB service. Take it to the bank that for the foreseeable future manufacturers will continue to produce AM and SSB rigs within the current channel plan, and that folks will continue to work skip; some of those same operators are also active hams. As you correctly pointed out, the FCC's *intentions* for CB were short-range communications, but like our lawmakers that passed the ECPA, our forgetful bureaucrats failed to consider human nature. Legal or not, few people can resist the temptation to talk skip. And similarly, when the cell industry created the hoopla about the cell phone frequencies, folks' natural curiosity brought them in droves to see what all the excitement was about.

A Minor Problem

Dear Editor:

I just noticed your posting on AOL and want to thank you for such a fine magazine. I started out with scanners a few years ago and have recently gotten interested in shortwave. Your magazine is indispensable to me! My problem is that I can't wait for the next issue to come out!

Bob Birchmeyer
(via e-mail)

Blown Off Again!

Dear Editor:

As a service representative for the local phone company, I read with interest your commentary about Caller ID in the February issue. There are many misconceptions about this service, the most popular of which is that having an unpublished listing somehow gives you the "right" to be automatically excluded from Caller ID. An unpublished listing means you are neither in the phone book nor available through directory assistance, and that's all. It has nothing to do with Caller ID and was never represented to be a way around the service.

Your observation about Caller ID blocking also illustrates a point: The person will not know who you are, but they will know you are purposely shielding your identity from them, which of course may incite a negative reaction. You lament, "What gives (him) the right . . . to say "if I can't see your number, I don't want to talk to you?" I say what gives you

the right to hide from me and then act like I'm obligated to answer the phone anyway? It's my home and anyone wishing to enter (physically or electronically) will identify themselves. That is NOT an unreasonable request. Would you open your front door to someone who covers the peephole? While there are some valid exceptions, it is my personal belief that callers who don't want you to know their identity are probably doing something they shouldn't be doing anyway.

My employer recently did a survey and found that over 60 percent of subscribers with non-published numbers also have Caller ID. My experience from speaking to customers every day supports this, so there is clearly a double-standard here. You can't have it both ways, and anyone blocking their calls should expect to be blown off on a fairly regular basis.

Charlie Warfield, Jr.
(via e-mail)
Illinois

Dear Charlie:

While I certainly trust your company's and your own personal experience, I've also done my own survey. Every week I make dozens of phone calls all around the country. Maybe one or two in all those *dozens* block my call. The rest blow me off when they learn it's me calling! And imagine, I was going to give them a free subscription and a shortwave radio!

It's Good Enough for Albert!

Dear Editor:

I acknowledge that CB frequency allocation has not changed in two decades, but these two decades have given the radio industry and the CBer an opportunity to get it right. Our citizens band has not sat still. Realistically, as we fly headfirst into the 21st century, just how much new technology does it take for a bunch of "Good 'ol Boys and Gals" to talk to their friends and neighbors on the radio? We've been doing just fine for many years. Why fix something that isn't broken?

Mr. Collier seems to be somewhat misinformed regarding the quality of not only the receive/transmit signals possible on modern CB radios, but the quality of the equipment as well. FM is no answer. It is short-range communication which is already available to the general public. FM would be the demise of CB, but that's the idea. AM radio is a way of life for tens of thousands of regular operators, not to

(Continued on page 66)

Photos Wanted!

We're planning the travel itinerary for 1997 for CQ Staff Photographer Larry Mulvehill, WB2ZPI, and could use some input from our readers. As you know, Larry shoots all the covers for our publications *CQ*, *CQ VHF* and *Popular Communications*, as well as the 15 photos for the annual CQ Amateur Radio Calendar. That's 51 shots used each year. Since a major part of the expense of generating these photos is travel, we like Larry to put together a few large "swings" each year to various parts of North America to visit specific locations we've been tipped-off about by readers. That's where you come in.

If you know of a particularly photogenic setting that you feel might lend itself to a good cover or a calendar shot, why not let us know about it. It might be a great antenna installation, or a neat mobile setup, an interesting shack, or even a busy electronic workbench with work in progress. How about an interesting Police, Fire Department, Public Service, Scanning, Shortwave Listening, Military Communication, or Broadcasting setting? Don't be shy about recommending your own setup, either! If you think you've got a suggestion that can lend itself to a great Amateur Radio photo, let us know. If you can provide a snapshot or two for reference, great. If a snapshot isn't available, a short verbal description will help.

Send your ideas and snapshots to Larry Mulvehill, WB2ZPI, at 32 Comanche Drive, Oceanport, NJ 07757. Larry will decide if your suggestion fits in with our needs and his schedule. If you'd like your snapshots returned, please include an SASE. The sole reward for your help will be the gratitude of your fellow readers, and of Larry, who will have the opportunity to make about a hundred new radio friends again this year. Be sure to include information about how Larry can get in touch with you.

Inside The "Elephant's Head"— A Visit To Radio Thailand

A Country Steeped in Tradition Modernizes its International Voice . . .

By Don Johnson

Freedom—that's what the word "Thai" means. And not surprisingly, inhabitants of the newly-industrialized country greatly cherish freedom and independence as they have for ages. Like their ancient ancestors, they have also maintained a steadfast Buddhist tradition and deep reverence for their King that permeates every level of society.

Perhaps this explains some of Thailand's singular distinctions: Years are reckoned in the Buddhist Era (currently 2540 B.E.) rather than AD; it is the only country in southeast Asia never to have been colonized, and it is the only remaining Buddhist Kingdom. His Majesty the King has reigned peacefully for over 50 years, making him the world's longest reigning Monarch.

In sharp contrast with the Thais' love of fiery hot cuisine, one can sense an inner peacefulness in these easygoing, warmhearted people. Throughout the Kingdom, whether in the heart of Bangkok or in remote villages, one constantly sees the old alongside the new and is likely to find ornate, centuries-old temples with monks wearing traditional saffron-colored robes talking on state-of-the-art cellular phones—a testament to their unwillingness to discard the old in favor of the new, but rather to harmoniously fashion them together in their own unique way.

Ms. Amaraporn, Chief Broadcaster of Radio Thailand at her desk. Notice the photo of the Prince of Thailand presenting an award to her in foreground).

The Elephant's Head

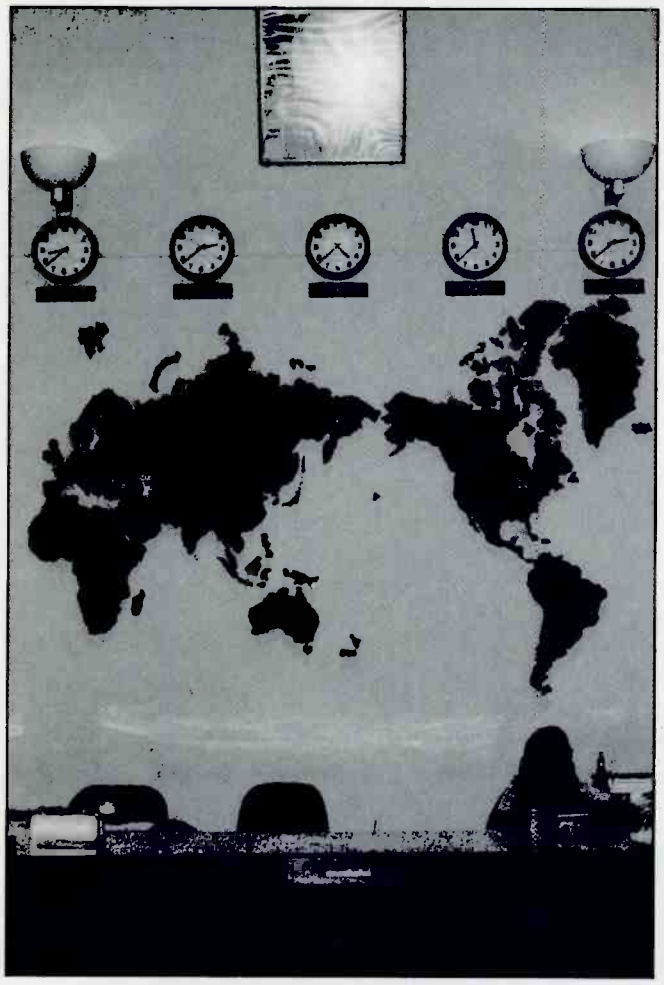
Looking at a map of Thailand, it's no wonder Thais often describe their country as an elephant's head. In the south is the trunk; the northeast is the elephant's ear; the head is the north; the harbor and delta of the Chao Phraya River form the mouth, while the Central Plains contain the eyes and brain. The ever-growing Bangkok, a city of more than 5 million seems to overshadow the rest of this 200,000 square mile country. The city is the center for virtually every aspect of Thai life; the economy, medicine, religion and business.

Radio Thailand's World Service facility is conveniently located only a few miles away from Don Muang International Airport in Bangkok along the congested Vibhavadi Rangsit Highway. It's a well-maintained modern structure. In front of the main entrance was an impressive display depicting the Royal Ceremonial Emblem in honor of His Majesty King Bhumibol Adulyadej. Inside the foyer was an impressive display of photographs of His Majesty the King and other members of the Royal Family. Within minutes I was meeting Ms. Amporn Samosorn, the Chief of Radio Thailand World Service.

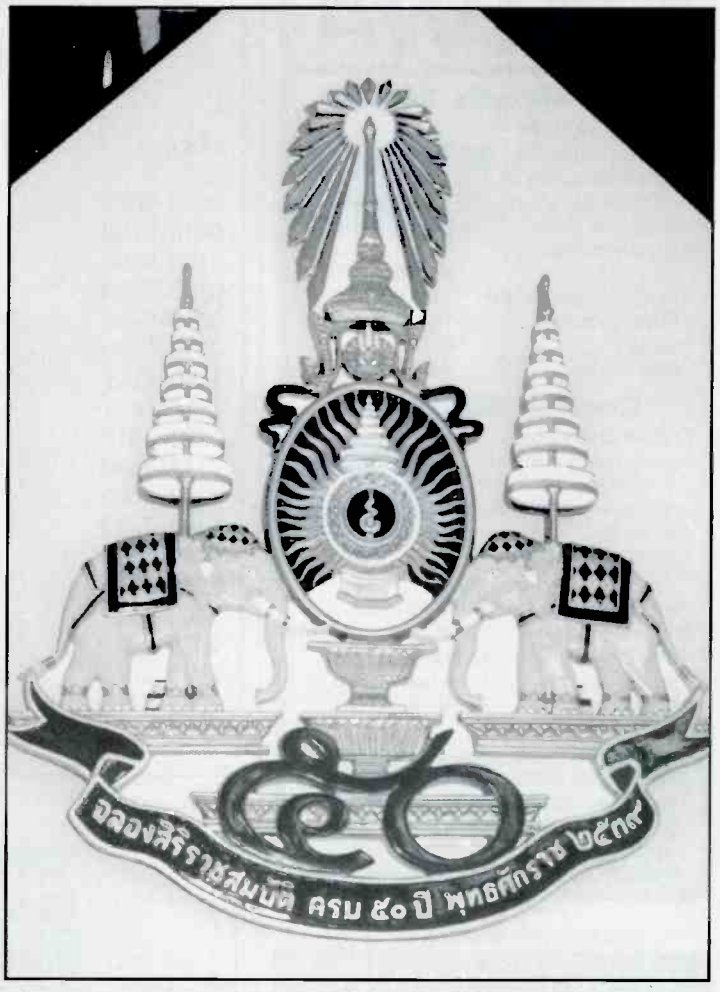
Ms. Amporn, a soft-spoken woman, ushered me into her office and told me about herself and her work at Radio Thailand. She talked about Radio Thailand's External Service (World Service) history; how it was created in 1938, broadcasting in both English and French in an effort to inform Thailand's overseas residents, as well as the world community of the Thai Government's views. She was pleased to announce that the station's international broadcasts were recently increased from 12 to 17 languages. The five new languages include Spanish, Russian, Tagalog, Cantonese and Arabic.

Radio Thailand has two shortwave transmitter sites. One is located in the

"The city is the center for virtually every aspect of Thai life; the economy, medicine, religion and business."



World time clocks on wall in foyer.



Close-up view of the Special Royal Ceremonial Emblem erected in honor of His Majesty the King's 50-year reign Golden Jubilee.

suburbs of Bangkok Metropolis in Pathum Thani and is used to beam their signal to other regions of Asia. The new transmitter site is located in northeast Thailand in Udon Thani and is jointly used by the Voice of America. Prior to using the new Udon Thani facility in July 1994, Radio Thailand had been plagued with difficulty in being heard by listeners throughout many parts of the world.

Ms. Amporn commented that the Udon Thani facility is "probably the only VOA facility to transmit a signal back to the United States." She lamented that "Radio Thailand's signal was formerly quite weak. It wasn't until the partnership with VOA that we [Radio Thailand] got a strong signal that could be easily understood by our listeners around the world." Radio Thailand's signal is beamed from the Bangkok headquarters facility to the Udon Thani Relay Station via satellite for retransmission via shortwave to listeners around the globe.

"She was pleased to announce that the station's international broadcasts were recently increased from 12 to 17 languages."

She said that recently Radio Thailand partially privatized its services and is in the process of modernizing many of their internal operations including moving to a LAN-based, client-server environment to streamline and integrate all of its foreign service news room and related operations. Radio Thailand is planning to open up a World Wide Web site in the near future as well providing its listeners with up-to-date news, information, broadcast schedules, and feedback via the Internet.

Focusing on North American Listeners

Radio Thailand is starting to focus their English language North American broadcast so that it corresponds to 7 p.m. (local time) in the target listener's area; i.e., Radio Thailand broadcasts an East Coast program at (0030 to 0100 UTC) and a West Coast program around (0300 to 0330 UTC).

Historically, Radio Thailand has provided international news coverage for the benefit of its listeners around the globe. Ms. Amporn has observed a common underlying theme in mail received from Radio Thailand's worldwide shortwave listening audience. Radio Thailand's listeners are eager to learn more about Thai culture and local Thai news and less about international news. Accommodating listener's needs is a high priority with Radio Thailand, so you can expect to see changes in the near future. As Ms. Amporn says,"There is ample room for improvement on all fronts, and we intend to pursue this to the best of our ability."

Ms. Amporn kindly escorted me to the office of Ms. Amaraporn Rathavinit, Chief Broadcaster of Radio Thailand's, External Service. Ms. Amaraporn, like

Radio Thailand World Service Shortwave Schedule (Time is UTC)

Time	Language	Target Areas	Frequency
0000–0030	English	Europe-Africa	9680
0030–0100	English	E. U.S.	11905
0100–0200	Thai	E. U.S.	11905
0300–0330	English	W. U.S.	11890
0330–0430	Thai	W. U.S.	11890
0530–0600	English	Europe	15115
1100–1115	Vietnamese	Asia-Pacific	7285
1115–1130	Khmer	Asia-Pacific	7285
1300–1315	Japanese	Asia-Pacific	7145
1315–1330	Mandarin	Asia-Pacific	7145
1330–1400	Thai	Asia-Pacific	7145
1400–1430	English	Asia-Pacific	9830
1800–1900	Thai	Middle East	11855
1900–2000	English	Europe	7295
2000–2015	German	Europe	11805
2015–2030	French	Europe	11805
2030–2045	English	Europe	11805
2045–2115	Thai	Europe	11805

View of Radio Thailand building.

Ms. Amporn, is a thoroughly knowledgeable yet quiet, soft-spoken lady with typically Thai courtesy and manners.

Ms. Amaraporn provided additional information about Radio Thailand from her perspective as Chief Broadcaster. In addition, she gave me a comprehensive tour of Radio Thailand's World Service facility including the foreign news room, studio, and research and record libraries. She also introduced the foreign news room and editorial staff members who are responsible for the daily operation of gleaning and translating regional and international news material for use in their respective regional language broadcasts. Although Thai is widely spoken, English is the common language that binds all members of the Foreign News service staff together and serves as the basis for all translation work (into respective regional languages). Radio Thailand utilizes hardware and software supplied by Reuters to provide real-time electronic news updates and news feature printouts for staff researchers.

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DRAKE MADE IN AMERICA

A technician at the controls in a studio sound room of Radio Thailand.

While touring the studio, Ms. Amaraporn and I watched two of Radio Thailand's English-language announcers, Mr. Winner Dachpian and Ms. Usna Yuvachitti, during a live broadcast beamed to listeners in the United States. Mr. Dachpian, in addition to being a Radio Thailand news announcer, is also actively engaged in software development and marketing in Bangkok. Ms. Yuvachitti is the director of a Yoga center in Bangkok as well as being a professional singer.

A visit to their research library proved to be interesting as well. There one can find a wide selection of Thai language materials covering nearly all major topics staff researchers are likely to deal with in their day-to-day activities.

Radio Thailand's record library, which is also comprehensive, includes albums of traditional Thai folk, ethnic, as well as contemporary Thai music. Announcers and technical personnel "check out" specific selections for use in conjunction with their programs.

A Special Luncheon

Lunch at Radio Thailand's canteen with Ms. Amaraporn and the Director of Foreign News Division, Ms. Soontharee, will be fondly remembered. The employees of Radio Thailand regularly enjoy a wide selection of delightfully prepared food. A special commendation is in order for their chef who skillfully prepared the golden deep-fried, crunchy En Gai (chicken cartilage) and tasty stir-fried vegetables. This absolutely delicious treat is a "must-try" for any shortwave listener having occasion to visit Radio Thailand in person!

Perhaps Radio Thailand's former public relations deputy director-general summed up the station's philosophy when he said, "We are proud to play a role in the development of our country as well as strengthening friendship and good relations among nations . . ." From back in 1938 when Radio Thailand began its External Service with broadcasts only in English and French, to today with a dedicated World Wide Web page in the works, Radio Thailand has positioned itself as a primary voice of Thailand and Southeast Asia.

A special thank-you to Ms. Amporn, Ms. Amaraporn, and Ms. Soontharee for their courtesy and patience during my recent visit to Radio Thailand. Each of these kind ladies went above and beyond in ensuring an enjoyable and memorable visit as well as ensuring that up-to-date information regarding their current and proposed future operations is made available to the world. ■

"Historically, Radio Thailand has provided international news coverage for the benefit of its listeners around the globe."

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World Radio TV Handbook 1992

"Unsurpassed DX Performance"

Passport to World Band Radio 1992

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Radio in the First State

Don't let its small size fool you, there's plenty to hear . . .

By Chuck Mankin

For it's small size, Delaware offers big scanning action. This state offers a wide range of scanning opportunities including public safety, business, agricultural, and military action. With most of the eastern edge of the state bordered by various waterways from rivers and bays to the Atlantic Ocean, marine scanning is also hot.

The northern part of the state offers a host of scanning opportunities. Many technical firms have facilities in New Castle County, including Hewlett Parkard, Zeneca pharmaceuticals, and ICI America's. Of course we can't forget the DuPont company which has various operations—research, manufacturing, and administrative throughout the state, but mainly in New Castle County. DuPont also maintains two country clubs and a children's hospital in New Castle County. Texaco also has a large terminal in Delaware City which offers many scanning opportunities including business and marine scanning.

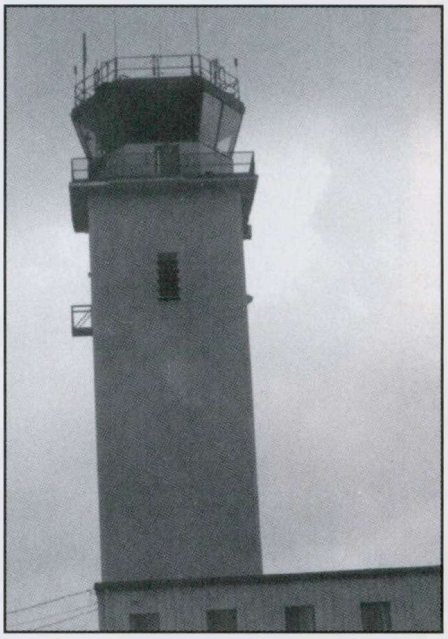
Of course scanner monitors know that the more people in an area, the more public safety activity. New Castle County has numerous local police departments including Elsmere, Newark, Newport, and New Castle city. Also there is the New Castle County Police and the State Police. All of these agencies are kept busy along with a county EMS agency which provides primary Advanced Life Support (ALS) and back up Basic Life Support (BLS) to the county in support of the volunteer fire departments which provide primary BLS as well as fire suppression and rescue services for the county. The City of Wilmington has it's own police and fire departments which provide public safety services for it's residents. The county EMS also provides back up ALS service for Wilmington.

The Delaware State Police also provide Medevac helicopters for the state. They do this with helicopters One (Trooper 4) based out of New Castle County Airport and the other (Trooper 2) based out of Sussex County Air Park in Georgetown. The aircraft are flown by a Trooper and staffed by one Trooper/Medic. While they still perform many of the chores that most police helicopters do, such as searching for suspects and transporting VIP's, their primary mission is Medevac. It is said that they even left the governor at the scene of an accident in order to fly an injured patient.

Public safety communications will diminish in the state over the next couple of years as the state phases in a new digital 800 MHz system for police fire & EMS communications. New Castle County is slated to be switched over early this year, followed by Kent and Sussex county in 12 to 18 month intervals. All municipal police departments currently dispatched by the state police such as Newport will be switched to the new system and all others are invited to join. Simulcast channels will exist for several years, but will slowly be done away with once all end users have switched. All frequencies will be given back to the FCC for reassignment and non-800 systems will be dismantled. The digital 800 MHz system will shut out scanner listeners entirely. Even with an 800 MHz scanner, listeners will only hear digital garbage similar to the data noise heard on some of the cellular frequencies. Only those radios programmed with Motorola's proprietary software will be able to receive the clear voice radio transmissions.

Middle and Lower Delaware

The middle and lower parts of Delaware are also very active with scanning action. Kent County, which covers from the town of Smyrna to south of Dover has lots of radio activity to offer. The Dover area is a fairly large town which has one of the Air Force's largest Air Mobility Command bases to it's southeast. Dover has it's own police department, but fire and EMS is provided by volunteers. Kent County provides ALS services just like New Castle County does. To the north of Dover is the town of Smyrna which houses one of Delaware's two correctional facilities. The other is in Wilmington. Other activities here include chicken farming and related agricultural businesses.



Photos by Chuck Mankin

Dover Air Force Base tower.

Also in Dover is Dover Downs which not only hosts two major NASCAR races each year but also has a horse racing track on slot machines. During NASCAR races the area is busy with lots of driver communications plus the communications associated with any major event like this. Daily communications revolve around the horse racing and slot activities. While they are not as frequent, they can be just as exciting, plus in New Castle County there is Delaware Park located just north of Christiana. There is a large amount of radio activity there. Everyone from security and maintenance to the computer operations people carry radios. While the horse racing part of the track is still slow, the slot machine activity is going at record levels.

Dover Air Force base is very active for scanner enthusiasts. Along with the usual

base police, fire, and EMS services there is a host of other activities. Loading and unloading the large C-141 and C-5 transports requires lots of radio communications. Dover also houses one of the U.S. military's two mortuaries. Every day flights arrive from and depart to sites all over the world, keeping Dover's military air frequencies very active. The base is huge, with a large flightline area and lots of transient aircraft. This, plus the civilian trucks which bring cargo into the base, keep the security and law enforcement folks busy. Dover is also experiencing a large amount of construction on the base. Everything from new dormitories to a new enlisted club are being built. This not only adds to the workload for the police, but also offer a great deal more scanning action. Everything from construction crews to deliveries to added EMS and fire activity make the airwaves even busier.

From South of Dover to the Maryland state line is Sussex County. This area also hosts a number of interesting radio activities. Chicken farms and the related businesses are also prevalent here as well as lots of marine traffic.

The Lewes area also has the Cape May —Lewes Ferry. With two ferries making trips daily between Lewes and Cape May, the activity here can be very interesting. The ferry is both a major tourist attraction and a great way to get from southern Delaware to Cape May, New Jersey. A surprising number of large trucks also use the ferry to transport their goods across. The Delaware River and Bridge Authority Police are responsible for the safety and security of the ferries and the terminals. They are also responsible for the Delaware Memorial Bridge and the New Castle County Airport. Their frequencies are very busy on holiday weekends when bridge and ferry traffic increases.

A C-5 aircraft at Dover Air Force Base, Delaware.

Beach and Resort Scanning

The area in and around Rehoboth Beach becomes very busy from late April though September. Scanning activity here is much like most large resorts; hotels, motels, restaurants, and other tourist businesses. The police departments in Rehoboth Beach, Dewey Beach and Fenwick Island are kept active with the tourists as is the Rehoboth Beach Patrol—not only in the area near the beach but out on U.S. Route 1. There is a host of shops, factory outlets and entertainment facilities in this area, and the waterways of Sussex County are active with boats of all sizes. While fishing is the main activity of the boaters here, pleasure boats and personal watercraft are also abundant. This makes for lots of activity in the marine band. 156.800 will stay active all day long with boater traffic. The U.S. Coast Guard maintains a station just north of the Maryland line at the inlet of Indian River. With thousands of tourists pouring into the area each summer to swim, boat, and fish the Coast Guard is kept busy throughout the summer. A large amount of ship traffic also transits this area enroute to the ports in Wilmington, Philadelphia and New Jersey. These ships are normally not visible to those on shore, but they are still close enough to monitor. Listen for Coast Guard activity as they, along with the Delaware Marine Police make sure boaters are abiding by the laws and keeping safe.

Even after the State and county have switched over to digital 800 and all the simulcast frequencies have been abandoned, there will still be plenty to listen to. I'm sure many of the public safety agencies will keep some of their own frequencies. Plus as you can see, there will be plenty of other activity to monitor.

A container ship off the coast of Delaware City.

Delaware Marine Police patrolling Delaware's waterways.

New Castle County

Police

154.665	State Police	F-1 (Troops 1,2,6,9) (RECOM)
154.695	State Police	F-4 (Statewide Information)
155.460	State Police	F-5 (Miscellaneous)
155.850	State Police	F-6 (Investigations)
155.475	State Police	F-7 (Nationwide Police Channel)
154.860	State Police	F-8 (Statewide Emergency Net)
39.50	State Police	Aircraft/Tactical/Haz Mat/S.E.R.T.
45.02	State Police	Old System

Fire

33.78	Countywide Fire Communications	F-1 (Dispatch)
33.94	Countywide Fire Communications	F-2 (Fireground)
33.68	Countywide Fire Communications	F-3 (Fireground)

Ambulances/Hospitals/Medical

155.280	Countywide Ambulance-To-Hospital	
155.340	Countywide Ambulance-To-Hospital	
462.975	Countywide E.M.S.	Med-10 (Dispatch)
155.400	State E.M.S.	
157.450	State E.M.S.	Paging

State Government/Services

47.22	State D.O.T.	F-1
47.34	State D.O.T.	F-2
156.135	State D.O.T.	Turnpike Maintenance
151.100	State D.O.T.	Portables
155.310	Delaware River & Bay Authority	F-1 (Police Operations)
156.350	Delaware River & Bay Authority	F-2 (Boats)
154.860	Delaware River & Bay Authority	F-3 (Statewide Emergency Net)
453.9625	Delaware River & Bay Authority	F-4 (Maintenance)
151.070	Delaware River & Bay Authority	Maintenance
453.0375	Delaware River & Bay Authority	N.J. Tie
453.7875	Delaware River & Bay Authority	
159.195	Delaware River & Bay Authority	

Sports/Recreation

465.000	Delaware Park Inc. (Wilmington)	Paging
151.655	Delaware Racing Association Inc. (Stanton)	
464.825	DuPont Country Club (Wilmington)	
467.8125	Hercules Country Club (Wilmington)	

Kent County

Police

154.935	State Police	F-2 (Troop 3) (KENTCOM)
154.695	State Police	F-4 (Statewide Information)
155.460	State Police	F-5 (Miscellaneous)
155.850	State Police	F-6 (Investigations)
155.475	State Police	F-7 (Nationwide Police Channel)
154.860	State Police	F-8 (Statewide Emergency Net)
465.475	State Police	Mobile Extenders
39.50	State Police	Aircraft/Tactical/Haz Mat/S.E.R.T.
44.72	State Department of Natural Resources	F-2 (Marine Police/Enforcement)
172.300	Dover AFB	Security Police
173.4375	Dover AFB	Security

Fire

33.78	Countywide Fire Communications	F-1 (Dispatch)
33.82	Countywide Fire Communications	F-2 (Secondary)
33.86	Carlisle Fire Company Inc.	
460.625	Carlisle Fire Company Inc.	
33.94	Citizens Hose Company No 1 Inc.	
33.94	Clayton Fire Company	
33.98	Clayton Fire Company	
154.220	Clayton Fire Company	
173.8625	Dover AFB	Fire/Crash
173.5875	Dover AFB	Fire/Crash (old)

Ambulances/Hospitals/Medical

462.975	Countywide E.M.S.	Med 10 (Dispatch)
47.42	American National Red Cross (Dover)	
47.46	American National Red Cross (Dover)	
35.90	Delaware Hospital	
173.5625	Dover AFB	Medical Net
462.775	Kent General Hospital Inc.	Paging
163.250	Milford Memorial Hospital -Paging	
33.04	Smyrna American Legion Ambulance	

Aviation

152.975	Air Enterprises Inc. (Magnolia)		
122.800	Chandelle Estates Airport (Dover)		Unicom
123.000	Delaware Airpark		Unicom
122.100	Delaware Airpark		F.S.S.
128.000	Delaware Airpark		Approach/ Departure
123.000	Deldot Helistop (Dover)		Unicom
126.350	Dover AFB	Tower	
327.500	Dover AFB	Tower	
121.900	Dover AFB	Ground Control	

225.400	Dover AFB	Ground Control
273.500	Dover AFB	A.T.I.S.
125.550	Dover AFB	Clearance Delivery
289.400	Dover AFB	Clearance Delivery
342.500	Dover AFB	Weather
125.900	Dover AFB	Approach
128.000	Dover AFB	Approach
135.150	Dover AFB	Approach
339.100	Dover AFB	Approach
353.300	Dover AFB	Approach
324.500	Dover AFB	Departure
372.200	Dover AFB	Pilot-Dispatcher
130.650	Dover AFB	Command Post
172.300	Dover AFB	Security Police
173.4375	Dover AFB	Security
173.5625	Dover AFB	Medical Net
173.8625	Dover AFB	Fire/Crash

Sports/Recreation

151.895	Dover Downs Inc.	
452.575	Dover Downs Inc.	
460.825	Dover Downs Inc.	
461.0625	Dover Downs Inc.	
461.450	Dover Downs Inc.	
461.525	Dover Downs Inc.	
462.1875	Dover Downs Inc.	
462.825	Dover Downs Inc.	
462.9125	Dover Downs Inc.	
463.425	Dover Downs Inc.	
463.900	Dover Downs Inc.	

Sussex County

Police

154.755	State Police	F-3 (Troops 4,5,7) (Suscom)
154.695	State Police	F-4 (Statewide Information)
155.460	State Police	F-5 (Miscellaneous)
155.850	State Police	F-6 (Investigations)
155.475	State Police	F-7 (Nationwide Police Channel)
154.860	State Police	F-8 (Statewide Emergency Net)
465.475	State Police	Mobile Extenders
39.50	State Police	Aircraft/Tactical/Haz Mat/S.E.R.T.

Fire

33.78	Countywide Fire Communications	F-1 (Dispatch)
33.96	Countywide Fire Communications	F-2 (East)
33.92	Countywide Fire Communications	F-3 (Central)
33.72	Countywide Fire Communications	F-4
33.86	Countywide Fire Communications	
33.42	Countywide Fire Communications	
33.58	Countywide Fire Communications	
33.48	County Fire Communications	
154.205	County Fire Communications	
154.235	County Fire Communications	

Ambulances/Hospitals/Medical

462.975	Countywide E.M.S.	Med-10 (Dispatch)
33.08	American Legion Ambulance Service	
47.42	American National Red Cross (Georgetown)	
47.46	American National Red Cross (Georgetown)	
151.925	Milford Memorial Hospital	
163.250	Milford Memorial Hospital	Paging
152.480	Nanticoke Memorial Hospital	Paging
453.025	Nanticoke Memorial Hospital	
464.575	Nanticoke Memorial Hospital	

Radio Remembered

A Station That Played Frequency Hopscotch

By Alice Brannigan

When tracing the history of broadcasters that date back to the 1920s, it's common to find that stations experienced numerous forced changes in their operating frequencies. These shifts resulted from almost continual expansion and rearrangement of the mediumwave band as the government attempted to provide sufficient interference-free channels for the rapidly growing broadcasting service. It took about 20 years to calm down, but by 1941 the band assumed its familiar 540–1600 kHz specs. Since then, broadcasters have generally tended to remain assigned to a single frequency, and been thankful for being permitted to stay put.

Yet, once in a while we come across a station that managed to find reasons to move around more than usual, and in the post-1941 era at that! That would be KNOE, Monroe, Louisiana.

This station began its career after Louisiana Gov. James A. Noe had purchased WNOE, New Orleans. In February of 1944, Noe was granted permission to move the license to Monroe and operate as KJAN, unlimited hours with 250 watts on 1450 kHz. The call letters were changed to KNOE while the station was under construction, with its transmitter site on 23rd Street. Studios were in the downtown Bernhardt Bldg. The station became licensed in November, 1944.

In 1945, KNOE learned that Monroe station KMLB was about to abandon 1230 kHz. Thereupon, KNOE applied for and received a construction permit to change its dial position to 1230 kHz. In late 1946, KNOE commenced operation on 1230 kHz with 250 watts.

The opportunity to increase its power from 250 watts to 5 kW came about only two years later, but it required KNOE to move from 1230 kHz. So, in November of '48 the FCC authorized KNOE to change its dial position to 1390 kHz, up its power, and install a multi-tower directional antenna for use during the night hours. In September, the FCC told new Monroe station KLIC that it could open up on 1230 kHz as soon as KNOE vacated the channel.

The KNOE facilities on KNOE Road, as they appeared in December of 1957. (Photo courtesy of Jan D. Lowry, Castaic, Calif.)

KNOE hopped over to 1390 kHz in late 1949, operating from its new transmitter site on Good Hope Road, West Monroe. In December of 1953, KNOE moved into a new radio-television office and studio building on KNOE Road (at the corner of Jan Road) in the Monroe suburbs.

On December 15, 1961, the FCC authorized the station to shift from 1390 kHz to 540 kHz. A condition of the permit was that the night power of the station would drop from 5 kW to 1 kW with a change in its directional antenna operation to full-time hours (differing patterns day and night). This was accomplished in May of 1962.

Former Lt. Governor James A. Noe, Sr., founder of KNOE, had remained with the station in various capacities. At the time of his death at age 85 in October of 1976, he was Chairman of the Board of KNOE's licensee, of which his son, James, Jr., was president. Soon after, James Noe, Jr. became the owner of KNOE.

In early 1984, KNOE began AM stereocasting using Motorola C- QUAM. The studios were moved in 1989 to new quarters at 1400 Oliver Road. Today, KNOE operates with an "Adult Standards" music format on 540 kHz with 5 kW days and 1 kW at night (two pattern directional). It is Louisiana's 13th oldest continuously licensed AM broadcast station. James A. Noe, Jr. continues as the station's licensee.

Our appreciation for the stats on KNOE go to Broadcast Pro-File, 28243 Royal Road, Castaic, CA 91384-3028. Our information was extracted, with permission, from their lengthy and highly detailed report on the station. BP-F is a commercial research service able to provide professional reports on the histories of all American AM/FM broadcasters, past/present. Many broadcasters use BP-F's services. If the station you want is listed in their big catalog, the report is $12. If it isn't listed, a custom report can be prepared for $18. You can obtain the BP-F catalog from them for $1. Tell them Alice sent you!

We are always on the lookout for input in the form of old time radio station photos, QSL cards/letters, picture postcards, station listings, anecdotes, newspaper clippings, memories, questions, and suggestions. See you on the exciting road to Radioville. ■

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Radio Resources

BY BILL MAULDIN, WG4R
e-mail: 75750.1331@compuserve.com

INTERESTING THOUGHTS AND IDEAS FOR ENJOYING THE HOBBY

The world of aviation has always been filled with communications. The conversations of pilots are especially interesting to those of us who enjoy airplanes and radio listening. Much of what most listeners hear is just routine air traffic control. There are passing planes, enroute to distant places, planes taking off and arriving, and every now and then, if your ears are sharp and you are located in the right place, you'll hear something that will cause you to turn up the volume and will make your heart race with excitement.

To know and understand aviation radio communications, you need a good basic knowledge of what is out there, and how to understand and follow it. Many scanner listeners monitor only the UHF military frequencies. Others listen only to the commercial and private plane VHF frequencies. And, there are those who monitor only the shortwave frequencies of the "pond crossing" airliners as they fly across the seas to foreign lands. It is interesting to talk with scanner listeners who prefer aviation chatter over the basic excitement of police and fire calls. This part of the hobby requires insight, knowledge, and some aviation education to truly become a devoted enthusiast.

Books have been written on the subject of monitoring and understanding aviation radio, and there are directories that list aviation frequencies.

The hobby of monitoring aviation radio can be an easy one to understand and enjoy if you have some basic knowledge on the subject.

All commercial jets in the USA are required to file, fly, and comply with restrictions of their flight plan. A flight plan for a commercial flight is normally filed by the flight dispatcher for the company. The information is filed with the FAA, and an air space reservation is made. The flight plan tells the FAA many things, including the departure point, the destination, the altitude desired, the speed of the plane, proposed departure and arrival times, and the radio and communications equipment on the plane.

As the flight prepares to depart, the pilots sign a release and get a briefing which gives them the latest weather for the departure city, the destination airport, the enroute weather, the fuel on board, and the route that they are initially proposing to fly. If the flight is a domestic USA flight, all communications will take place on the VHF aircraft band. If the flight is an international flight, the VHF radio frequencies will be used until the plane enters an area where there is no VHF radio coverage. At that point, the pilots are given two HF (shortwave) frequencies to be used while over water or over the non-VHF coverage area.

Weather Conditions and Flying

Of course weather information is very important to aviation safety. Although there are commercial jets that can land in almost zero-visibility these days, pilots need and depend on accurate weather information for legal reasons and for safety. Monitoring aviation frequencies during periods of bad weather can bring you some of the most interesting listening. Times of thunderstorms, fog, heavy rains, and ice and snow can cause air traffic delays. The FAA controllers will often add extra space between planes when weather is bad. This extra spacing means

There's always something interesting to hear on the aircraft frequencies. (Courtesy U.S. Air Force)

"Every now and then, if your ears are sharp and you are located in the right place, you'll hear something that will cause you to turn up the volume and your heart to race with excitement."

they can't fit as many planes in the same air space, and this means enroute delays. When you are monitoring your favorite aviation frequency during periods of bad weather, do you understand what the pilots are talking about when they say the airport is "below minimums" or request a "deviation" while enroute? Many passengers often hear the gate agents say "the airport is closed" when a flight is delayed. More often than not, passengers think the FAA has closed the airport. Generally speaking, the FAA never officially "closes" an airport. Many times, runways are closed for snow plowing or to clear a damaged aircraft off the runway, but the FAA does not often take the official step to "officially close" an airport. This term is sometimes used when the airport is "below minimums," meaning that no airplane can land or take off because the weather visibility is less than the legal limit to take off or land. If you have a handheld scanner with you on that trip as you sit in the passenger waiting area, you could have the knowledge to truly understand the problem, and even to make a change of planes or airlines. To do this, you need some basic knowledge about communications, different airplanes, and most of all weather. For example, the weather landing minimums required for a "legal" landing are higher for DC-9 aircraft than for a fully-automatic landing equipped Boeing 757. The DC-9, in most situations, will require a half-mile visibility, whereas a fully-equipped and certified Boeing 757 can land with just 300 feet forward visibility and a zero ceiling.

Most airports have an ATIS frequency. This is the airport terminal information service. The ATIS frequency tells pilots about the local airport weather, the runway being used, and any other safety-related information. If you are in the airport with a handheld scanner, you can easily monitor the airport ATIS frequency. In these modern "money saving times", the ATIS voice is actually a talking computer at many airports. Whether

it is an FAA person or the computer, the information is still the same. The frequency is easy to find with a simple scanner search. The ATIS information is broadcast continuously, 24-hours-a-day on VHF at most medium and large controlled airports.

Company Business

Most hobby listeners already know about routine air traffic control communications. These routine communications can be heard on VHF, UHF for military aircraft, and on the HF or shortwave bands. However, the most interesting listening on the aircraft band relates to company business. These communications, although routine most of the time, can fill your speaker with interesting and exciting events. Commercial airliners communicate with the company dispatchers and maintenance personnel whenever anything unusual takes place. Some of these communications are routine position reports, enroute weather updates, and maintenance alerts for the next station when something is not working properly. Although many "confidential" company communications are now being handled by the on-board ACARS data communications unit, there are many times when urgent needs are handled by a phone patch with the company dispatcher through the company radio network or through ARINC's system.

ARINC is a paid communications service that offers extensive radio services to the airlines and business aircraft. The main dispatch center for ARINC is in San Francisco. ARINC radio operators in San Francisco operate a nationwide network of VHF remote transmitter and receiver sites. They also handle all air traffic communications on shortwave for the FAA air traffic control centers that control traffic over the ocean area under their control. The FAA does not maintain their own HF shortwave radio system. Instead, they use the extensive system of ARINC, allowing ARINC operators to relay instructions regarding air traffic movements.

ARINC also maintains an extensive HF shortwave radio system just for airline company communications. On these frequencies, pilots of long-range international flights can easily talk with the company dispatcher or maintenance personnel when there is a problem. These can be some of the most interesting frequencies on your radio when the action starts!

Here is a list of the ARINC shortwave frequencies used primarily for airline company business traffic (upper-sideband—USB):

Honolulu and **San Francisco**: 3013, 6640, 11342, 13348, 7925 and 21964 kHz.
Houston: 6637, 10075, 17940 and 21964 kHz.
New York: 3494, 6640, 11342, 17925 and 21964 kHz.

These frequencies carry routine company messages daily. However, messages that are urgent or of an emergency nature will also be found on these shortwave frequencies. When there is action taking place over the international waters, these are the frequencies that you want to monitor. Keep in mind that if the aircraft is ACARS-equipped, there is a possibility that HF ACARS may also be used to try and keep the messages confidential. Also, some SATCOM satellite up and downlinks are also being phased into operation. If the system is operational on the plane, SATCOM communications could also be used. But, these are hot frequencies when there is action in the skies.

VHF ARINC Listening and Much More

The VHF ARINC channels are also quite interesting. There isn't enough space in this article to list these frequencies, however, they are easily found for your location with a few hours of simple scanner searching. To check for VHF company and ARINC frequencies in your listening area, enter 128.825 MHz as the lower search limit and 132.000 MHz as the upper search limit. Remember, all aircraft communications on VHF are in the **AM mode**, not FM, so be sure to select AM on your scanner for the mode of the communication. Make your own list of what is active in your listening area. Then, program these frequencies in your scanner for constant scanning after the search has alerted you to what is active locally.

When "air phones" were first installed on commercial airlines, the airlines gave little thought to the systems other than the fact that they made a few extra dollars for

"If you are in the airport with a handheld scanner, you can easily monitor the airport ATIS frequency."

the airline. Just a few months ago, there was an emergency situation on an airliner that was equipped with the "air phone" system. The airline was surprised to learn that three unexpected phone calls were made by passengers during the event. One passenger called a family member to express her concern and distress about the problem. Another passenger called a news agency to give a first-hand report of the emergency. And, another passenger was so upset and alarmed that she called 911. All three calls quickly caught the attention of the airline, as you might imagine. It is now normal procedure for the crew to quickly remove power from all passenger "air phones" in the event there is an emergency. Although "air phone" communications were initially an excellent source of interesting conversations, you can generally forget this as a source of information these days.

ARINC HF Listening

Here is an up-to-date list of the ARINC shortwave air traffic control frequencies. These are the frequencies that ARINC uses to relay FAA air traffic information and instructions to international aircraft.

- **Honolulu Radio**: Central & West Pacific—3413, 5547, 8843, 13288 and 17904 kHz; Northern Pacific—2932, 5628, 6655, 8951, 10048, 11330, 13273 and 17904 kHz.
- **Houston Radio**: 6637, 10075, 13330, 17940 and 21964 kHz.
- **New York ARINC**: 3016, 5598, 8906, 13306 and 13354 kHz.
- **San Francisco ARINC**: 2869, 3413, 5574, 6673, 8843, 10057, 11282, 13288 and 17904 kHz.

Some interesting company communications can be found on Speedbird London, British Airways channels. These frequencies are: 5535, 8921, 10072, 13333, 17922 and 21946 kHz. As mentioned, weather plays a big part in aviation. ARINC and others outside the USA broadcast selected weather reports on a regular basis on shortwave. Although there is no two-way communication between the pilot and the ground station on these frequencies, you can get a quick check of the current aviation weather for many major airports on these frequencies:

- **New York Radio**: 3485 kHz, 6604 kHz, 10051 kHz, 13270 kHz.
- **Shannon**: 3413 kHz, 5505 kHz, 8957 kHz, 13264 kHz.
- **Honolulu Radio**: 2863, 6679, 8828 and 13282 kHz.
- **Gander Radio**: 3485, 6604, 10051and 13270 kHz.

These stations broadcast on a regular schedule, normally at five minute intervals. You can make a schedule of the cities covered by listening to the frequency for an hour, as the same sequence of weather reports is broadcast every hour at the exact same time. Keep in mind when listening to shortwave that the lower frequencies are active at night and the higher frequencies are used in the daytime. The band will change during the day and night, giving you more or less listening range, depending on band conditions. The subject of aircraft communications is so extensive that it could easily fill this magazine from cover to cover. We've just touched the surface, giving you some of the more interesting and lesser-known frequencies. In the future we'll be dealing with each in more detail. In the meantime, if you've heard any interesting aircraft comms, let us know. ■

Popular Communications Reader Survey

May 1997

Congratulations to Jeff Burgess, Sr. of Birmingham, AL. He wins a free one-year subscription to *Popular Communications*. Be sure you send in your Reader Service Card, circling the appropriate numbers corresponding with your survey answers in order to be eligible for our random monthly drawing. You could be our next winner!

We're still compiling the hundreds of responses to our questions. As we move along with our monthly survey, we'll give you an inside look at our *Pop'Comm* family and how you view our radio hobby. Thanks for your participation!

In January and February we asked you, among other things where you lived; interestingly most responses were evenly divided between large cities, small towns and cities with a heavy concentration of readers in the northeast, midwest and southeast. *Pop'Comm* is still widely read in other areas of the country and Canada, however by a margin of 10 to 1 we have more readers in the Midwest than in the Pacific Northwest.

In a time when many folks believe lots of listeners are converging on the internet—and that may be the case—but still many others, according to our survey results consider the hobby as being in a state of change, yet interestingly about one-third of the respondents indicated the hobby appears to be "prosperous." These responses, when viewed with previous months, indicate the use of computers in our shacks is growing and our readers are in tune to the significant changes we're experiencing in our hobby. Still we aren't spending nearly as much as many folks would like. According to our results, most readers spent between $250–500 during the past year or so. Next down the line was spending between $500 and $700. Relatively few hobbyists spent more than $2000, although nearly the same number of readers spent this amount as did $700–1000.

What once used to be a mainstay of the radio hobby—QSLing—has apparently become somewhat less important over the years, still nonetheless, the overwhelming majority of you indicated some interest in QSLing stations (broadcast, utility and ham), while a significant number of respondents said they were "very interested" in QSLing.

Stay tuned, next month we'll have more survey results and of course another winner in our random drawing. Don't forget to send in your card today!

Here are this month's questions:

1. What kinds of magazines do you read?

Aircraft 15
Automobile 16
Computer 17
Electronic 18
Gardening 19
General Interest 20
Gun 21
Home Improvement 22
Men's 23
Music 24
News 25
Off-Road 26
Outdoor 27
Photography 28
Sports 29
Travel 30
Women's 31

2. As a CBer, I'm a member of REACT or other local Ch. 9 monitoring team.

Yes 32
No 33

3. As a CBer, I operate mostly from:

Base 34
Mobile 35
Both 36

4. I own the following number of scanners and receivers:

Five or more 37
Four 38
Three 39
Two 40
One 41

5. I have modified my scanner/s (either with add-on meters, frequency expansion, etc.):

Yes 42
No 43

6. Listening to cordless or cellular phones interests me:

Yes 44
No 45

7. During the past year, I've talked about the radio hobby with other people and in some cases have got them interested in radio communications:

Yes 46
No 47

8. The people (non-hams) I talk to about ham radio specifically tell me:

They know little about ham radio 48
They've seen hams on TV helping during disasters 49
Ham radio is like CB 50
The equipment is too expensive 51
It's too technical 52

It doesn't interest them 53
They're interested and want more information 54

9. I speak the following number of foreign languages:

More than four 55
Four 56
Three 57
Two 58
One 59
None 60

BY EDWARD TEACH

The Pirate's Den

FOCUS ON FREE RADIO BROADCASTING

New A*C*E President

k routine from 0114 tune in. d off with Stairway to Heaven. obs, PA) heard this one at 0107 jc, skit on Mr. Ed the Horse.)wsley, CA)

—**The Pirate King, 1620** at ning with the national anthem broadcast which ran several a lot of rock and fake commer- ia Ziegner, MA) 0610 to 0720 including political parodies. r George Donahue claimed 15 ess given as 570 Ulster Ave., NY 12401 or <wjdi1620AM@ (Stephen Maroulis, NY)

he Hat—6955 at 2130 with Dr. nch story and Providence, RI Ed Rausch, NJ)

r Radio, 6960 USB at 1700 l truck air horns as a sign on IS. dress. (Rausch, NJ)

—**Green Lantern Radio,** at 1610 with announcer Guy roadcasting from "DC Uni- ausch, NJ) 1830 to 1905 close. yden, PA) 1518 relayed by te Network with music, talk of antern comic book. Reports to l, Belfast, NY 14711. (Dave Y)

f Smoke, 6955 USB at 2256 n Marley with reggae music and greetings from Pigpen Junior. New York address. (Rausch, NJ)

KCBM with the "Ken and Barry Show on real pirate radio" at 0530. They **announced "11 MegaHertz"** as their frequency. (Tim McGuire, CA)

Radiodiffusion International, 6955 USB at 1747-1820 sign off mostly in French. Providence, RI address. (Mike Layden, PA)

WMPR—Micro Power Radio, 6955.3 heard them at 1650 to 1717 close with techno music. ID as "WMPR—6-9 9-5," with the numbers read like a numbers station might, over "We Are Family." (Layden, PA)

WPRS, 6955 USB at 1340 giving Providence, RI address. (Chris White, MA)

WREC 6955 USB at 1545 with ID at 1546. Pirate Radio East Coast, (White, MA) Sign on at 1928 with music and comedy, Blue Ridge address. (Folmsbee, NC) 1349 "broadcasting from a very small boat in a very big ocean," many spoofs and parodies. (Dick Pearce, VT) 2015 with comedy commercials and skits. Off at 2058 with Belfast and Blue Ridge addresses. (Jeffery, NY)

WRFB—Radio Free Brooklyn, 6955 at 1733 with "Monkeys" TV theme, announcer Tony promising QSLs via postings in *Pop'Comm* (uh, uh, & sorry, Dick P.—Ed). (Marc Pawl, NJ)

Radio Free East Coast, 6955 USB at 0320 with host Radio Animal and music parodies. (Jim Mcleod, MD)

Up Your Radio Shortwave, 6955 USB at 1432 with anti-Republican satire, listener mail, top ten somethings. (Dick Pearce, VT)

The Talking Pirate, 6955 USB at 2059 with ID, stand-up comedy by Jeff Foxworthy and off at 2111. No address given but he mentioned the broadcast was coming from the mid-Atlantic states. (Jeffery, NY)

Radio USA, 7475 USB at 0715 sign on with what sounded like the same tune over and over then hard rock instrumental. ID at 0731. (Owsley, CA)

Earth Radio (not the main station name) **6955 USB** from 2048 to 2104 sign off. Full ID unclear. Providence, RI address. (Bailey, WI)

KMCR, 6955 USB at 0035 with rock and skits. Song "The Cockroach That Ate Tijuana," "Girl That Got Rovin' Eyes," sudden fade out at 0129. Again at 0214 with ID by man, CW ID and wolf howls. (Benton Owsley, CA)

Good show, folks! Keep tunin', keep loggin' and keep sending those pirate logs in every month. If you're on e-mail you can send them to Harold Ort, the main editor-guy at <popularcom@aol.com> and he'll pass them on to me. Thanks for participating!

See you again next month! ■

0619 with Mr. X and Charlie reading listener's mail. Gave their address as P.O. Box 146, Stoneham, MA 02180. (Love, SC) 1930 to 1952 close with mailbag and reggae. (Mike Layden, PA) 1915 with music and address. After sign off someone asked about their power and they replied it was 1700 watts. (Paul Folmsbee, NC) **6954.6** at 1645 with Mr. X and Charlie Loudenboomer, contest based on identifying the source country of a Mideast number, listener mail, boosting Brattleboro, VT. (Pearce, VT)

CSA—Radio Free Willie Nelson, 6955 USB with Willie Nelson music, listener mail, Belfast address. (Love, SC)

KAOS was heard on **6953.5 USB** with "funny false rock news," Monty Python

The Radio Connection

BY PETER J. BERTINI, K1ZJH
<RadioConnection@juno.com>

A LOOK BEHIND THE DIALS

More On Capacitors

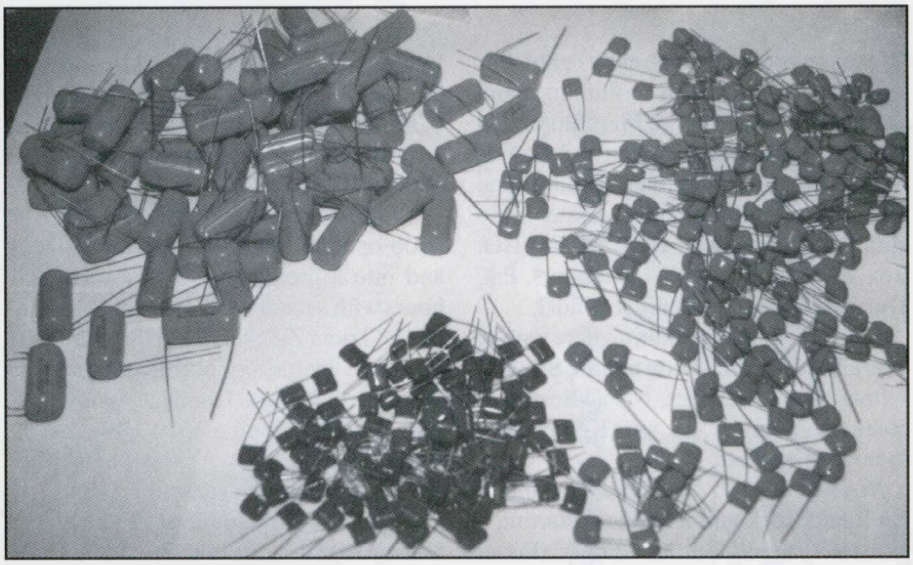
We all make mistakes, and I am embarrassed about one that made it into an earlier column. A number of sharp-eyed readers caught my error. Before I get into specifics and corrections, this particular error brought to mind some early radio memories from my past.

When I was a youngster, my idol was Alfred Powe Morgan. I wrote an editorial about Mr. Morgan and his seemingly endless series of "Boys" books in a past issue of *Communications Quarterly*, a sister publication of *Pop'Comm*, and how he influenced my career choice at a tender young age. I was surprised to receive a lot of reader mail from others who have the same regard for Mr. Morgan.

I don't remember which book it was in—my library of his books is long gone and now sadly missed—but it was either in his *Boys First Book of Radio*, or the *Boys Book of Electricity*. At that time I was more interested in wrecking old radios scrounged from neighbors and relatives, than in fixing them up. I suppose in my own mind I was doing something really useful with them, but nonetheless they usually ended up in the garbage heap when I finished with them!

Back to our story. There it was! A one-tube receiver that I could build. Mr. Morgan showed me how to do it. All I needed was a handful of parts. Heck, I already had the pine board chassis! I scoured Hartford for the better part of a day, with my allowance in one hand, and my parts list in the other. I hit every radio shop in the city. Can you believe it was harder to find a 1H4 tube in 1959 than today? We didn't have Antique Electronic Supply around in those days! A kindly old-timer radio repairman dug in his back room and found a 1H4 for me.

I ended up at the old Hatry's on Ann Street for the final item. In those days the ham store was the big draw, parts were in the back. In later years, as the store moved several times from Ann to High Street, and finally to the south end of Hartford, the ham department grew smaller, and the TV parts business grew. Eventually the ham stuff went away, and just recently Hatry's closed their doors for good. In better times, hams would gather at Hatrys on Saturday mornings, and trade used or new gear, and talk ham radio. Where else could a young sixteen-year old ham take home a used Collins S line, with no money in hand, on the basis of a handshake and a promise to pay? A tip of the hat to the late W1KXM, Corky. Those were the good old days.



A recent order from Hosfelt arrives. Going clockwise from upper left: Sprague .22 mFd Orange Drops, .01 mFd Orange Drop style caps (not Sprague) and some .047 mFd capacitors.

Oops, I'm wandering again. The final item I needed was a .00014 mFd tuning capacitor. I didn't know a .00014 tuning capacitor from a Bermuda onion, and apparently the parts clerk had a problem too. I ended up with a .000014 mFd capacitor—14 pF instead of 140 pF! I thought it looked a little small! Despite this error, the radio worked, although I could only receive one station thanks to the limited tuning range. It was just enough to get me hooked for good.

I mention all this because a while back I told you that a .0001 mFd was equal to 1000 pF (1000 pico Farads). That was absolutely wrong! A .0001 mFd is the same as 100 pF capacitor! What happened was that I had originally typed 0.001 mFd, and during the final editing had intended to change it to what I thought would be a more legible .001 mFd. As you can see, rushing last minute edits can cause problems. Alas, my capacitors again turned into Bermuda onions!

Sigh. Adding to the confusion is that while some capacitors are marked mFd, others may use µfd. The µ is actually the Greek symbol for "micro". Thus 1000 pF is a recent marking scheme, 1000 µµf is the same as 1000 pF or .001 mFd. I remember as a youngster that most magazines where still using the old mmFd during the 1950s. The change to using pF came about at the same time when the old familiar megacycles and kilocycles were changed to megaHetz (MHz) and kiloHertz (kHz). Things were never same, and many of us old timers still slip and say megacycles on occasion. The F in µFd or pF is often capitalized in honor of Farad, the early electrical pioneer. The Farad is the standard value of capacitance. You'll see µf, µfd, mFd, µFd used interchangeably by different manufacturers; and likewise for µµfd, µµf, mmFd, pF.

For the more mathematically inclined, remember that when going from µFd to pF to move the decimal point *six places to the right*. To make matters more confusing for newcomers, some current schematics may use nF, or nano-Farad values! To convert the nF value to µFd just move the decimal point *three places to the left*. To convert a

the decimal point *three places to the left.* To convert a nF value to pF, move the decimal point *three places to the right.* For example, a 1 nF capacitor is equal to 1000 pF, or .001 µFd. You won't see nF used on any of your vintage parts or schematics.

Heck, I know this is dry and boring material folks! But whether your interest lies in the Radio Connection and vintage receivers, or with visiting with Don Patrick in his Old CB Shack, it is material you *need to know,* and keep for future reference. I have read a few horror stories from beginners and use those as lessons not to take anything for granted. I would rather take the time to cover things in detail.

One final comment about resistors. I have mentioned the Rider reference volumes as sources for schematics. The other day I noticed that some values of resistors were marked with m values in certain manufacturers schematics and parts lists. This archaic scheme should not be confused with resistors marked with meg (megohm) values! This is especially true of many popular early Zenith sets.

Most of you probably have some technical skills and already know that a resistor can be marked as 220,000 ohms, or 220 k (220 k-ohms) by the draftsman on a drawing or parts list. In odd cases, it may also be correctly marked as a .22 megohm resistor. One million ohms is the same as 1 meg (1 megohm). But, on early schematics you may see a resistor marked as 47 m. This is not a 47 megohm resistor value! It is a 47k (47k-ohm, or 47,000 ohms) resistor; m preceded the more modern k designation. We will continue discussing capacitors and resistors in greater detail in future columns.

Finding Good Deals

I buy capacitors in bulk, usually Panasonic brands from DigiKey, or NTE replacements from my local NTE dealer in West Springfield, MA. I do a lot of sets for my friends and for my own collection and use up capacitors like gummy bears. For me, the savings are well worth it! DigiKey offers substantial price breaks if you order more than 10 or 100 pieces of the same value. Additional savings are had if you can place a $100 order.

To start with, you will probably find the most commonly used values in old sets are .01 and .05 mFd. As I mention before, you can get .05 mFd capacitors from NTE, but the more common .047 mFd capacitors will work the same. The next most popular values are .1, .02 (use .022), .2 (use .22), .005 (use .0047), and .001 mFd. You will find a smattering of other in-between values, so it may be wise to keep four or five of each of those standard value caps on hand.

I also buy surplus; not 30 or 40 year old parts, but modern capacitors that were surplused from discontinued product lines by manufacturers. There are two good sources for this material: Hosfelt Electronics and MECI. I am talking about fantastic bargains.

A common value found in older sets is .22 mFd. A 1996 electronics catalog shows .22 µFd at 600 volt Sprague "Orange Drops" selling for about $2.60 each. Hosfelt's latest catalog offers them for 60 cents each (Hosfelt # 15-863)! I also found .047 µFd at 400 Vdc mylars, and .01 at 630 vdc mylars for bargain prices. MECI also offers similar bargains. Imagine, .03 µf 1000 Vdc metallized film capacitors for 20 cents? Or, how about Mallory .33 µf 400 vdc polyester film capacitors for eight cents each? MECI has

Besides capacitors, both companies offer other items of interest to the radio or CB restorer, such as line cords, fuses and holders, power and regular resistors, mica compression trimmers, and solder terminal strips. What you don't find in one catalog, you will often find in the other!

Dealing With Surplus Vendors

Now for some bad news, and some tips when placing your order. The bad news is that these vendors' stock varies; they may get a truckload of specific values, and when sold out they are gone for good. Hosfelt had .0047/630 volt "Yellow Jacket" style caps for years for five cents apiece. They are long gone. Many times the capacitors have leads that have been pre-trimmed for PC board insertion, making them useless for antique restorations. Always have the sales clerk verify that the components have full-lead lengths before committing to an order. Do not solely rely on the representative parts drawings in the catalogs!

If you're a "big roller," ordering in 100-lot quantities, do your homework! The catalogs don't always tell you this, but you can usually ask for a 10 percent price break on 100 lot quantities. You can also use competitor pricing for counter offers in some instances. Sometimes purchasing will give your order clerk the go-ahead on a price break, on some items they won't. It always pays to ask. MECI often lists the price breaks on specials.

Reading Modern Capacitors

Many mylar and disc capacitors are marked with cryptic values, such as 224, or 103, or 104. Are they 224 µFd, or 224 pF? What is going on here?

Small dipped micas, often used in RF circuits, may have a cryptic 221 marking. Is that 221 pF? Nope. A larger mylar capacitor marked with 224 is the pF value, but the last digit is a multiplier—the number of trailing 0's you need to add to the parts value. Thus, 224 is really 220,000 pF! Remember what we discussed earlier about moving the decimal point six places to the left to convert pF to µFd? 220,000 pF is also .22 mFd, a common and useful value! The 103 is a .0l mFd capacitor, and the 104 is a .1 mFd capacitor.

Now, here is where it gets tricky. What does a 221 silver mica, or dipped-mica marking signify? Is it 221 pF, or 220 pF? In theory it could be either, since both marking schemes are still in common use. The giveaway is that 221 pF is not a standard value, so it is a 220 pF capacitor.

Well, that's all for now. Thanks for tuning in. I enjoyed your company and reading your letters of support. Please keep writing; and I need more pictures and short stories from you folks! See you next month—same station, same time. ■

Surplus Parts Vendors

MECI
340 East First Street
Dayton, OH 45402
1-800-344-6324 order desk

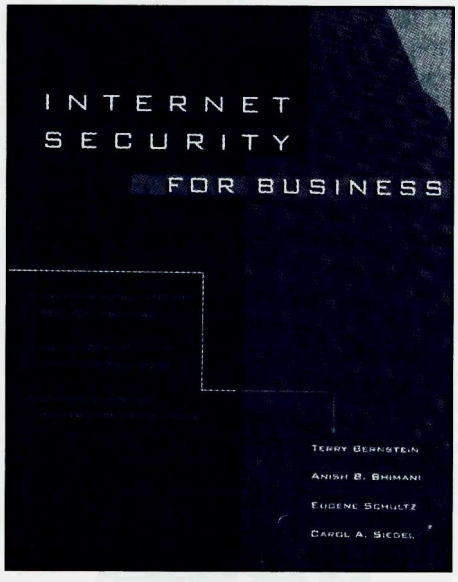
Hosfelt Electronics
2700 Sunset Blvd.
Steubenville, OH 43952-1158
1-800-524-6464

Books You'll Like

BY R.L. SLATTERY

Security Problems on The Net

Businesses that set up Web sites are inviting visitors from around the globe to visit their digital showrooms to retrieve product information. It has become apparent that, just as your neighborhood convenience store experiences theft and vandalism, so do those who do business on the Web. Yes, some "shoppers" are actually phreakers with mischievous or malign intentions.



Today, maintaining Net security is a real business problem that requires more than technical solutions. Firewalls and other technical solutions aren't enough to assure doing business safely on the Net.

The new book, *Internet Security for Business*, is a 452-page how-to manual that provides business and managerial perspectives on why, when, and how to implement effective security controls. It covers the full range of Net security issues faced by all types of businesses, then explains how to develop a complete security program to deflect these threats.

These are proven methods relating to e-mail, WWW, Net news services and electronic commerce. The book shows how to customize and implement a plan for your particular needs and type of organization. You are provided with valuable, easy-to-follow guidelines that explain how to train end-users to identify and respond to almost any breach of security, internal or external.

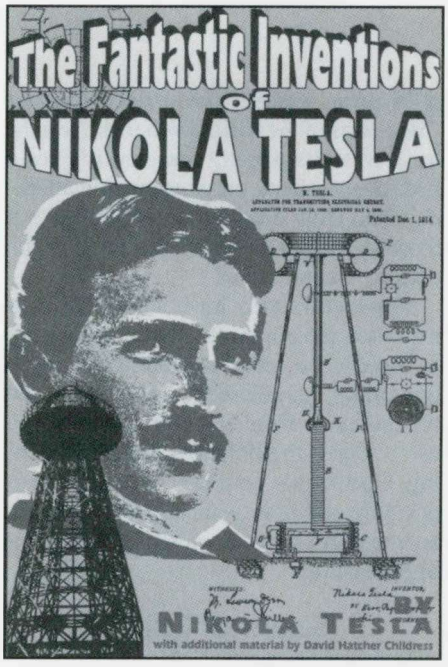
Internet Security for Business is $34.95 ($48.95 in Canada) from John Wiley & Sons, Inc., 605 Third Ave., New York, NY 10158. Phone: 1-800-225-5945. In Canada call: 1-800-567-4797 to place an order with the Wiley office in Etobicoke, Ontario.

Tesla: The One and Only!

A 342-page profusely-illustrated book entitled *The Fantastic Inventions of Nikola Tesla* is a virtual compendium of patents, diagrams, photos, and explanations in Tesla's own words of the many incredible inventions of one of the most brilliant early visionaries of the modern era of electrification and electronics. The U.S. Supreme Court ruled that it was Tesla, not Marconi, who should have been given credit for inventing radio.

The book is a readable collection of his patents, inventions, and thoughts on free energy, anti-gravity, wireless transmission of power, time travel, death rays, radio-controlled airships, and other futuristic inventions. Hundreds of rare photos, drawings and patents are included.

The final chapter deals with a secret city built in a remote South American jungle by one of Tesla's students, Gugliemo Marconi. Marconi's group group claimed to have built "flying saucers" from Tesla's plans in the 1940s, then flown them to Mars in the 1950s. Incredible photos of the Tesla craft are provided.



See why this controversial genius' ideas are now being given more serious reassessment and applications in modern military electronics systems. The Fantastic Inventions of Nikola Tesla is $16.95, plus $5 s/h ($6 to Canada) from CRB Research Books, Inc., P.O. Box 56, Commack, NY 11715-0056. Residents of NY State please add $1.81 tax. MC/VISA welcomed. Phone: 1-800-656-0056. In Canada/AK/HI phone: (516) 543-9169.

BY CHUCK GYSI, N2DUP
e-mail: <SCAN911@aol.com>

Scanning The Globe

MONITORING THE 30 TO 900 MHz "ACTION" BANDS

It's Getting Warmer!

Spring weather has arrived in most parts of the nation. When the weather starts turning warmer, it's not a bad idea to check on your outside antenna farm. How did your antennas make it through the harsh winter that most of the country experiences?

Connectors may have started corroding when ice got inside, cables may have become loose, antenna mounts may need tightening, and elements may be broken off antennas from ice and wind. If you use a tower, the bolts may need tightening. Check over your antennas as soon as possible and plan your corrective action so you don't miss too much of the listening pleasure.

Scanner Edict

The Federal Communications Commission has issued a public notice regarding modification of scanners to receive cellular communications. The notice, issued Feb. 13, reads as follows:

"It has come to our attention that entities are offering to modify scanning receivers (scanners) in order to receive frequencies allocated to the Domestic Public Cellular Radio Telecommunications Service. Such modifications are not permitted under federal law and the Commission's rules.

"Scanners are radio receivers that can automatically switch between four or more frequencies anywhere in the frequency range of 30-960 MHz. On April 19, 1993, the Commission adopted a Report and Order amending Parts 2 and 15 of the FCC Rules to prohibit the manufacture and importation of scanners capable of receiving, or readily being altered to receive, frequencies allocated to the Cellular Radio Service. The Commission adopted these rules to implement Section 302(d) of the Communications Act of 1934, as amended (47 USC 302 (d)). Scanning receivers are required by Section 15.101(a) of the FCC Rules to be certificated by the Commission. Section 15.121 states that scanning receivers and frequency converters designed or marketed for use with scanning receivers must be incapable of operating (tuning), or readily being altered by the user to operate, within the frequency bands allocated to the Domestic Public Cellular Radio Telecommunications Service. Scanners that are capable of "readily being altered by the user" include, but are not limited to: those for which the ability to receive cellular telephone frequencies can be added by clipping the leads of, or installing, a simple component, such as a diode, resistor and/or jumper wire; replacing a plug-in semiconductor chip; or programming a semiconductor chip using special access codes or an external device. Scanners and frequency converters for use with scanners also must be incapable of converting digital cellular frequencies to analog voice audio. Under Section 15.37(f), the manufacture or importation of scanning receivers and frequency converters used with scanning receivers that do not comply with Section 15.121 shall cease on or before April 26, 1994.

"Manufacturing a scanner to receive cellular telephone frequencies is a violation of Section 302(d) of the Communications Act (47 USC. Section 302(d)) and Sections 15.37(f) and 15.121 of the Rules (47 CFR 15.37(f) and 15.121). The modification of scanners on a substantial scale to receive cellular frequencies will be considered to constitute manufacture of such equipment in violation of FCC Rules. Entities engaged in such activity are cautioned to cease advertising and/or performing any such activity immediately.

"The Commission will vigorously take enforcement action against parties found to violate these rules. Willful or repeated violations may be subject to a monetary forfeiture of not more than $10,000 for each violation or each day of a continuing violation, except that the amount assessed for any continuing violation shall not exceed a total of $75,000. See 47 CFR 1.80(a). Further, pursuant to 47 U.S. Code Section 510, such devices may be seized and forfeited to the United States. Use of scanners by individuals to intercept and divulge or use beneficially wireless telephone conversations is subject to Section 705 of the Act. Other federal and state statutes also apply in this area. For more information regarding the interception and divulgence of radio communications, see FCC Fact Sheet, "Interception and Divulgence of Radio Communications," dated January 1997, which can be obtained by calling the Public Service Division at 202-418-0200 or accessing it on the FCC's Internet Web site at <http://www.fcc.gov/Consumer_Info.html/>. Questions concerning this notice may be addressed to Art Wall at 301-725-1585, Ext. 205, fax 301-344 2050 or e-mail <awall@fcc.gov>."

"When the weather starts turning warmer, it's not a bad idea to check on your outside antenna farm."

So, in other words, if the radio doesn't go there, don't expect to be able to find someone to do it for you. A $10,000 fine for modifying a scanner to receive cellular phone calls seems a bit steep!

Are You Amused?

A friend of mine asked recently how she could find frequencies used in amusement parks. She said she visits parks every summer and always notices personnel carrying around two-way radios and pagers. Without using frequency counters or scanner directories that include this information, you can do a little sleuthing to find amusement park channels.

Most persons with handheld scanners have a tendency to take them on vacation, to fairs, amusement parks, sporting events and the like. Whenever there's a crowd, there's bound to be two-way radios in use. Those with scanners will know everything that's going on.

If you're planning on visiting a state or federal park, you may want to check regional scanner directories to see what frequencies may be used by park rangers

MAKE SURE TO STOP BY AND SEE US AT DAYTON! BOOTH #'S 575 - 579

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Great for business and family uses, hunting, fishing, camping. No license required.

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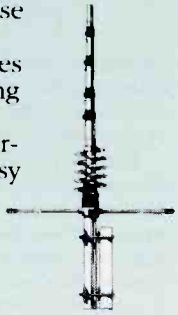

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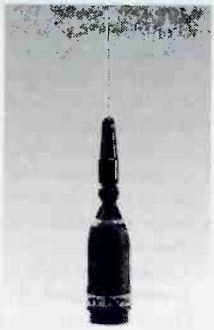
7/8 wave vehicular antenna, base loaded, specially designed for hi-power, from 1500 Watts continuous to 3000 watts (P. e. P.). The coil is made of big section copper wire and works as an impedance transformer and the conic whip is made of 17/7 PH stainless steel to get the best performance. It's strong mount is of black chromed brass supplied with a big washer for perfect waterproofing. The UHF-PL259 connection makes it particularly suitable for the installation on a magnetic mount. The HP3000 is easily tilted and locked into position without the use of screws.



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Earpiece with lightweight boom microphone attached.

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This ultra-compact, light-weight portable features 40 channels, 7 watts, large LCD, and more. Includes low-profile flex antenna, 12V DC power cord w/ lighter socket plug and carry strap.

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Outperforms low-power GMRS radios and offers four times more channels. 7W full 40 channel operation. Features high/low power switch & "Power Save" mode.

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10 channel WX/hazard monitor. Dual watch permits monitoring two channels. Hi/Lo power settings. Jacks for remote microphone and external speaker (not incl.)

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CIRCLE 130 ON READER SERVICE CARD

and crews. If you want to use the search function, you most likely will find most federal park rangers in the 163–173 MHz range. Rangers aren't the only ones to use radios in a park, however. You also may find maintenance crews, concessions, security units, lifeguards, front-gate personnel and parking lot attendants using radios during busier months.

Amusement and theme parks also are popular scanner targets. Check from 151.625 to 151.955, 154.515 to 154.625 and 461.000 to 465.000 MHz on business band frequencies for channels used by security, ride operators, maintenance, hosts, parades, music shows and programs, admissions and more. You're bound to hear reports of lost children, crime, undercover operations and other various activities associated with crowds of people.

Don't forget you'll find business frequencies active at various other events, too, such as baseball games (stadium security is a primary user), auto races (hear the drivers talk to their pit crews), Special Olympics (464.500 and 464.550 are favored by these groups), fairs and festivals (support crews and security will use radios a lot) and more.

The frequencies of 151.625, 464.500, 464.550, 469.500 and 469.550 are reserved for itinerant users and you can almost always find activity on these frequencies; everything from surveying to bridge building to football teams and more. No matter where you live in the United States, you are bound to find someone using one of those frequencies at any given time during the year, if you keep a constant watch on the channels. In addition, the frequencies of 154.570 and 154.600 MHz are reserved for low-power use (2 watts) and often are used for purposes such as security at stadiums and facilities such as museums and more. You won't find more than walkie-talkies on these two channels, though.

"Whenever there's a crowd, there's bound to be two-way radios in use."

And when searching through the 461–465 MHz band, be sure to search in 12.5 kHz steps so you don't miss all the potential activity on the low-power (2-watt) splinter frequencies offset by 12.5 kilohertz from normal full-power channels. The low-power channels can be used for repeaters, phone calls, paging, walkie-talkies, data or telemetry, and any other conceivable use. These splinter channels fall between the full-power channels. For

FCC Cracks Down on Scanners

A Special Report by J.T. Ward

Reacting to increased pressure from Congress, the FCC is cracking down on companies that offer to modify scanners to tune cellular telephone frequencies. The agency is also tightening its evaluation of both new and existing scanner models to make certain that they can't be easily modified to receive cellular transmissions. Also under consideration are new standards for cellular image rejection.

Following a Feb. 5 hearing during which companies advertising scanner modification services were sharply criticized by several members of the House Sub-committee on Telecommunications, and during which the availability of scanner modification instructions on the Internet was revealed, the FCC issued a notice that was published in part in this month's Scanning the Globe column.

The increased interest by Congress comes in the aftermath of an incident in which a north Florida couple tape recorded a cellular telephone conversation between House speaker Newt Gingrich and several others during which Gingrich discussed his pending House Ethics Committee hearing. According to the couple, John and Alice Martin of Fort White, Florida, their scanner picked up the cell call as they were driving. The scanner, which had been purchased from RadioShack, had apparently generated an "image" of Ohio congressman John Boehner's cellular telephone transmission as he talked to Gingrich and the others from the parking lot of a north Florida pancake house.

In a letter to Congressman Thomas J. Bliley, Jr. (R-LA), chairman of the House Committee on Commerce, FCC chairman Reed Hundt promised that the agency "will undertake a thorough examination of our current scanning device authorization and enforcement processes to ascertain whether we are implementing our rules as efficiently and effectively as we can."

Julius Knapp, chief of the FCC's Equipment Authorization Division, said during a February telephone interview that the agency is focusing on the design of both new and existing scanners to make sure they meet provisions of the ECPA which prohibits the manufacture or importation of cellular capable scanners, or scanners which can be "readily" modified to receive cell frequencies.

Knapp said the agency interprets "readily modifiable" to mean that the cellular frequencies can be restored by moving a simple jumper wire, installing or removing a minor component or other similar changes. Readily modifiable also includes keyboard commands and software changes, he said.

Knapp acknowledged that the popular AOR AR-8000 wide-coverage scanner is one of those being looked at closely since some scanner control software programs can restore full cellular coverage on the AR-8000. While he wouldn't single out any one model, Knapp said it's possible the FCC may withdraw the approval of some scanners.

Perhaps surprisingly, Knapp said FCC engineers put a great deal of reliance on the manufacturers' statement that a new scanner model is not readily modifiable. Engineers request to examine actual samples of the radios in a minority of cases, and only spend about an hour reviewing the circuit diagrams and documentation that accompanies an application for authorization, he said.

While the increased scrutiny may slow the approval process, Knapp said there is no moratorium on approval of new models.

It was apparently the Gingrich incident, along with ads from certain companies offering to modify scanners to allow direct tuning of cellular frequencies, that caused Bliley to call for an FCC investigation and a hearing by the House Sub-Committee on Telecommunications.

The FCC's Hundt said that the agency does not investigate complaints where a violation of criminal law may have taken place. Those investigations are handled by the Department of Justice with the FCC providing technical assistance, he said.

During the February 5 hearing, Thomas Wheeler, president of the Cellular Telecommunication Industries Association, called scanner listening "nothing less than electronic stalking". He repeatedly referred to scanner listeners as "electronic stalkers" and said that scanners are sold openly across the country "for the purpose of listening to these calls."

Any doubt that the CTIA and its members are behind this new push to restrict scanners should be erased by the following newspaper advertisement that appeared in several newspapers around the country in February.

"ALLTEL Mobile and the CTIA (Cellular Telephone Industry Association) are totally committed to ensuring complete privacy for all cellular phone users. Together we are doing everything in our power to minimize the risk of eavesdropping on cellular telephone transmissions, and to toughen existing laws governing this offense. Intercepting cellular phone conversations is currently a violation of Federal and state law and we believe that anyone guilty of this crime should be prosecuted to the fullest extent of the law.

"To aid us in making this crime less likely, and the punishment more severe, we urge all cellular phone users to write their congressional representative and express concerns about this important issue."

Testifying before the committee on the side of scanner listeners was Bob Grove, president of Grove Enterprises, a North Carolina radio equipment dealership that until recently offered to modify scanners to receive cellular frequencies.

"Technically unsophisticated Americans are

instance, the low-power channel of 461.8125 falls between 461.800 and 461.825 MHz.

For The Birds

One reader who has contributed to this column in the past is Rick Garrett, N9GSU, of Muncie, IN Rick wrote in to wish me a belated welcome back to the column. He also writes to tell us about an unusual gift he received for Christmas last year—it's a bird feeder made by a company called Wing Song. However, the interesting thing about this feeder, Rick says, is that it has a wireless microphone inside of it, with a monitor to go inside your house, so you can not only see the birds feeding, but you can listen to them, too! Rick passes along the information just in case other readers or their neighbors have one of these units. The frequency used on Rick's unit is 49.83 MHz. The information included with the unit claims the device has a listening range of 75 to 150 feet, but, Rick says his Uniden Sportcat with a rubber duck seems to have a range about double that.

". . . it has a wireless microphone inside of it, with a monitor to go inside your house, so you can not only see the birds feeding, but you can listen to them, too!"

Rick adds that he has become more and more interested in these scanning oddities, everything from fast-food drive-through order windows to baby monitors, and who-knows-what-else is out there. Every time I turn around, there seems to be a new application for radio frequencies. It surely is tough keeping up with all the usage in any size community anymore. Tune around . . . you never know what you will hear!

Write In

What are you listening to on your scanner. We welcome listening tips, questions, frequencies of interest, and photos of your listening posts or radio installations, towers, etc. Write to: Chuck Gysi, N2DUP, Scanning the Globe, *Popular Communications*, 76 N.Broadway, Hicksville, NY 11801-2909, or e-mail to <SCAN911@aol.com>. ■

astounded, and often outraged, upon learning that their cellular telephone conversations are broadcast openly, and that anyone with a variety of receiving devices can listen in," Grove said.

"They don't blame the listeners as much as the vendors who sold them the phone with no warning from the salesperson or in the instruction manual," he said.

In a later telephone interview Grove said he's received a citation from the FCC warning that if the company gets caught modifying scanners in the future it could be fined up to $75,000.

While Grove said he doesn't agree with the FCC's interpretation of the existing law he has no plans to challenge it in court.

"Even if we won under the law as it is, they would only have to, and I believe they will do it anyway, make a few changes in the wording to make it clearly illegal to modify scanners, so there's no point. Besides, we didn't make that much money off modifications anyway," he said.

While scanner modification may or may not be illegal under existing law there's little doubt that it's a crime to intentionally intercept or disclose the contents of a phone call, regardless of whether it is over a hard-wired, cellular or cordless phone. But in the case of cellular calls in particular, the law is little enforced and penalties are light because cellular traffic is so easily intercepted.

Unless there are "aggravating" circumstances, such as a repeat offense, eavesdropping on a cellular call is treated as an infraction, with no jail time and a maximum fine of $5,000.

Deputy Assistant Attorney General Robert Litt suggested to lawmakers they explore "whether it continues to make sense" to levy different penalties for eavesdropping on the different types of calls. "From the point of view of the person having the conversation, the invasion of privacy is the same," he said.

Just because a scanner can't tune the cellular frequencies directly doesn't mean it can't be used to listen to cellular calls. Many scanners can receive cellular transmissions as out-of-band images that appear outside the normal cellular frequency range. It was reportedly just such an image that the north Florida couple who recorded Gingrich's conversation say they overheard while driving in their car.

Officials at Uniden America Corporation filed a petition with the FCC on February 3 to establish standards for scanner image rejection characteristics of at least minus 38 dB in the cellular frequency bands.

In its petition Uniden states that it made a corporate decision to delete the cellular frequency bands from scanners after the ECPA became effective in 1986 and that it was one of the few scanner manufacturers that supported the 1992 amendment banning the manufacture and importation of cellular-capable scanners.

Knapp said there are currently no standards for image rejection, thus the FCC has never tested scanners to see if they could receive cellular transmissions as images.

Uniden officials did not respond to repeated requests for comment on the petition.

What does all this mean to scanner listeners? Several things are likely. First, Congress will almost certainly amend the ECPA to make the act of modifying a scanner to allow it to tune cellular frequencies clearly illegal. This will take only a minor change in the wording of the existing law.

Second, the FCC will continue to crack down on companies offering to perform scanner modifications, as well as on companies outside the U.S. that are selling and shipping scanners to U.S. citizens. Whether they will file charges against U.S. citizens attempting to import such scanners remains to be seen.

Third, some existing scanners may lose their FCC type authorization until they can be redesigned to make cellular modification even more difficult. The FCC has sent letters to both Uniden American Corp. and RadioShack (Tandy Corp) expressing concern with at least some existing scanner models.

Fourth, new image rejection standards will be implemented. This could be a double-edged sword. While it will reduce or eliminate the ability for scanner users to listen to telephone calls via images it could also reduce the amount of annoying pager signals and other images some scanners are prone to pick up, resulting in a better overall product. However, additional components or engineering work needed to meet the new standards may drive the cost of scanners up by a few dollars per unit.

Finally, look for the cellular and wireless communications industries to continue their push for ever more restrictions—and in their dreams, the complete elimination of scanners—as more and more radio-based communications products come to market. They may also be joined by law enforcement lobbying groups that will ask for laws prohibiting scanners from receiving public safety, or perhaps all local government, frequencies. There are already reports on the Internet of a so-far unidentified group doing just that.

What can you, as a scanner listener do, to safeguard your ability to continue to monitor the airwaves? First, be realistic. The battle over cellular transmissions is lost. It's illegal to listen in, and Congress will not overturn existing laws, no matter how unenforceable they may be. Second, if you do monitor cellular or cordless telephone calls keep your mouth shut about what you hear. Had the Martins not tape recorded Newt Gingrich and given that tape to the House Ethics Committee, the cellular industry would not have had an excuse to launch a new offensive against us. Third, write to your local House members. Their address is usually printed in the first few pages of the telephone book. Urge them to look at any new laws restricting scanners very closely so that efforts to protect the privacy of cell phone users do not inhibit our ability to monitor other portions of the radio spectrum. And lastly, stay tuned and stay informed. This is not likely to be the end of this story.

BY NANCY BARRY

Product Spotlight

POP'COMM REVIEWS PRODUCTS OF INTEREST

The Sangean ATS-909 Portable Shortwave Receiver

Every once in a while there's a product that just demands a review. There are a number of items that cross my desk each month; each one with bells, whistles, and features galore. Only a few really jump out at me. Sangean's newest shortwave receiver is one of those that jumped.

The ATS-909 has it all—bells, whistles, beeps, buttons—you name it. But, all the features, unlike many products, are not just for show. Every feature is geared to making shortwave listening both easier and more exciting. Although not necessarily created for the beginner SWL, the ATS-909 will provide nearly everything an SWLer will need from beginner to avid hobbyist.

Frequency Coverage:

FM (VHF)	87.5–108 MHz
MW	520–1710 kHz
LW	153–519 kHz
Shortwave	1.711–29.999 MHz

Power Requirement: 6 Vdc, 300 mA center connector negative AC adapter (included); or 4 "AA" batteries (not included).

Suggested Retail Price: $359

Contact: Sangean America, Inc.
2651 Troy Avenue
S. El Monte, CA 91733
Phone: 818-579-1600
Fax: 818-579-6806

Photo 1. The Sangean ATS-909 Shortwave Receiver. (Courtesy Sangean America, Inc.)

Tuning Features

The ATS-909 is a 306 memory FM stereo/MW/LW/SW synthesized receiver that offers five frequency tuning methods, ATS-Auto Tuning, Direct Tuning, Manual Tuning, Scan Tuning, and Memory Tuning. The ATS-Auto Tuning system automatically sets your memory presets based on the signal strength of the received station. This function is especially useful to people new to the hobby.

The Direct Tuning function allows the user to program the frequency of a desired station into the receiver by using the key pad. The key pad has a comfortable feel with raised buttons that with some time, can be memorized for quick programming functions.

Manual Tuning can be achieved by using the rotary knob located on the right side of the radio. This is especially useful for fine-tuning stations. The step button is used in conjunction with the tuning knob to determine the tuning spread for each step of the tuning knob.

Another tuning feature ideal for the beginner is Scan Tuning. This is done by pressing and holding the Up/Down button for a second. The unit will then automatically scan the frequency band and stop when a station is detected.

It is also possible to preset up to 306 stations using the memory capability of the ATS-909. Each nine presets make up one "page." The SW band is capable of storing 29 pages or 261 preset stations; 18 presets on FM and MW and nine presets on LW.

Each tuning possibility is fully explained in the manual that comes with the unit and each offers unique possibilities to the user.

The RDS Function

This is probably the newest "gadget" to be added to any receiver. RDS (Radio Data System) signals are now being transmitted by many FM radio stations. When receiving an RDS station, the display will show the station call letters and if the RDS station is also transmitting a clock time function, it will automatically correct the time every minute. This display will vary slightly between stations depending upon what the station chooses to print. One station in the New York area transmits their station ID and location. The display looked something like this: **Z 100 N Y C**. Other stations just offer basic information such as: **WNEW — FM**. Some stations even include their format type in their display. WBGO in Newark, NJ displays **JAZZ 88** on their RDS display.

There are 7,000 radio stations in the

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- Auto Tuning Methods
- Auto SW Search
- ATS Automatically Presets Memories
- Manual Editing
- USB/LSB Single Side Band Select
- RF Gain Control
- 3 Individual Timers
- Adjustable Sleep Timer
- Dual Time System
- Selectable Tune Steps
- Priority Key
- Wide/Narrow Filter
- Battery Indicator
- Signal Strength Meter
- Mono/Stereo Switch
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- Auto Daylight Savings Time Button
- Lock Switch
- Reset Switch
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- 9KHZ/10KHZ Switch
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- Includes AC Adapter
- Includes ANT-60 Antenna
- Includes Carrying Case
- 8¼" x 5.0" x 1½"

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Reynoldsburg, OH 43068
(800) 431-3939

United States, of those, 5,000 are FM stations. Right now only 694 of those FM stations have the RDS capabilities. One of the reasons stations might be slow to jump on the RDS bandwagon is the cost. To install and maintain RDS equipment costs stations approximately $2,000 to $5,000 according to sources at EIA.

For more information on this relatively new service, try calling Electronic Industries Association's Consumer Electronic Manufacturers Association at 703-907-7669; or try the internet. One particularly helpful internet location is: <http://www.dungeon.com/~start/rds.html>.

Other Features

As I mentioned at the start of this column, the ATS-909 offers many features. Some will be very useful to you as you surf the shortwaves, others may not. It will, of course, depend on what you as an SWLer look for in a receiver. The ATS-909 will *not* let you down as far as feature selection goes. Sangean has included nearly everything you could want in a shortwave receiver. The only thing this 909 can't do is bring you food and drink while you're caught up in the action around the world!

Some of the things you can do include: Program an Instant Priority button that will allow you to instantly recall your favorite station from any frequency of band; receive single side band (SSB) transmissions; program up to three timer circuits; utilize the auto shut-off function; exchange station positions in memory; and lock a station into memory.

The SSB reception capability is a nice feature for those of you who would like to listen in on ham and utility transmissions. I was able to catch a few upper sideband stations; most with aviation weather reports or comms that were barely audible. I recommend SSB listening to anyone who is up for quite a challenge. If you have a lot of patience, (it can take up to an hour on one frequency to hear something) and a really good antenna you're, as we say around the office, "good to go!"

The ATS-909 has three timer circuits that enable you to program three separate wake-up times. The alarm function may be set with the power on or off. When choosing your wake-up times, you can also choose radio or buzzer. If you should decide to have the radio as the alarm, the ATS-909 allows you to set each time to a different frequency in a few simple steps. Sangean has also taken into consideration the possibility of you falling asleep during one of those late-night journeys to far-off lands. The sleep timer allows you to set the auto-shut off in 10 minute decrements from 90 minutes to 10 minutes. For those of you who might be listening outside or in dimly-lit conditions, the ATS-909 also has an LCD display light. The display light remains on for approximately 12 seconds or will go out when another function is initiated. If the AC adapter (included) is in use, the LCD display will be illuminated continuously while the radio is in operation.

Another feature Sangean has included in their great little receiver, is actually available by way of an included accessory. The ATS-909 is designed to receive FM stereo broadcasts with headphones connected to the stereo headphone jack. The FM/Stereo/Mono switch must be placed in the stereo position. The stereo icon will appear in the LCD display if headphones are connected. The reception quality was fabulous! I couldn't believe how clear and clean the FM stereo was. It sounded like the musicians were right in my livingroom! This feature convinced me that this ATS-909 is a great all-around performer and a perfect portable. I know that the FM capabilities are not all that important to the serious SWLer, but the quality was so good, I thought it warranted mentioning.

Additional Thoughts

This Sangean ATS-909 is a great little portable! There's not much that the folks at Sangean didn't include. They've included a 1-year limited warranty covering manufacturing defects or malfunctions. Sangean will repair or replace defective merchandise at no charge except for shipping and handling. They've even added in an ANT-60 portable shortwave antenna to help catch a few more signals. I have to be honest and say that I didn't notice any real improvement over the telescoping whip. With any luck, the propagation situation will improve and reception will be easier. (My sources assure me that it's *got* to get better!) For now, we'd recommend using a longwire antenna physically attached to the base of the telescoping whip for enhanced reception.

Overall, reception was very good. I did enjoy a number of English language broadcasts including Radio Havana Cuba, Radio Netherlands and a BBC World Service show called "Network Africa." Some of my favorite listening came from native language broadcasts with music from places such as Taiwan and Japan.

The unit is 5" × 8.25" × 1.5" (HWD) and weighs approximately 30 oz (slightly more with batteries). The ATS-909 is a convenient size and shape, has a comfortable key pad and can be operated without a Rhodes Scholar by your side. It has excellent audio quality and is the kind of radio that can be used by beginners and experts alike. If you're a beginner, it's got a lot of extras you might not be ready for just yet, but it's nice to know that this radio will allow you to become proficient at an exciting hobby without having to constantly upgrade your equipment as you improve. For the experienced hobbyist, this is the portable for you! The Sangean ATS-909 will provide hour upon hour of exciting globe hopping!

For further information on the ATS-909, or any of Sangean's other fine products, contact Sangean America, Inc., 2651 Troy Avenue, S. El Monte, CA 91733; or phone 818-579-1600; or fax 818-579-6806; or call Sangean's toll-free hotline at 1-888-SANGEAN. ■

Tap into secret Shortwave Signals

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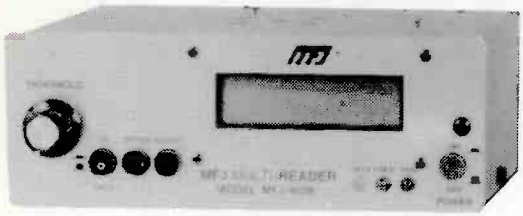

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Listen to maritime users, diplomats and amateurs send and receive error free messages using various forms of TOR (Telex-Over-Radio).

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

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

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

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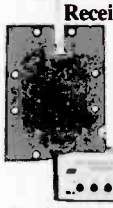
Mount it outdoors away from electrical noise for maximum signal, minimum noise. Covers 50 KHz to 30 MHz.



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

$129.95 MFJ-1024

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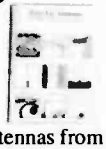

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The *Super Hi-Q Loop*™ is a professional quality remotely tuned 10-30 MHz high-Q antenna. It's very quiet and has a very narrow bandwidth that reduces receiver overloading and out-of-band interference.

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

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Cellular look-a-like. Covers 25-1300 MHz. High-est gain on 406-512 and 108-174 MHz, 19 in. Magnet mount. MFJ-1824BB has BNC/UHF plug; MFJ-1824BM has Motorola plug.

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MFJ-107B **$9.95**

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

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

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Pop'Comm's World Band Tuning Tips

May 1997

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 UT equals 7 p.m. EST, 6 p.m. CST, 4 pm PST.

UTC	Freq.	Station/Country	Notes
0000	7150	Radio Ukraine	
0000	9705	R. Mexico Int'l	SS
0030	4980	Ecos del Torbes, Venezuela	SS
0030	5965	R. Havana Cuba	SS
0030	7325	Austria Radio Int'l	
0030	9540	Radio Exterior Espana, Spain	
0100	3280	La Voz del Napo, Ecuador	SS
0100	4805	Radiodifusora Amazonas, Brazil	PP
0100	4885	Radio Clube do Para, Brazil	PP
0100	6010	RAI, Italy	
0100	6135	Swiss Radio Int'l	
0100	6190	Radio Budapest, Hungary	
0100	7105	Radio Tashkent, Uzbekistan	
0100	7115	Radio Yugoslavia	
0100	7305	Slovak Radio, Slovakia	
0100	7345	R. Prague, Czech Republic	EE
0100	9545	Deutsche Welle, Germany	
0100	9560	R. Norway	EE Sun
0100	9745	HCJB, Ecuador	
0100	9835	Radio Budapest, Hungary	
0100	15167	Radio Tahiti	FF
0130	4780	Radio Coatan, Guatemala	SS
0130	5385	Radio Huamarca, Peru	SS
0130	5890	Radio MI, Honduras	SS
0130	5981	AWR/Union Radio, Guatemala	SS
0130	6090	Radio Bandeirantes, Brazil	PP
0130	7290	Radio Sweden	
0130	7448	Voice of Greece	GG/EE
0200	3210	Radio Exterior Espana, via Costa Rica	SS
0200	3250	Radio Luz y Vida, Honduras	SS
0200	4930	Radio Internaçional, Honduras	SS
0200	4985	Radio Brazil Central, Brazil	PP
0200	5077	Caracol Colombia	SS
0200	5930	Radio Slovakia International, Slovakia	
0200	5940	Voice of Vietnam, via Russia	
0200	6000	Radio Havana Cuba	EE
0200	6025	Radio Amancer, Dominican Republic	SS
0200	6045	Deutsche Welle, Germany	
0200	6150	Adventist World Radio, Costa Rica	SS
0200	9475	R. Cairo, Egypt	
0200	9735	R. Naçional Paraguay	SS
0200	11710	RAE, Argentina	
0200	11780	Radio Naçional/Radiobras, Brazil	
0230	6200	Radio Sweden	
0230	7160	Radio Tirana, Albania	
0243	7215	Qatar Broadcasting Service	AA, s/on
0250	6095	Vatican Radio	
0250	7200	Republic of Sudan Radio	AA
0300	3220	Channel Africa, South Africa	
0300	3306	Zimbabwe Broadcasting Corp.	
0300	4910	Zimbabwe Broadcasting Corp.	unid
0300	4940	Radio Amazonas, Venezuela	SS
0300	4955	Radio Naçional, Colombia	SS
0300	5035	Radio Aparecida, Brazil	PP
0300	9640	Radio Botswana	EE/local
0300	9690	China Radio International, via Spain	
0300	9700	Radio Bulgaria	
0329	6210	Radio Fana, Ethiopia	unid
0330	3955	Channel Africa, South Africa	unid
0330	4760	Trans World Radio, Swaziland	GG
0330	7215	Trans World Radio via South Africa	
0400	3300	Radio Cultural, Guatemala	SS
0400	4991	Radio Ancash, Peru	SS
0400	5890	Radio Bulgaria	
0400	8000	Voice of Sudan (clandestine)	AA
0400	9590	BBC, England	
0400	9730	China Radio Int'l, via French Guiana	
0430	4770	R. Nigeria, Kaduna	sign on
0430	6165	Radio Netherlands via Bonaire	
0430	9415	HCJB, Ecuador	GG
0500	4890	Radio France Inernational, via Gabon	FF
0500	4904.5	Radiodiffusion Nat'l Tchadienne, Chad	FF
0500	6055	Radio Exterior Espana, Spain	
0500	6105	Radio Universidad, Costa Rica	SS
0500	6110	Radio Japan	EE
0500	6185	R. Educacion, Mexico	SS/EE
0500	7255	Voice of Nigeria	
0500	7480	Radio Bulgaria	
0500	9485	Radio Bulgaria	EE
0500	9580	Africa No. One, Gabon	FF

UTC	Freq.	Station/Country	Notes
0500	9675	Channel Africa, South Africa	
0500	9750	VORGAN, Angola	PP
0500	9885	Swiss Radio Int'l	II
0530	3366	Ghana Broadcasting Corp.	
0530	4750	Voice of America relay, Sao Tome	FF
0600	4815	RadioTV Burkina, Burkina Faso	FF
0600	4870	ORTB, Benin	FF
0600	5004	Radio Naçional, Equitorial Guinea	SS
0600	7125	RTV Guineene, Guinea	FF
0600	9425	Voice of Greece	
0630	6015	R. Austria Int'l, via Canada	
0700	4783	Radio TV Malienne, Mali	FF
0700	5950	Voice of Guyana	
0700	7155	RTV Malagasy	FF
0700	11615	HCJB, Ecuador	
0730	7265	Sudwestfunk, Germany	GG
0800	5980	Radio Guaruja, Brazil	PP
0800	6070	Radio Japan-NHK World, via Fr. Guiana	
0800	6100	R. New Zealand Int'l	
0800	7283	RTV Malienne, Mali	FF
0900	6030	Radio Globo, Brazil	PP
0900	6160	CKZU, Canada	PP
0900	6250	Radio Pyongyang, North Korea	KK
0930	4895	Radio Bare, Brazil	PP
0930	9665	Radio Marumby, Brazil	PP
1000	4450	Radio Frontera, Bolivia	SS
1000	4805	Radiodifusoras Amazonas, Brazil	PP
1000	4969	Radio Imagen, Peru	SS
1000	4996	Radio Andina, Peru	SS
1000	6095	Radio Naçional, Peru	SS
1000	6106	CKZN, Canada	
1000	9505	Radio Tacna, Peru	SS
1000	21605	UAE Radio, Dubai	
1030	4775	Radio Tarma, Peru	SS
1030	5020	Solomon Islands Broadcasting Corp.	EE
1100	3380	Radio Chortis, Guatemala	SS/local
1100	4870	La Voz del Upano, Ecuador	SS
1100	6175	Faro del Caribe, Costa Rica	SS
1100	9580	R. Australia	
1130	6120	R. Japan via Canada	
1130	9650	R. Korea, S. Korea, via Canada	
1130	9700	Radio New Zealand Int'l	
1200	9510	R. Australia	
1200	9805	Radio France International	
1200	13790	R. Bulgaria	
1200	13800	Radio Norway	
1200	15075	All India Radio	Tamil
1200	15115	HCJB, Ecuador	
1200	15400	R. Finland Int'l	Finnish
1230	9810	Radio Thailand	
1230	11735	Radio Finland Int'l	
1230	11900	Radio Finland Int'l	
1230	12020	Voice of Vietnam	
1230	12085	R. Ulaan Bataar, Mongolia	
1230	13610	R. Vlaanderen Int'l, Belgium	
1230	15195	Radio France International	
1300	4035	Xizang PBS, Tibet	CC
1300	7145	Radio Thailand	various
1300	7405	China Radio International	
1300	9590	R. Norway	NN
1300	9625	CBC Northern Service, Canada	
1300	11940	Radio Romania Int'l	
1300	15605	Radio Norway Int'l	NN/EE
1300	17745	R. Romania Int'l	
1320	21520	RAI, Italy	s/on; Sun.
1330	11650	R. Sweden	
1330	11785	Broadcasting Svc of Kingdom of Saudi Arabia	AA
1330	13770	Radio Austria Int'l	
1400	11720	R. Norway	NN
1400	13580	Radio Prague, Czech Republic	
1400	17560	Radio France Int'l, via Gabon	
1400	17780	RAI, Italy	II
1400	17830	Qatar Broadcasting Service	AA
1430	9535	Radio Japan NHK World	
1430	12080	Radio Australia	
1430	15175	Voice of Greece	
1430	21515	Radio Portugal Int'l	
1500	9515	BBC via Canada	
1500	11402	ISBS, Iceland	Icelandic
1500	11605	Kol Israel	
1500	11890	Radio Oman	AA
1500	13635	Swiss Radio Int'l	
1500	17545	Reshet Bet, Israel	Hebrew
1600	11690	Radio Jordan	
1600	11785	Radio Republik Indonesia	
1600	11840	Radio Norway Int'l	NN/EE
1600	15160	Radio Algiers Int'l, Algeria	
1600	15240	Channel Africa, South Africa	
1600	21560	Deutsche Welle, Germany	GG
1630	15395	UAE Radio, Dubai	EE
1630	21700	R. Japan NHK World, via Gabon	JJ
1700	15300	Radio France International	FF
1700	15715	WINB, Pennsylvania	
1730	11970	R. Jordan	AA
1800	11775	Caribbean Beacon, Anguilla	
1800	11975	VOA relay, Sao Tome	
1800	15265	Radiobras/Radio Naçional, Brazil	
1800	15450	RTT Tunisia	AA
1830	11645	Voice of Greece	
1830	11705	Radio France International	FF
1830	11990	Radio Kuwait	
1900	15345	RAE, Argentina	
1900	15540	HCJB, Ecuador	
1900	17785	VOA via Morocco	
1930	15505	Radio Kuwait	AA
2000	12085	Radio Damascus, Syria	
2100	9550	R. Havana Cuba	
2100	9935	RS Makedonias, Greece	Greek
2100	13725	Radio Havana Cuba	USB mode
2130	15415	R. Jamahiriya, Libya	AA
2200	5910	Radio Vlaanderen Int'l, Belgium	
2200	9445	Voice of Turkey	TT/EE
2200	9570	R. Portugal	PP
2200	17795	Radio Australia	
2230	5945	Radio Austria Int'l	
2230	9430	Radio Prague, Czech Republic	
2230	9855	Radio Kuwait	AA
2300	5100	Radio Liberia	EE/FF
2300	7475	RRTV Tunisienne, Tunisia	AA
2300	9655	Voice of Turkey	
2300	9900	Radio Cairo, Egypt	
2300	11700	Radio Pyongyang, North Korea	
2330	7105	Radio Romania Int'l	
2355	9925	R. Vlaanderen Int'l, Belgium	GG

BY NANCY BARRY

Product Parade

REVIEW OF NEW, INTERESTING AND USEFUL PRODUCTS

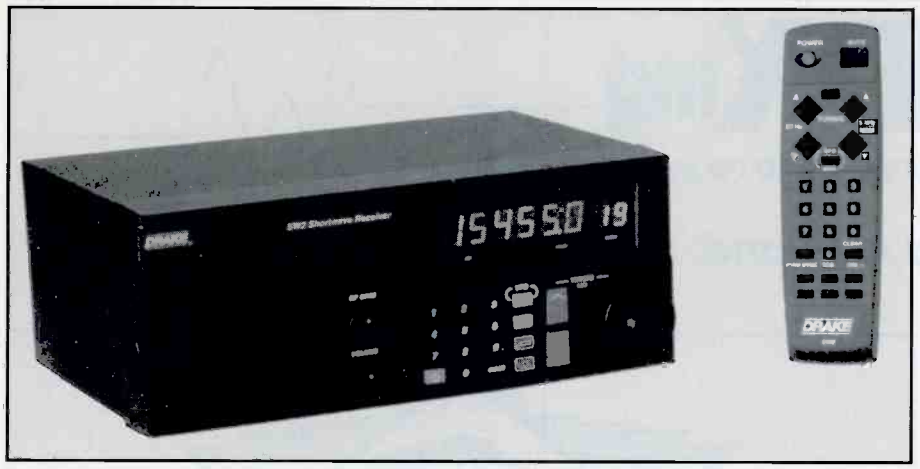
Drake Announces SW2 Shortwave Receiver

The R.L. Drake Company has introduced the newest addition to its shortwave receiver product family—the SW2 Shortwave Receiver. This synthesized AM/SSB receiver is microprocessor-controlled and has continuous coverage capability from 100 kHz through 30000 kHz. Features include full AM and single sideband operation, selectable sideband synchronous detection, and an optional infrared remote control to give the user added flexibility.

The new SW2 includes 100 programmable channel memories, and 32 preprogrammed positions, including many popular North American and global broadcast stations. "Users can take the SW2 out of the box and immediately begin enjoying the BBC, Monitor Radio, Radio Havana, Voice of Russia, and the Voice of America, just to name a few," explained Bob Jackson, Marketing Director. The operating frequency can be tuned via a tuning dial, tuning buttons, or by direct numeric entry. All tuning controls are located on the front panel. Also located on the front panel is an adjustable RF gain control and an extra-large front panel LED display that shows the receive frequency and meter band designation. Memory mode operation and connection to an AC (or DC) power source are indicated by additional front panel LEDs. (SW2 includes an AC adaptor wall transformer). "This is the ideal receiver for those wishing to listen to amateur radio. The SW2 is a user-friendly receiver and provides advanced features not found on other shortwave receivers in its price range," says Jackson.

The Drake SW2 also offers dual antenna input terminals on the rear panel for connection of either a 50 Ohm coax feedline or a wire antenna. In addition, the 12 volt capability of the SW2 combined with an optional mobile mount antenna, make the receiver ideal for vehicle operation.

Initial specifications from Drake report AM sensitivity at less than 2.0 uv, typical (10 dB S+N/N) and (1000 Hz, 30 percent Mod); SSB sensitivity at less than 0.5 uv (10 dB S+N/N), readout accuracy to nearest 0.1 kHz; selectivity on AM, 6 kHz @ –6dB, less than 12 kHz @ –60



"Drake's new SW2 receiver (Courtesy R.L. Drake Company)."

dB; sideband selectivity 2.3 kHz @ –6 dB, less than 5 kHz @ –60 dB. Tuning step sizes are 50 Hz with tuning wheel, 5 kHz with up/down buttons. Headphone jack is 1/8-inch stereo/mono type (mono reception only); Dimensions (HWD) 4 3/8" × 10 7/8" × 7 5/8". Weight is 5.8 lbs.

For more information on the new SW2 which carries a suggested retail price of $499, contact the R.L. Drake Company 230 Industrial Drive, Franklin, OH 45005 or phone 513-746-4556 or fax 513-743-4510 or visit their Web site at <http://www.rldrake.com/>.

New Antenna Theory Book from MFJ

MFJ Publishing has released a new book for amateur radio operators called Antennas and Transmission Lines by John A. Kuecken. Most of the 37 chapters are short and to the point, making it useful as a reference guide or study book.

The first third of the book covers basic antenna theory, including point array sources, wave interference, standing waves, collimators, lenses, apertures, and simple radiators. The second third of the book covers transmission lines, discussing line impedance matching, Smith and immittance charts, lumped circuits, waveguides, directional couplers, hybrid junctions, reactive elements, and resonant circuits. The final third of the text consists of selected antenna topics such as self-impedance, balance, short and antifade antennas, frequency and ground-independent antennas half-space, noise, and radio-range protection.

For more information or your nearest dealer, contact MFJ Enterprises, Inc., 300 Industrial Park Road, Mississippi State, MS 39762; phone 601-323-5869; fax 601-323-6551; via Internet Web Site <http://mfjenterprises.com>; or order toll-free by calling 1-800-647-1800.

BY TIM KRIDEL

Broadcast DXing

DX, NEWS AND VIEWS OF AM AND FM BROADCASTING

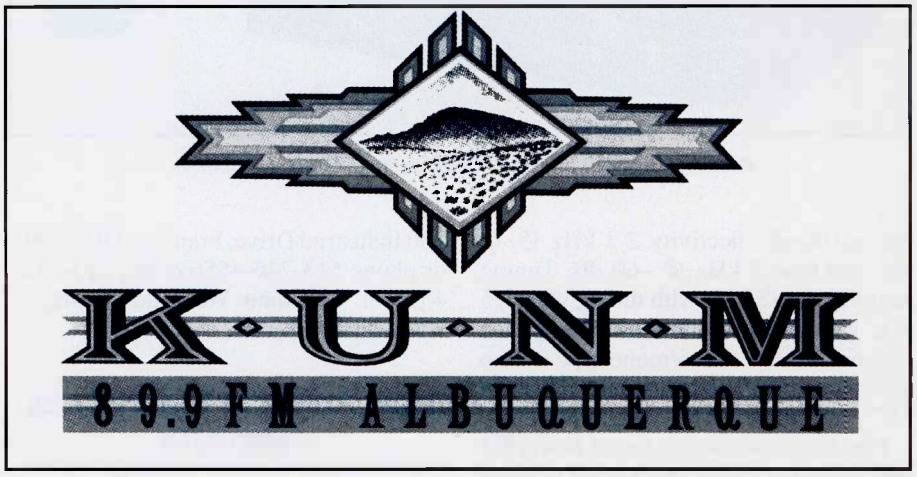
The Expanded AM Band: Better Late Than Never?

For those of you who have spent the first few weeks of the new year tuning around 1650 kHz trying to hear KNNZ—no, your radio isn't broken. So far, the station hasn't put Costa Mesa, CA, on the map as the home of the nation's third expanded AM band station. But it will, soon. Hopefully.

Program director Jim Roope told *Pop'Comm* in mid-February that the 1650 kHz outlet will be on "in the coming weeks," although he was unsure exactly when the station would sign on.

The calls for the 1650 kHz outlet will be KBTL, in honor of its all-Beatles format. Roope said plans are to have KBTL simulcast on 1260 kHz to promote the new station and educate listeners about the 10 new channels between 1605 kHz and 1705 kHz.

Meanwhile, KNNZ on Feb. 15 became KNOB, and sister station KNNS on 1260 kHz became KGIL. Other plans call for Tijuana, Mexico's XETIN, which regularly simulcasts KNNZ and KNNS, to continue its rebroadcasts of the 540 kHz outlet. XETIN and KNNZ were set to debut on March 1 a classical music format, IDing as "K-Bach."



The campus radio station of the University of New Mexico at Albuquerque. The reach of its 13.5-kW signal is extended by translator stations K220AW in Las Vegas and K220EM in Nageezi, both on 91.9 MHz. (Courtesy Steve Walkowski, Albuquerque, N.M.)

Kids Stuff

The syndicator of the popular Radio Aahs kids format hasn't wasted much time in circling its wagons following the debut of Radio Disney last November. Children's Broadcasting Corp.'s (CBC) in January secured a $16.5 million loan, which should give it the capital necessary to acquire more stations. By the end of January, CBC had closed on a deal to purchase Sandwich, Illinois's WAUR-AM, and signed up Memphis' WNWZ, for a total of 32 affiliate stations nationwide. Between its affiliates and its own six stations in the nation's top 10 markets, the Radio Aahs format is heard in about 40 percent of the country.

Steve & D.C. have moved their morning mayhem from St. Louis' WKBQ-FM (now WALC) to WKKX-FM.

". . . CBC faces its strongest challenge yet from the fledgling Radio Disney network."

The acquisition of WAUR comes on the heels of FCC approval for CBC to power up its Orange, CA station. KPLS-AM's daytime power will go from 2.5 kW to 50 kW, according to a press release sent in Pop'Comm reader Nolan Crabb. The nighttime power also will be increased, from 1 kW to 20 kW.

All told, the increases in capital and coverage may prove critical, as CBC faces its strongest challenge yet from the fledgling Radio Disney network. The Walt Disney Co. may have some extra cash on hand—$2.5 billion, according to estimates—if a planned sale of its Capital Cities/ABC publishing division goes through. In fact, ABC Radio President Bob Callahan said Disney is committed to the radio business, and hinted that the company may use the cash raised from the sale to acquire more stations. Just how many will carry Radio Disney remains to be seen.

South Bend Tribute

The folks in South Bend, IN know a thing or two about building on tradition.

"The folks in South Bend, IN know a thing or two about building on tradition."

We're not just talking about football, either. At 76, South Bend's WSBT is one of the nations oldest radio stations. Like many stations at the time, it was born out of an experiment by a newspaper employee. A home-brew transmitter, built in the fall of 1921 by a reporter for the South Bend Tribune, formed what would eventually become WGAZ. The 10-watt station increased its power to 50 watts in 1923, according to a station profile in the Tribune, sent in by Les Coburn, of Knox, IN. A call change to WSBT two years later reflected the station's ownership, making the Tribune the 34th station in the country with its own radio station.

Today, WSBT is owned by Schurz Communications, and runs 5 kW 24-hours-a-day, with a news-talk format.

In Brief

As if they haven't suffered enough already, backers of the proposed satellite-delivered digital audio radio service (DARS) now have two more issues to contend with: public-interest requirements and questions about spectrum allocations. FCC commissioners are split over whether to make public service a requirement for a DARS license. Meanwhile, the Consumer Electronics Manufacturers Association told the FCC that the 25 MHz of spectrum above 2310 MHz allocated for DARS is insufficient to handle the proposed service.

Burlington, Ontario's CING-FM will decrease its effective radiated power from 50 kW to 26.1 kW. The cut is part of an effort to preserve the station's coverage area as it increases the height of its antenna, as well as to reduce interference to aeronautical NAV/COM services.

"FCC commissioners are split over whether to make public service a requirement for a DARS license."

Seeking Permits to Construct New FM Stations

CO	Delta	103.3 MHz	
CO	Wellington	94.3 MHz	
GA	Gibson	94.3 MHz	
ID	McCall	98.3 MHz	
ID	Wallace	97.5 MHz	
ID	Wallace	100.7 MHz	
IL	Pittsfield	91.7 MHz	500 watts
LA	Jonesville	105.1 MHz	
MI	Baraga	104.3 MHz	
MN	Faribault	107.5 MHz	
MO	Campbell	107.5 MHz	
MO	Shell Knob	97.7 MHz	
MS	State College	104.5 MHz	
NC	Columbia	102.5 MHz	
NC	Fayetteville	91.1 MHz	4.2 kW
NC	Hatteras	94.5 MHz	
OK	Ada	91.3 MHz	100 kW
OK	Woodward	95.9 MHz	
SC	Cross Hill	94.1 MHz	
TN	Hohenwald	90.7 MHz	1 kW
TX	Denver City	97.5 MHz	
TX	Leakey	104.3 MHz	
TX	Leesville	88.7 MHz	3 kW
TX	Odessa	89.5 MHz	1 kW
TX	Pearsall	104.1 MHz	
UT	Roosevelt	94.3 MHz	
WV	White Sulphur Spgs.	93.3 MHz	

Granted Permits To Construct New FM Stations

AR	Forrest City	88.1 MHz	
CA	Gairmead	91.1 MHz	15 kW
GA	Statenville	97.5 MHz	6 kW
HI	Lihue	88.9 MHz	
IA	Madrid	96.1 MHz	6 kW
IN	Crawfordsville	91.3 MHz	2.2 kW
IN	Evansville	107.5 MHz	2.25 kW
MO	Kennett	89.9 MHz	
MO	Marble Hill	97.3 MHz	
PR	Mayaguez	88.3 MHz	
TX	Dilley	98.9 MHz	50 kW
TX	Yuma	91.9 MHz	
VA	Winchester	99.3 MHz	(WFQX booster)
VT	Montpelier	103.3 MHz	(WGLY-FM booster)
WA	Omak	90.1 MHz	
WA	Davenport	97.3 MHz	4.8 kW
WY	Casper	104.7 MHz	183 watts

Revoked, Canceled or Deleted

KYEG	Canadian, TX	Dark since 12/91.	
KZHT-FM	Bountiful, UT	94.9 MHz	100 watt booster only.
WYFN	Rocky Mount, VA	1290 kHz	
WHET	Birnamwood, WI	92.9 MHz	6 kW
WLVC	Fort Kent, ME	1340 kHz	Dark since 3/94.
WRTL	Ephrata, PA	90.7 MHz	650 watts
WXJJ	Mt. Vernon, KY	102.9 MHz	3 kW

Requesting AM Facility Changes

KINY	Juneau, AK	800 kHz	Seeks night increase to 8.5 kW.
KMCI	McCall, ID	1240 kHz	Seeks move to Donnelly, 1 kW full time.
KOKE	Giddings, TX	1600 kHz	Seeks move to Pflugerville, 5 kW/700 w.
KOMY	Watsonville, CA	1340 kHz	Seeks move to LaSelva Beach.
WRPT	Peterboro, NH	1050 kHz	Seeks move to Asland, MA, 650 kHz, 250 w.

Changed AM Facilities

KIEV	Glendale, CA	870 kHz	Increased days to 20 kW.
KNCO	Grass Valley, CA	830 kHz	Increased to 25/10 kW.
WLVV	Mobile, AL	1410 kHz	Changed power.

New FM Call Letters Issued

KARH	Forrest City, AR
KCYS	Seaside, OR
KEZZ	Estes Park, CO
KHGN	Kirksville, MO
KKJW	Stanton, TX
KLWS	Moses Lake, WA

In a sad twist on the rash of church burnings last year, Jesup, GA's WLPT-FM was knocked off the air for a week after vandals burned down its transmitter building. The Christian-format station had completed its new facilities only a year earlier.

Another set of rare three-letter calls has been retired, this time in St. Louis. As part of its reformatting in January, KSD-AM changed its calls to KTRS—"Talk Radio St. Louis." KSD-FM is owned by another company, and will not change its calls. KTRS' stature in St. Louis went up another notch as it acquired the broadcast rights to University of Missouri football and basketball games, beginning this fall. Crosstown rival KMOX had long been the voice of the Tigers, but the university apparently was unhappy about its sports being pre-empted in favor of Blues hockey and Cardinals baseball. KMOX, meanwhile, recently added CNN Radio News to supplement the national and international news it already receives from CBS Radio.

"The next Frasier" is how KPIX-FM is billing the host of its new weekday advice show. Psychotherapist Dr. Tara Fields

KPUB	Prescott, AZ	
KYOD	Casper, WY	
KZZM	Dayton, WA	
WCMV-FM	Oscoda, MI	
WIYQ	McConnellsville, PA	
WJKW	Athens, OH	
WLVX	Charlestown, IN	
WMOM	Pentwater, MI	
WWWA	Winslow, ME	
WZAX	Nashville, NC	

Pending FM Call Letter Changes

New	Old	
KSMJ	KHIS-FM	Bakersfield, CA
KTPZ	KLVJ-FM	Mountain Home, ID
WEAM-FM	WFAZ	Thomasville, NC
WLUS	WDJY	Trenton, FL

Changed FM Call Letters

New	Old	
KHHK	KZTA-FM	Yakima, WA
KIOL	KMMX	Lamesa, TX
KIXQ	KJKT	Joplin, MO
KJEL	KIRK	Lebanon, MO
KJMK	KIXQ	Webb City, MO
KJQN	KSJC-FM	Stockton, CA
KKZN	KNBR-FM	Halton City, TX
KLTR	KHEN	Caldwell, TX
KMBR	KQUY	Butte, MT
KMMX	KIOL-FM	Tahoka, TX
KVSR	KRBT	Fresno, CA
KXXI	KQNM	Gallup, NM
KYNU	KANG	Carrington, ND
KZTA	KHHK	Naches, WA
KZTR	KLTR	Franklin, TX
WDBZ	WMXV	New York, NY
WEBZ	WOWW	Port St. Joe, FL
WEQQ	WWRT	Pinetops, NC
WFXN	WZZW-FM	Milton, WV
WGOW-FM	WFXS	Soddy-Daisy, TN
WHPZ	WYEZ	Bremen, IN
WIJY	WLOW	Bluffton, SC
WJLR	WKLO	Seymour, IN
WJZC	WJCE-FM	Russellville, KY
WLOW	WIJY	Hilton Head, SC
WMXF	WDLF	Old Fort, NC
WOWF	WSWJ	Crossville, TN
WQWV	WJBQ	Fisher, WV
WRBN	WQXJ	Clayton, GA
WSMR	WNCQ	Sarasota, FL
WUKS	WUSA-FM	Tampa, FL
WXRD	WZCO	Crown Point, IN
WYSF	WMXQ	Birmingham, AL

New AM Call Letters Issued

WJNL	Petoskey, MI
WPNP	Mulberry, FL

Pending AM Call Letter Changes

New	Old	
KMHI	KLVJ	Mountain Home, ID
KOOO	KDFX	Dallas, TX
WYPA	WSCR	Chicago, IL

Changed AM Call Letters

New	Old	
KBNN	KJEL	Lebanon, MO
KCBL	KKTR	Fresno, CA
KIRK	KAAN	Bethany, MO
KKGR	KHKR	E. Helena, MT
KKMS	KEGE	Richfield, MN
KKNW	KAPY	Port Angeles, WA
KMCA	KAVA	Burney, CA
KMRZ	KUUY	Orchard Valley, WY
KMVP	KVVA	Phoenix, AZ
KXNT	KVEG	N. Las Vegas, NV
WBWL	WPDQ	Jacksonville, FL
WCIZ	WNCQ	Watertown, NY
WFRY	WODZ	Rome, NY

will field calls from noon to 3 p.m. on the San Francisco station. Field's show replaces Dr. Laura Schlessinger, who left KPIX in January for KGO-AM.

Thanks

Your news clippings, bumper stickers, station and shack photos and QSLs are always welcome, as are your questions and comments. Send 'em to "Broadcast DXing" at *Pop'Comm's* at 76 North Broadway, Hicksville, NY 11801.

Until next month, 73. ■

CB Scene

BY ED BARNAT

27 MHz COMMUNICATIONS ACTIVITIES

Looking at RadioShack's New TRC-485

Spring is here, and summer is just around the corner. It's time to plan your getaway. Soon you'll be hitting the road and heading for your favorite vacation spot. For safety's sake, convenience and pure enjoyment, don't forget your CB.

What's that you say? The mobile is broken? A little shaky? You (gasp) don't have one? Well, here's your chance to trade up to a real CB—one with sideband! Don't worry. You can do it. And, with a little careful shopping, have enough left in your pocket for a few extra rides when you arrive at "Wacky World."

RadioShack's TRC-485 AM/SSB mobile CB; catalog number 21-1577. (Courtesy RadioShack)

Do It *Without* Dropping a Bundle!

Some SSB radios, especially some of the exotic "export" models, are pretty expensive. But, if you can settle for a basic, entry level rig (remember, you will probably be leaving it in the vehicle), you can easily get away spending less than $200. Maybe a lot less; case in point, RadioShack's TRC-485.

The 485 is quite a radio. A stripped down, bare bones model it is not. In fact, it is packed with some of the most advanced features on the market. It is small, just 2" × 6 1/16" × 7". With mounting space in many vehicles at a premium, that is a real plus. It is sleek. The black case and controls not only give it a classy air, but a low profile as well. It doesn't stand out like chrome-plated models do, so it is less likely to attract the attention in the parking lot, if you know what I mean. It is attractive; the appearance rivals that of many high priced amateur rigs. And, yes, it is a real performer. Right out of the box it operates at or near peak performance. Sure, you can take it to your local tech and make it do a little more, but you'll hardly notice the difference.

The large, backlit, channel and frequency display is easy to read. Particularly enjoyable is the 12-segment S/RF indicator. It is large, sensitive and easier to read than most analog meters. That is a real plus for radio checks and fox hunts. Controls are large, considering the size of the radio, and easy to use. They include a switchable Noise Blanker and a fully adjustable RF gain control, not just at two-position (local/dx) switch. Combine these with the 485's ceramic filters (they do a great job at reducing bleed), built-in automatic modulation and receiver gain controls (they keep outgoing and incoming signals fairly consistent), a squelch circuit that compensates for signal fading, and you've got a radio that is easy listen to—both for you and the people you're talking to.

Some Advanced Features

The TRC-485's advanced features include a Dual Watch, so you can effectively monitor two channels at once. I found this a particularly attractive option on the road where I usually monitor channel 9. With dual watch, I was also able to keep an ear on 19 or the occasional home channel as well. I also found the Last Channel Recall (LCR) option handy. But, far and away, I was most impressed by the 485's ability to scan!

Scanning is a great way to find active channels. I took the 485 with me on a recent trip to my favorite getaway, Cape Cod, MA. With it, I was able to quickly and easily zero in on locals and other vacationers alike. I found a channel where shuttle busses talked with their base to coordinate their runs. Then I was able to listen to cooks on the Island Ferries ordering galley supplies. Best of all, I located a couple of channels used by charter fishing boats to swap sightings, tips and tales. Then using Dual Watch, while my wife and I explored the Cape's side streets and back roads, we were thoroughly entertained by their nearly continuous chatter. It was a definite enhancement to an already enjoyable trip.

It's Really Very Good, But . . .

Now, before you get the idea that I think the 485 is the "Perfect Radio," let me say that I don't. First of all, "There ain't no such animal." The 485 comes

close, but it does miss the mark on several counts. First, it is missing several somewhat important holes. That's right, holes; the ones you need to attach the supplied mic holder with. Sure, on page five of the owner's manual they tell you how to "carefully" install them. BUT, if Tandy thinks that we would willingly put a power drill to a brand new citizens band radio, they have been spending way too much time in the shack! Most of us would (or *should*) opt to use a mag-mount mic clip on the dashboard or just lay the darned mic on the seat.

The power cord is permanently connected to the radio. That means that if you are replacing an existing rig, one with a standard plug-in type connector, you will either have to cut and splice or rerun the leads. Also, if you frequently remove the radio from the vehicle, you'll have to modify the leads by splicing in more convenient connectors. The mic connector is the standard Tandy five-pin DIN, not a problem in itself, unless you want to use a different mic, most of which come with more standard connectors. While none of these are insurmountable problems, you will have to buy the proper plugs or connectors and make the changes yourself.

Also missing from the 485 is an SWR function, used to check the integrity or your antenna system. Most radios in this price range have one. Again, there is a workaround. You will have to use an external meter. If you (or a friend) have one, this is not a major problem. However, if you don't, you should buy one.

I like to hook my mobile up to one of switched fuses in the vehicles fuse box. That way, the radio, like the vehicle's AM/FM radio, can be automatically turned on and off with the ignition key. While this method works with the 485, its lack of a memory backup causes it to revert to its default setting (channel 9, AM, noise blanker off)—even if you turn the radio off before turning off the key. You can defeat this problem by wiring the radio to a non-switched fuse or directly to the vehicle's battery. If you do, however, you will have to remember to manually turn the radio on and off.

As impressed as I was with the scan feature, it did fall short in one respect. There is no way to selectively lock out channels. You have to scan all 40. During quiet times, that isn't a problem. When I tested it, however, the skip was rolling in on channel 6. So, I had to keep hitting the

scan button. The frequency display is just that, a display—*not a counter*. Therefore, it is more decorative than functional. It shows you the frequency you are supposed to be on, not necessarily the frequency you are operating on. Finally, if you have designs on working the Freeband, this radio is not for you. As far as I—and anybody I asked—can tell, the circuitry cannot be modified. If anyone finds a way to do it, please let me know.

In conclusion, the RadioShack TRC-485 is a great little radio. True, it does have several shortcomings. If however, you are a casual to moderate user of the legal 40 channels, this radio deserves your serious consideration. It is a fair buy at its regular price of $180 (down from $200) and a great buy when it is on sale for about $120!

". . . if Tandy thinks that we would willingly put a power drill to a brand new radio, they have been spending too much time in the shack!"

Hats Off To You—Our Readers!

On the personal side, I want to say thank you to the readers of the "CB Scene" for making me feel so welcome. I really enjoy receiving your mail, both e-mail and snail mail. I particularly appreciate your encouragement for being brave (or crazy) enough to "Tell it like it really is" on CB. I must point out, however, that I can't claim all the credit. Much of it has to go to our editor and the publisher for allowing me the freedom to do it.

I had hoped to share some of the insights and information I received in the column this month, but I have rambled on so long about the 485, I seem to have run out of room! So, to do them justice, I'll put them on hold for a future issue. Until then, I look forward to hearing from you. Please send your comments, questions and suggestions to me in care of the magazine. I can also be reached on the Internet where my address is <edbarnat@global2000.net>. Better yet, if you can, catch me on the radio.

73—Ed

How I Got Started

Radio Enthusiasm in Argentina

We invite 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, please try to include your photograph (no Polaroids, please) with your submission.

". . . I enjoyed listening to English stations to improve my understanding of the language."

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

The person whose entry is selected will receive a one-year gift subscription (or renewal) to *Popular Communications* magazine. Address all entries to: How I Got Started, *Popular Communications*, 76 North Broadway, Hicksville, NY 11801-2909, or e-mail to <popularcom@aol.com>. If you decide to e-mail your entry, please let us know if you're sending a photo.

Our May Winner

This month we've chosen Celestino Miguel Esteban of Argentina as our winner. Celestino says: "For a long time I have been an enthusiastic radio listener. When younger—I am 60 now—I enjoyed listening to English stations to improve my understanding of the language. At first I used an old Phillips receiver, but later I bought a good solid state five-band portable. Recently I have included a Sony ICF-2010, a Panasonic RF-B65 and an AOR-1500. I also have an MFJ-959B antenna tuner/pre-amplifier. So I've extended my listening to the amateur bands and SSB stations. For an outdoor antenna I use an inverted-V and a random length wire. I am a member of the GRP (Grupo Radioescucha Platense) a DX group in my country, and I have an amateur license, LU9EMI." ■

Here's Celestino Miguel Esteban of Argentina at his well-equipped listening post.

MAKE SURE TO STOP BY AND SEE US AT DAYTON!
BOOTH #'S 575 - 579

AR8000 - Still the Best!

All Mode Wide-Band World Band Radio Receiver

The Ultimate Handheld Receiver! The AR8000 incorporates the latest PLL technology and offers a multitude of features including true carrier re-insertion SSB (CW) demodulation with 50Hz frequency steps. 4 level alpha numeric LCD indicates the frequency, signal strength, band scope and more. Selectable squelch system, auto-mode, auto-band-plan, serial communication port are all standard. Internal ferrite antenna offers high performance reception below 2MHz..

Main Features

- Frequency Coverage 500 kHz - 1900 MHz • All mode reception AM, NFM, WFM, USB, LSB & CW
- True carrier reinsertion and specific SSB filter with non-offset frequency readout • 1000 memory channels
- 20 search banks • Priority channel • Frequency pass • Rotary tuning dial • Step sizes programmable between 50 Hz & 999.995 kHz in 50 Hz increments • Scan & search speed up to 30 increments per second • Signal strength meter
- Band scope • Backlit LCD, Keypad & Side panel • Battery save facility • Separate controls for volume, squelch & dial
- Attenuator • Keypad beep on/off • Keypad lock • Top panel 3.5mm earphone socket • Monitor switch • Password protected banks • Programmable scan & search including free, delay, audio, level & mode • Select scan list • Computer control
- EEprom memory backup (no battery required). • Two users modes: Beginner and Expert

Supplied with: NiCads, AC Charger, Hand strap, Belt Clip, Semi-flexible antenna, DC lead with cigar plug, Comprehensive operating manual with over 50 LCD illustrations.

Options: SC8000 Soft Case, AR8000INF interface, SAC8000 (Scout Adaptor Cable), Desk stand, DS8000 (Speech Inversion descrambling chip), MA500 antenna, ScanCat GOLD Software, RCSS8000 Software, RCSI-SoftControl 2.0, LA320 active loop antenna, QS200 Mobile bracket

SAC8000 Adapter Cable

Once the SAC8000 is installed, the AR8000 can easily be connected to the OptoElectronics Scout™. Any frequency captured by the Scout™ instantly tunes the AR8000 receiver.

Purchase an AR8000 and buy a SAC8000 for just $9.95...save $20!

HF150 RECEIVER

Lowe, an outstanding U.K. manufacturer of shortwave receivers, created an easy to operate, compact, receiver, with the features of the "Big Guys."

Specifications

Frequency coverage: 30kHz to 30MHz continuous coverage
Reception modes: LSB, USB, AM, Synchronous AM (USB, LSB, DSB)
Receiver system: Microprocessor controlled PLL tuning, dual conversion superheterodyne receiver.
Display: 5 digit LCD showing frequency to nearest 1kHz. receiver mode, and memory number
Tuning steps: 8Hz in LSB, USB, and AMS modes; 60Hz in AM mode. Step size increases with rapid spin-wheel rotation.
Memories: 60 mem. holding frequency & mode.
IF Filters: Wide: 7kHz, Narrow: 2.5kHz
Audio outputs: Record output at approx. 200mV (3.5mm jack) The internal loudspeaker is disconnected when headphones or an external loudspeaker are plugged in.
Power Supply: 12Vdc supply @ 130 to 300mA (2.1 mm power jack) 240Vac power unit supplied as standard (110V in some markets) Internal batteries: 8 AA size cells. Nicad charging system included in main receiver.

AR7000 • COMING SOON TO A DEALER NEAR YOU!

100kHz - 2GHz, DSP Receiver

PENDING FCC TYPE ACCEPTANCE: This device has not been approved by the F.C.C. this device in not, and may not be, offered for sale, or lease, or sold or leased.

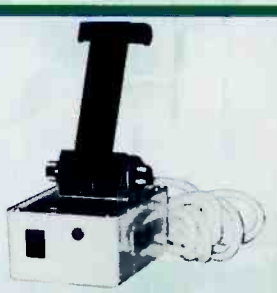
SSE PSU101

Adjustable Desk Charger/ Power Supply

12VDC Version

This quality, custom-designed combination desk charger and regulated power supply unit is perfect for convenient 'Base Station' use of your handheld scanner at home or office!!

- Securely holds scanner in proper position
- Charges radio's internal NiCad w/out overcharging
- Powers radio from standard 117VAC house current



For: FIARMATE HP1000E/200E/HP2000
AOR AR1000XLT/AR1500/AR2000
YUPITERU MVT7000/MVT7100
UNIDEN BEARCAT BC50XL/BC55XLT/ BC70XLT/BC100XLT/ BC200XLT/BC205XLT
ALINCO DJX1
ICOM ICR1 Handheld
REALISTIC-TANDY-RADIO SHACK PRO35/PRO38/PRO41

SSE PSU101TA

Desk Charger/Power Supply

9VDC Version

- 9 volt version for popular REALISTIC (RADIO SHACK) handheld scanners and others that require a 9 volt DC supply
- All the same quality & features of the PSU101 12 volt version above!

For: REALISTIC- TANDY- RADIO SHACK PRO34/PRO37/PRO43 and others.

WiNRADiO™

Your Window to the World

- **Scan for exotic stations from faraway places**
- **Eavesdrop on aircraft and maritime communications**
- **Intercept clandestine stations**
- **Monitor emergency services**
- **Receive satellite and Space Shuttle signals**
- **Witness combat transmissions making history**

Tune in the world from the monitor of your PC, with the latest receiver technology! Just a mouse click or a keystroke can take you around the world to diverse cultures in hundreds of languages. PC screen shows entire receiver with all controls, including tuning dial for easy tuning and control. The WinRadio package includes the receiver card, software, handbook and indoor antenna. Microprocessor PC plug-in card is PLL synthesized with triple conversion superheterodyne and connectors for external antenna and speaker/headphone.

Features:

- ***500kHz to 1.3GHz***
- ***Tuning steps from 1kHz to 1MHz***
- ***Up/down, direct entry or tuning dial via mouse or keys***
- ***Modes are AM, FMW, FMN, SSB***
- ***Long wire antenna included***
- ***Requirements - 386 or higher, DOS 3.3 or Windows 3.1/Windows 95, 640kB Ram for DOS or 4 MB for windows use, and a vacant 16 bit card slot.***

SCANCAT GOLD DOS OR WINDOWS VERSION!

SCANCAT presently supports:
• AOR3000/3000(A) & AOR2500, AOR-3030 HF receiver, AOR-AR8000 (Newest handheld) • Drake R-8 • MOST Icom Radios • Kenwoods including TS-440, TS-450, TS850 & R5000 • Most Yaesus including FRG-8800 & FRG-9600 Yaesu, plus FRG-100, FT-840 and more! • The NRD-525 & 535 JRC.• LOWE HF-150m • Watkins Johnson HF-1000 • Opto Electronics add-on boards for PRO series Radio Shack Radios

Software allows complete control of all functions supported by these radios through the standard manufacturer's interface.

***SCANCAT* allows you to:**

1. Enter any two frequencies and scan between them with ANY increment, time delay or pause.
2. Scan a file of frequencies, search by description or wildcards.
3. Create databases of frequency files. Sort by any field, and save to disk and/or send to printer.
4. Create 30 personal "Preset:" frequency BANDS for SW, aircraft etc, including increment and mode. Multiple scanning Banks, multiple scanning diskfile banks, unlimited file sizes, dual radio simultaneous scanning, comma delimited conversion, d-base support, scanport gold, direct import of TRS, Macro control per record, command line control, automatic birdie lockout, top hits table.

Now Available! Scancat Gold for Windows...Same great features and support you've come to expect ! Super windows graphic and commands for the smoothest possible operation. Now you decide...DOS or Windows 95 or 3.1

THE SRX100 RECEIVER

The new LOWE SRX100 is an economycommunications receiver intended for the newcomer to shortwave listening, or as a second receiver for the more experienced enthusiast. It sells for well under half the cost of our most popular receiver, the HF150, but nevertheless has an excellent specification for the price.

The SRX100 is extremely simple to operate, and can receive AM, CW and SSB signals. Some of the key features are shown below:

- Frequency range 30kHz to 30MHz
- 1kHz tuning steps
- Clarifier for SSB tuning ±800Hz
- 1µ sensitivity
- 2 watt audio output
- Modes available: USB, LSB, AM
- Liquid crystal display
- Built in speaker
- Dual conversion superhet design
- Signal frequency readout to 1kHz
- Digital frequency readout to 1kHz
- British made
- 12VDC power adaptor supplied
- Dimensions: 7.3"W x 7.5"D x 2.5"H

LOOK TO DAIWA FOR THE BEST IN HAM GEAR

Power Supplies

Daiwa's hi-tech, super efficient designs yield higher output capacity in rugged, compact packages.

MODEL	PS304	PS50TM
VOLTAGE	1-15	9-15
CURRENT (ICS)*	30	5.2
CURRENT (CONT)	24	4.2
SIZE (INCHES)	6.8 x 6 x 9.5	5.3 x 3.4 x 3
WEIGHT (LBS.)	19.6	4.2

Cross Needle Meters

From the originator of the cross needle meter, Daiwa offers models to suit every application, band and power level...

	CN101
Frequency Range (up to)	1.8-150MHz
Power Rating	15/150/1.5kW
CONN.	UHF
MIN SWR	<4W

Coaxial Switches

Professionally engineered cavity construction from the originator of the cavity type coaxial switch.

	CS201
Frequency Range (up to)	600MHz/1Ghz
Power Rating	2.5kW PEP - 1kW CW
VSWR	Below 0.12
Insertion Loss	Less than 0.2dB
Isolation	60dB, 600Mhz
Output Port	2

Dual Band & 2 Meter Amplifiers

All models feature switchable low-noise FaAsFET RX preamps. The dual-band models have a preamp for each band. Front panel power output meters and built in duplexers are standard for all dual band models...You'll find a Daiwa amplifier that's perfect for virtually every application at an exceptional value!

The Old CB Shack

BY DON PATRICK

GIVING LIFE TO YESTERDAY'S RELICS

The Early Transistorized CBs

So far in this series, we have traveled together and looked at why and when CB Class "D" service began, then checked out the early sets and features (or the lack of them) and finally, rebuilt the best tube-type units ever made and restored them to full service. There are many other notable tube-type units that were manufactured which we'll bring to life in future issues. We'll also talk about others that were only known for how *terrible* they were and why. Some problems were funny, and others were sad because they carried the name of well-known manufacturers. This month we're going to take a look at the early transistorized units.

(Photos by Don Patrick)

Here's the Cadre 510. It measured 3 1/8" × 11 1/2" × 1/2".

Before we begin, I'd like to digress for a moment and mention the letters that many of you are sending with various questions about your units and where you can obtain service or parts information. The number of letters has been most satisfying and most of you have been very careful to provide full identification of the radio. This has allowed me to supply most of you with at least *some* of what you need. We try to get a response back to you within 24 hours, but occasionally we are backlogged, and a few days does lapse. Since we provided the information about how to obtain full service information (schematics, alignment and parts lists) from Sam's Photo Fax Service at 1-800-428-7267 for most of the CB radios, requests for schematics has decreased. If they are unable to provide you with what you need, contact me as I have some schematics they never published.

Sam's Data

Before Sam's published full data on any unit, certain criteria had to be met concerning the number manufactured and distribution, And the manufacturer had to provide additional information. If a unit didn't meet any of the requirements, it was not published. The quality, or lack thereof, was not a factor; therefore there are some good units that didn't make it due to not surviving long enough to be included. We have some partial information in many cases that was published in a magazine featuring new products in the marketplace. It's better than nothing! Contact us if Sam's can't help you and we'll examine our files. We are happy to provide you with any historical, operational or helpful hints that we can on your old units.

Transistorized CB—1961

Transistorized CB radios first hit the market around 1961, and most were pretty poor units compared to a lot of the tube-type CBs available at the same time. They did have the advantage of smaller size and low battery drain, but most, if not all, had low power-out on transmit, receivers that were very susceptible to ignition interference, and poor selectivity resulting in bleed-over. Many of these early units used multiple transistors in parallel that were expensive in the transmitter output. Cadre is one example. The early receivers were very likely to be overloaded by a strong nearby signal. This caused distorted audio or even in some cases, total blanking out of a nearby caller. If you were trying to talk to a friend in another car, you had to stay some two or three blocks apart. One major, common problem with most of the early transistorized units was in the transmitter output stages, which were very susceptible to damage if the antenna system had a mis-match. It would be destroyed in seconds if the radio was keyed into a poor antenna system.

I recall a customer who had a Raytheon Model TWR-7 who came in stating that he could only talk 100 feet or so. We checked and found no measurable power out. Replacing the final restored it to normal power (some 2 1/4 watts). Upon reinstalling the unit we automatically checked the antenna with a brief one second transmission and found a high SWR of 4:1. We looked at the antenna and determined that the rod on the base-loaded antenna was only 31 inches long instead of 36 inches. Replacing the rod brought the match down to an acceptable 1.3:1. When the customer picked up his car, we advised him that we had replaced the final and repaired his defective antenna which had caused the problem. He left happy, but returned the next morning not so happy. His range was back down to about 100 feet. As we approached the car, the first thing to catch our attention was his antenna rod had been broken off down to about 31 inches. We asked him to step

outside and tell us how he had broken the rod off again in less than 24 hours. He explained that "it didn't break off—it was dragging on the metal garage door" as he pulled in, and not liking the noise, he had cut off some five inches again "to get rid of the racket." We explained that he had a choice of the racket or 100-foot range!

When we speak of the *first* of any type of radio, we're referring to the first "in our area." A new brand or type didn't appear all over the country at the same week, but rather spread out in ever-widening circles from various locations. A brand might be made in California and sold in a few cities there for the first month or two. A couple of months later a manufacturer's representative firm might call on dealers and wholesale houses in Dallas, Kansas City or Atlanta, and convince some firms to sell the units. In later months, more outlets were added, and like ripples on a pond, the sale of the unit spread out from each new city until the majority of the country was covered — assuming the manufacturer lasted long enough to develop wide coverage, and that in the smaller towns, that the only person selling CB radios had not already committed to another brand. So there might be some 15 or 20 pretty good brands of tube or transistor radios, but if the handful of dealers of CB radios had already cast their lot with another brand or two, some were not even sold in certain areas.

If the first transistorized radios were so poor, why did anyone purchase them? The cars of that era had a lot of room and metal dashboards to support the heavy tube-type radios, plus most CB units were only used when the engine was running, so low battery drain was not a big advantage to transistor units. Some of the new transistorized CBs were sold to people that were first-time buyers and didn't know that the performance was below that of good tube-type models. Still others needed the small size or low battery drain features for their specific application. But the main reason most people purchased the early transistorized CB units was for the same reasons that most purchased the early automobiles manufactured in the late 1800's and 1900's; a combination of status and/or intrigue with new technology. When cars first came out, they were undependable, dangerous, hard to start or keep in running order; and the roads, lanes, and trails were much better suited to horses, but just like the cars that rapidly improved, so did the transistorized CB radios.

The biggest gains in quality, and the ones that came fastest were in the transistors themselves. Not only did they become smaller and cheaper, but quickly became more reliable, with improved performance parameters. I recall in the mid-'50s, Raytheon came out with the CK722 transistor. It was about 1/4" × 1/4" and would amplify signals all the way up to near 2 MHz or so. This was amazing to service and design personnel. Of course CB was at 27 MHz, so it could not be used that high, but could be used in audio stages. Then came transistors built on silicon; the power handling and frequency capabilities started rising quickly. These improvements continue even today as each month brings announcement of new models capable of higher frequncy and/or power ranges. Tubes? Many applications today are still the realm of tubes due to no existing transistor that will do the job at all or will only serve if many of them are paralleled together to carry

Differences Between Safety Alert™ Traffic Warning System and Safety Warning System

Similar names, similar target audiences and often-confusing information have clouded the public's perception of the technologies that provide emergency text warnings on certain radar/laser detectors equipped to receive such messages. Cobra Electronics' Safety Alert™ Traffic Warning System and the Safety Warning System (SWS), created by a mobile electronics-industry consortium. The reality is that Safety Alert and SWS are two different technologies with vastly differing histories and characteristics.

Here are the differences:

• Municipalities in 40 states use Safety Alert, including major cities like Indianapolis, IN and Dayton, OH. Each city has fitted more than 50 police, fire and medical emergency vehicles with Safety Alert transmitters. SWS's goal is to have one transmitter in every state by April 1. Currently SWS has a transmitter installed in 12 states.

• SWS has the ability to send 120 separate emergency signals, while Cobra's transmitters can send more than 100. Nevertheless, Cobra has chosen instead to transmit only three signals through its Safety Alert system. The reason: consumer testing showed a desire for ease of use—and three signals were determined to be more than sufficient.

• Cobra began shipping Safety Alert-only receivers in February to go along with its other radar detectors that already incorporate the Safety Alert Traffic Warning System.

The Hallicrafters CB-21.

the load that one tube would easily shoulder. A good example is some FM and TV stations that I maintain. Some low-power ones are all transistor, while others are transistor to a point, then have a tube final stage or stages. A high-power, all-transistor one may be smaller and use less power, but it will not stand the heat, voltage spikes and antenna problems that the tube-types do. Their time is coming, as in the last 40 years, we have gone from a transistor which would operate at one-tenth of a watt at 2 MHz, to ones that will work in the 600 MHz range at hundreds of watts.

Improved CB Performance

As the transistors improved, so did the CB radio performance. But the reason was also due to improved circuit design. As engineers worked more and more with the new solid state technology, they learned how to design circuits with transistors that got the most from a stage in the receiver, audio or transmitter to avoid the weaknesses. So hand-in-hand, the transistors were improved, radio circuits were redesigned and succeeding generations of CB radios quickly got better, smaller and more reliable. They also began to come into their own, as additional features such as multiple channels (up to hundreds), special operations such as single sideband and regular AM in the same unit became available. While the same things could be achieved with tubes, only the driver would then fit in the front area of the car with a big bulky CB!

At this time, Integrated Circuits (ICs) didn't exist. Each transistor was an individual item soldered to the printed circuit. Even the printed circuit boards were primitive in their construction; construction was mostly of phenolic-type material. Later came fiberglass and epoxy boards. Some transistors began to be "packaged" together with some of their components into a one-piece item which could be soldered to the board. This was mainly in the audio and regulator stages. Then came the first of the ICs and the new vistas they opened. The initial improvement was the new stages, features and extra bells and whistles the engineers could put into the same size box, or they could keep the unit the same, but make it much smaller.

But this was all in the future. When transistorized CBs first hit the market the units were primitive when compared to today. While smaller than a tube unit, they were four times larger than today's CBs and had only a few channels, low power and poor reliability when compared to the 40 channel wonders of today.

The First Units

Among the first to be available was the Osborn 300 in 1962. It had nine transistors and four-channel capability. Then came the Magnavox WT-101, a one-channel walkie-talkie with eight transistors, and the Lafayette HE29A which was a one-channel unit using nine transistors. These were all low-power (1/2 to one watt output) units with low performance. In 1963 the first fairly good unit made its appearance. It was the ITT model 320 with 18 transistors, room for five channels and had a dual-conversion receiver. They used four transistors in parallel as the final amplifier and got a respectable

With the arrival of the E.F. Johnson Messenger III, the transistorized era was in full swing!

2 1/2 watts out on a good day. This was a move from the Model T to a Model A. Then, in late 1963, the first really useable unit hit the marketplace; the Cadre 510, followed by the 510A and 515. The 510 was a five-channel-capable unit using 18 transistors. The final stage was three transistors in parallel to get 3-3 1/2 watts out, the audio was crisp on transmit, the receiver didn't overload too badly on strong signals and it generally stayed working through the heat, cold and vibration of mobile use. Its two biggest weak points were the poor noise-limiting in the receiver, and the fact that you would destroy the final amplifier stages in a heartbeat with a bad antenna or coax.

Soon to follow was the E.F. Johnson Messenger III in 1965. With this one unit, transistorized CB had finally arrived. It was much smaller than the Cadre, had room for 11 channels (12 in later models), used a single transistor in the RF output stage and would tolerate some VSWR without committing suicide. The receiver was dual-conversion with a good noise limiter to keep out most car ignition noise. In those days, the cars didn't generally use radio suppression wiring to the spark plugs—noise was a *real* problem. Others like Pace, Cobra and more soon brought out improved units and the CB boom was poised to begin!

In July we'll look inside a Cadre 510 and maybe a few other units, checking out their size, performance, and what made them tick—comparing them with a modern unit! If you have any questions, you can write to me at Don W. Patrick, 3701 Old Jenny Lind, Fort Smith, AR 72901. Enclose an SASE for a personal reply. Until next time . . . this is the Old-Timer!

BY GERRY L. DEXTER

The Listening Post

WHAT'S HAPPENING: INTERNATIONAL SHORTWAVE BROADCASTING BANDS

New Mexican Shortwave Broadcaster

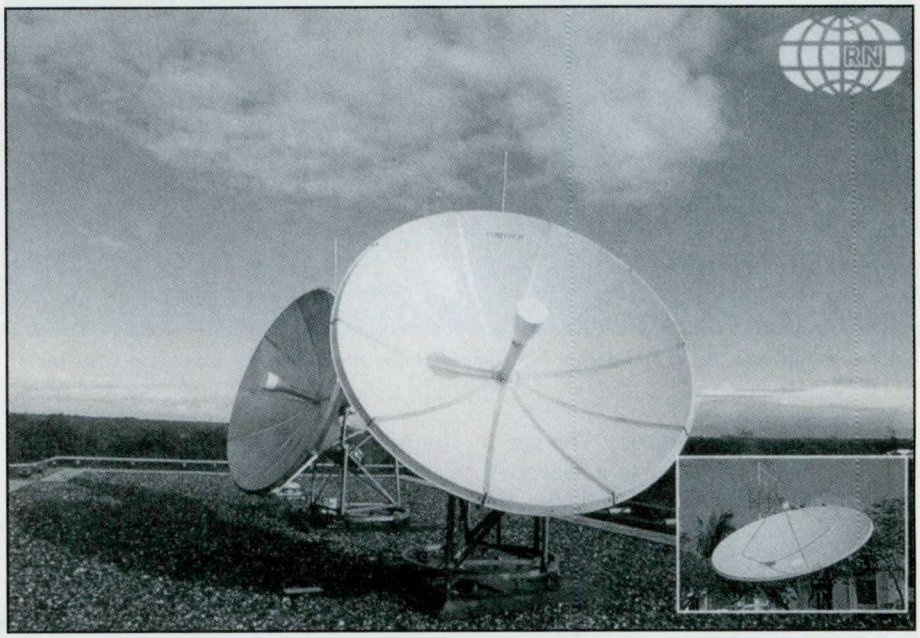
Mexico isn't known for being very energetic when it comes to shortwave broadcasters. Once upon a time, decades ago, there were lots of active stations but, over the years, their numbers have dwindled down to a precious few. Only two or three are active on a regular basis—Radio Educaçion, Radio Mexico International and possibly Radio Mil. The rest are gone or fire up their tubes briefly and rarely. But maybe we're about to see some really fresh action from this country (and who knows how long it's been since the last new shortwave station came on the air from Mexico)?

Radio Transcontinental America—XERTA—is supposedly due to begin broadcasting from Mexico City any time now and perhaps may have already done so. Apparently this is a commercial station which will include the U.S. and Canada as targets. Watch **4800** (already a cluttered spot) during our evenings, and **15120** during our daytime hours. Incidentally, they may or may not use the above name during on-air practice. Their address is: EXTRA Torre Latinoamericana (piso 36), 06007 Mexico, D.F.

The new Honduran reported on **6075** last time turned out to be an old station reborn. La Voz del Junco, in Santa Barbara has reactivated, but its exact schedule hasn't yet been determined. Sign-on is apparently in the 1200–1230 range. However, operations seem to be on the sporadic side, so they may or may not be on when you try them.

There's some new action a bit further south, in Colombia, as well. Colmundo Bogota has begun operations on **6065**, relaying medium wave HCJC on 1040, which is the originating station of the Colmundo network. Both the medium and shortwave frequencies were used by Super Radio. The station can be reached at Diagonal 58, No. 26A-39, Bogota. We're not sure if this is a 24-hour-a-day thing, but they've been noted as late as 0600 and asearly as 1100.

One rare target which had been inactive on shortwave for quite some time has returned to test you in the hunt. Radio Bayrak in Cyprus has resumed broadcasting on or near its old **6155** frequency, apparently with a schedule which runs from 0400 to 2200. It has shown up on **6157,** varying to a hair above **6159**. The programs are in English and Turkish, and include pop songs from Turkey and other countries. Some North American DXers were pulling this in during the late afternoon periods up to sign off but, due to seasonal propagation changes, that window is pretty much gone until fall returns. You may have a shot at it in the late evenings, however.



This 1995 Radio Netherlands limited edition QSL shows their uplink facility which gets the RN signal to their Bonaire relay station. (Thanks to Thomas Turnwald)

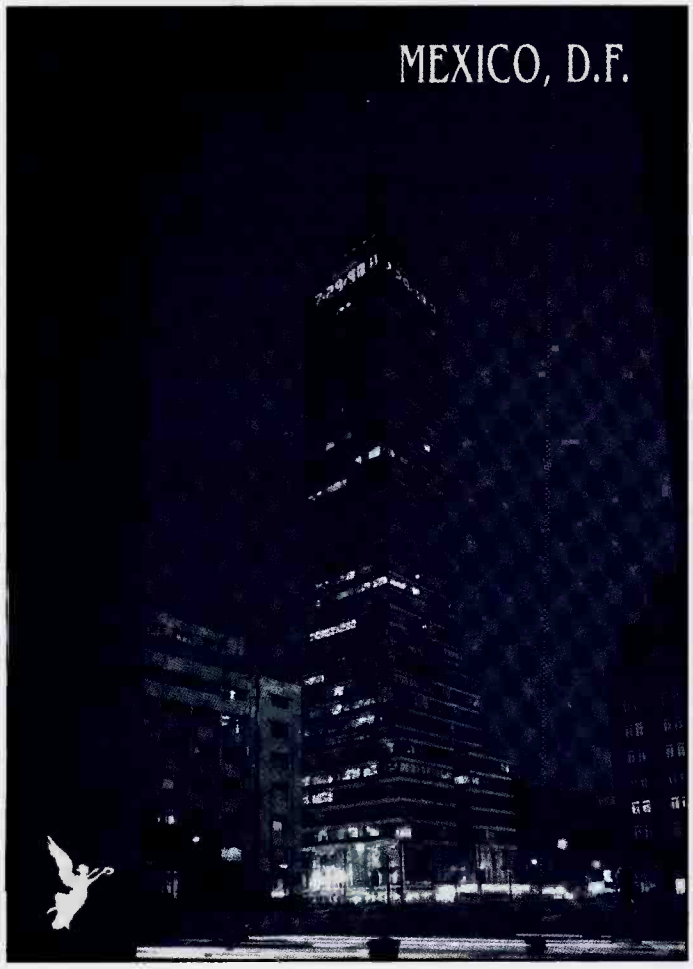
U.S. religious broadcaster WINB in Red Lion, Pennsylvania, has also been reactivated. For a while, it seemed as if the owners were going to let this one die. Initially, the transmissions were on **11740** until 2200, then on **11950** (the programming was mostly religious music. It's using **11740** (where Listening Post reporter Lee Silvi heard them). **15715** is another spot where you may find them.

HCJB Down Under?

There have been rumors for some time that HCJB planned to put a station on the air from Australia,but apparently that is a long, long way away, if it ever comes to pass. HCJB says there are "no firm plans" for such a station. HCJB would like to do a better job of getting into Asia, so they have been looking into various options which might let them achieve this, one of which was a transmitting base in Western Australia.

No sooner had we reported that the Radio Naçional Archangel San Gabriel was off the air, than it came back. The station in Argentine Antarctica operates only when the Argentine base is staffed; word that it had gone off was a long time filtering through. LRA36 is again using **15476**, but the schedule is only from 1900–2000, so you may find it an extremely tough one to catch.

As of this writing, the new "Investment Channel" hasn't yet begun broadcasting via South Africa's Meyerton site, but it likely will be by the time you read this. The schedule should be as follows: 0200–0300 on **6195, 7175**; 0300–0325 on **7175, 9775**; 0330–0355 on **9775, 11985**; 0400–0530 on **11985, 15225**; 0530–0555 on **11985**; 0600–0625 on



The La Torre Latinoamericana (Latin American Tower) of the Palace of Fine Arts in Mexico City is where the studios of the new (due!) Mexican shortwave broadcaster are located.

This QSL from China Radio International shows the ruins of Yuanmingyuan. (Thanks to Thomas Turnwald)

9675, 11985, 15225; 0630–0730 on **9675, 11985, 15225**; 0730–0755 on **15225, 17735**; 0800–0930 on **17735, 21745**; 0930–1230 on **11985, 17735, 21745**; 1230–1600 on **17735, 21745**; 1600–1730 on **17735**; 1800–1900 on **9675, 17735**; 1900–2000 on **9675, 15420, 17890**; 2000–2025 on **7270, 15420, 17890**; 2030–2055 on **7270** and **17890** and 2100–2155 on **15420** and **17890**. That's a lot of tuning to find out how your portfolio is doing!

Receivers are probably the most common subject of questions asked of shortwave writers and those who sell information and equipment to the hobbyist. Now there are two excellent new sources of information on this most elemental of shortwave subjects. Radio Netherlands has published a booklet on radio receivers for many years. Now the station, in cooperation with the World Radio TV Handbook, has compiled "an extensive online guidebook to 64 receivers.." including a photo and a review, full specs on the receiver and the results of independent tests. "The Receiver Shopping List" may be accessed at **<www.rnw.nl/en/pub/rxshop/rx index.html>**.

The second great source is a sparkling new edition of Fred Osterman's "Shortwave Receivers Past and Present" which gives you info on virtually every shortwave radio born from 1945 to 1996, in a glossy, beautifully done full-size book which runs to some 350 pages. The book was published at $19.95 by Universal Radio Research. Universal Radio and many other radio dealers serving SWLs have it available.

Remember that we always welcome your reception logs. Please double-space between the items and add your last name and state abbreviation after each one. Also wanted are photos of you and your shack, photos of shortwave stations, as well as their schedules, extra QSLs, QSL information, and other station literature or extras (stickers, etc.) which can be used as illustrations. Thanks for your continued support!

Here are this month's logs:

All times are in UTC which is five hours ahead of EST, i.e. 0000 (midnight) UTC equals 7 p.m. EST, 6 p.m. CST, 5 p.m. MST, 4 p.m. PST. Abbreviations such as FF, PP, SS, GG stand for languages (French, Portuguese, Spanish, German, etc.) If no language abbreviation is indicated the broadcast is assumed to have been in English.

ALASKA—KNLS at 1300 hrd on **7365.** (Gentry, VA)
ALBANIA—Radio Tirana, **7160** at 0230 to 0300 close. (Miller, TX)
ANGOLA—Radio Naçional, **4950** at 2320 with African music, PP talk. (Clemente, Italy)
ANGUILLA—Caribbean Beacon, **6090** at 0340 with Gene Scott programming. (Paszkiewicz, WI) Uses **11775** from 1000 to 2200, **6090** 2200–0700. (Rausch, NJ)
ANTIGUA—BBC relay, **5975** heard at 2205. (Turnwald, FL) and at 0000 and 0404. (Jeffery, NY)
Deutsche Welle relay, **6185** at 0525 with news. (Foss, AK)
ASCENSION ISLAND—BBC relay African program stream, **7160** at 0412 and **15400** at 1947. (Jeffery, NY)
AUSTRALIA—Radio Australia, **6060** at 1230 in CC to East Asia and Pacific. EE ID at 1230, //**6080.** (Schwartz, WI) **9580** at 1127. (Wachter, FL) 1400. (Ericksberg, MA) **9615** at 1810. (Rausch, NJ) **9655** at 2230. (Turnwald, FL) **11800** at 1616. (Wilden, IN)
AUSTRIA—Radio Austria Int'l, **6155** at

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

2231 with EE to Europe. Preceded by DX program in German at 2224. (Schwartz, WI)

BANGLADESH—Radio Bangladesh, **4880** at 2240 with extended schedule for Ramadan. (Clemente, Italy)

BOTSWANA—Radio Botswana, **3356** at 0300 with local music. (Gentry, VA)

BRAZIL—Radio Naçional/RadioBras, **11780** at 2254 in PP mixing with Deutsche Welle. (Miller, WA) **15265** in EE to Europe at 1835. (Moser, IL) **15445** at 1305 with news. (Northrup, MO)

Radio Liberal, Belem, **4775** at 0448 in PP with reverb effects, mention of Sao Paulo and other Brazilian cities, Brazilian country songs. ID 0458. (Lamb, NY)

BULGARIA—Radio Bulgaria, **9485** at 0035 with letters. (Miller, WA) **9700** at 2211 to Europe. Parallel **7390.** (Schwartz, WI) **11720** at 2150. (Wilden, IN)

BURKINA FASO—Radio Burkino Faso, **4815** at 2305 in FF with tribal music. (Clemente, Italy)

CAMEROON—CRTV, Yaounde, **4850** at 2241 with light music. (Clemente, Italy)

CANADA—CFVB relay CKMX Calgary, **6030** at 2239 with old love songs. Mixing with Radio Marti. (Miller, WA)

CHU time station, **3330** at 0606 with pips. (Clemente, Italy)

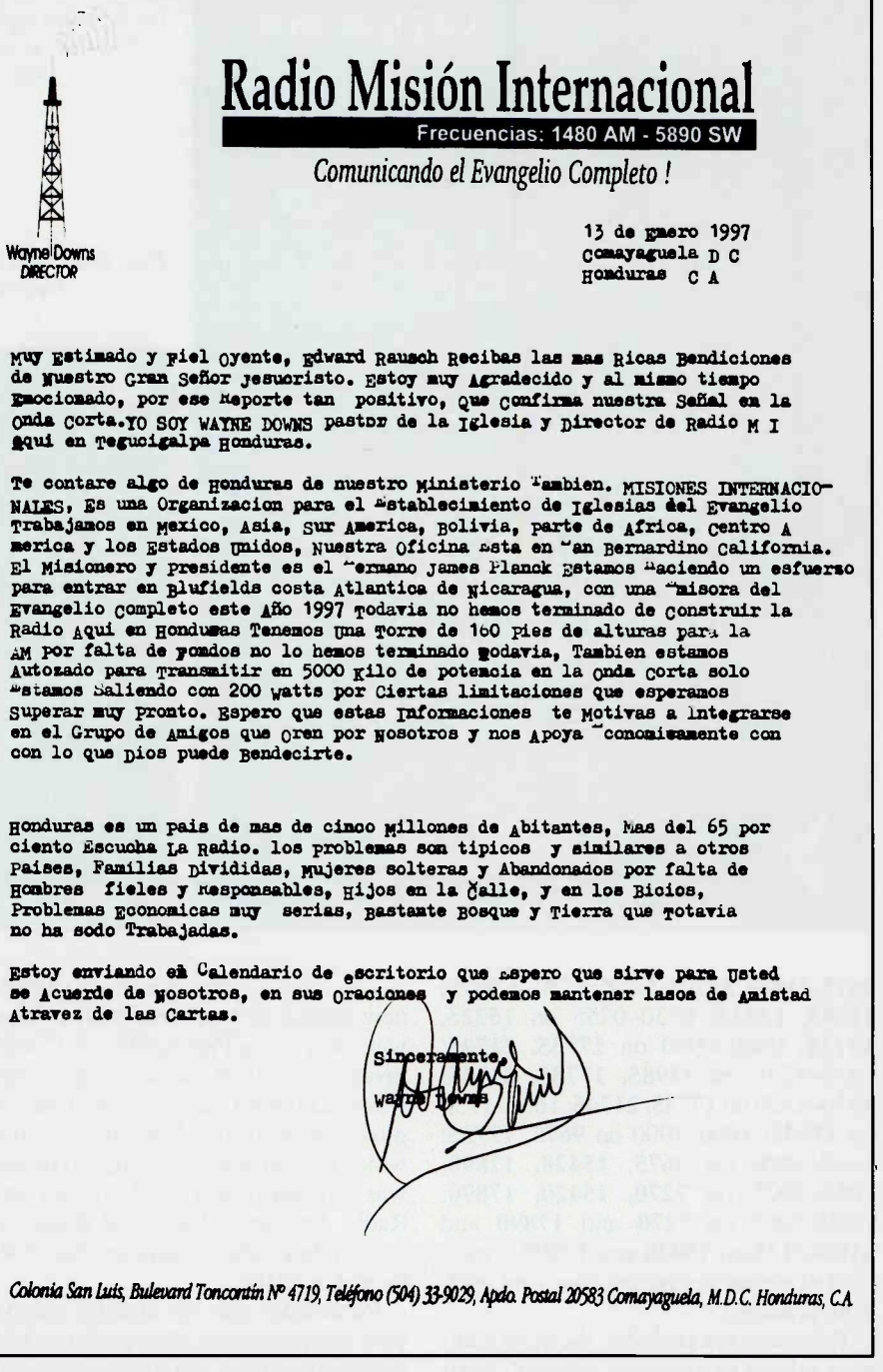
CFRB relay CFRX, Toronto, **6070** at 2317 with QSL info and commercial. (Wilden, IN)

Radio Canada Int'l, **5925** at 2100 with jazz music. (Davis, MA) **5960** at 2309. (Miller, WA) 0010. (Jeffery, NY) **15325** at 2129 and **17585** at 2205. (Wilden, IN)

CBC Northern Quebec Service, **9625** at 0538 with classical music in the domestic service. (Schwartz, WI)

Canadian Forces Network via RCI, **6150** to Europe at 0600, news about Canada. (Schwartz, WI)

CHINA—Central People's Broadcasting Station, **4905** at 2230 in EE/CC. (Gentry, VA) CPBS Guangxi, Nanning, **5050** at 2315 in CC. (Clemente, Italy)



Wayne Downs
DIRECTOR

Radio Misión Internacional

Frecuencias: 1480 AM - 5890 SW

Comunicando el Evangelio Completo !

13 de Enero 1997
Comayaguela D C
Honduras C A

Muy Estimado y Fiel Oyente, Edward Rausch Recibas las mas Ricas Bendiciones de Nuestro Gran Señor Jesucristo. Estoy muy Agradecido y al mismo tiempo Emocionado, por ese Reporte tan positivo, que Confirma nuestra Señal en la Onda Corta.YO SOY WAYNE DOWNS Pastor de la Iglesia y Director de Radio M I Aqui en Tegucigalpa Honduras.

Te contare algo de Honduras de nuestro Ministerio Tambien. MISIONES INTERNACIONALES, Es una Organizacion para el Establecimiento de Iglesias del Evangelio Trabajamos en Mexico, Asia, Sur America, Bolivia, parte de Africa, Centro America y los Estados Unidos, Nuestra Oficina Esta en San Bernardino California. El Misionero y Presidente es el Hermano James Planck Estamos Haciendo un esfuerso para entrar en Bluefields costa Atlantica de Nicaragua, con una Emisora del Evangelio Completo este Año 1997 Todavia no hemos terminado de Construir la Radio Aqui en Hondumas Tenemos Una Torre de 160 Pies de alturas para la AM por falta de Fondos no lo hemos terminado Todavia, Tambien estamos Autozado para Transmitir en 5000 Kilo de potencia en la Onda Corta solo Estamos Saliendo con 200 Watts por Ciertas limitaciones que esperamos Superar muy Pronto. Espero que estas Informaciones te Motivas a Integrarse en el Grupo de Amigos que Oren por Nosotros y nos Apoya Economicamente con con lo que Dios Puede Bendecirte.

Honduras es un Pais de mas de cinco Millones de Abitantes, Mas del 65 por ciento Escucha La Radio. los problemas son tipicos y similares a otros Paises, Familias Divididas, Mujeres solteras y Abandonados por falta de Hombres fieles y Responsables, Hijos en la Calle, y en los Bicios, Problemas Economicas muy serias, Bastante Bosque y Tierra que Totavia no ha sido Trabajadas.

Estoy enviando el Calendario de Escritorio que Espero que sirve para Usted se Acuerde de Nosotros, en sus Oraciones y podemos mantener Lasos de Amistad Atravez de las Cartas.

Sinceramente,
Wayne Downs

Colonia San Luis, Bulevard Toncontin Nº 4719, Teléfono (504) 33-9029, Apdo. Postal 20583 Comayaguela, M.D.C. Honduras, C.A.

Ed Rausch of New Jersey was one of the first to get a QSL from the new Honduran shortwaver, Radio Mision Internaçional.

China Radio Int'l, **3985** via Switzerland, in EE at 2200. (Gentry, VA) **9960** at 0330 with folklore items and cooking show (braised grass carp). (Turnwald, FL) **9950** at 0321 in SS. Perhaps via Mali or French Guiana. Listed parallel with **11765** Brasilia. (Lamb, NY)

COLOMBIA—Radio Mira, **6014.8** at 0450 to 0500 sign off with vocals, announcements, ID with call letters, Caracol ID, vocal version of National Anthem. (Paszkiewicz, WI)

Caracol Colombia, **5077** at 0133 in SS. Apparently a horse race. (Miller, WA)

COSTA RICA—Adventist World Radio, **9725** at 2257–2359 with "Wavescan" program, religious program and into AA at 0000. (Silvi, OH) 0003 with Christian and classical music. (Wilden, IN)

CROATIA—Croatian Radio, **5895.3** at 0000 with EE to Europe. Woman with news to 0004, anti-war editorial to 0010 and into Croatian. (Schwartz, WI)

CUBA—Radio Havana Cuba, **6000** at 0433. (Wilden, IN) **9820** at 0554. (Hill, ID)

CZECH REPUBLIC—Radio Prague, **5930** at 2130 with news. (Wallesen, IL) 2329 with program announcements in EE, GG, CC, FF.

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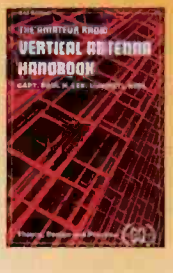

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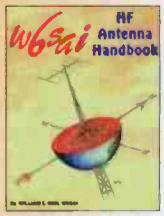

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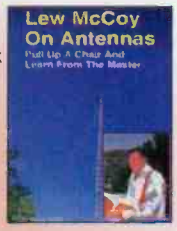

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(Miller, WA) **7345** at 2205 in FF to West Africa and North America. (Schwartz, WI)

DOMINICAN REPUBLIC—Radio Cima, **4960** at 1127 in SS with talk, ID, music. (Jeffery, NY)

ECUADOR—HCJB, **5860** at 0309 in RR with talks, music, ID.(Jeffery, NY) **9415** at 0030. (Miller, WA) **9745** at 0145. HCJB, via the "Andean Herald" electronic newspaper has been requesting comments and suggestions from North American listeners on the QRM and other reception problems on **9745.** (Silvi, OH)

Radio Oriental, **4779.8** at 1030 in SS with commercials, time checks, ID, inspirationalmessage. (Rausch, NJ)

EGYPT—Radio Cairo, **4810**, variable sign on between 0350 and 0415, call to prayer, Koran discussion, 5+1 time pips, ID and anthem at 0500. (Rausch, NJ) (NF, Ed? I hadn't noticed this one. Editor) **11875** at 1655 in AA, many mentions of Egypt and Cairo. (Moser, IL)

ENGLAND—BBC, **7125** heard at 0431 in PP to Africa, presumed news; ID at 0438. (Schwartz, WI) **5960** via Canada at 0636. (Wachter, FL) 6110 at 2352. (Miller, WA) 6175 via USA at 0537. (Foss, AK) **15220** at 1345. (Northrup, MO)

FINLAND—Radio Finland Int'l, **11735** at 1200–1300 with EE on a Sunday. Announces 1-800-221-9535 for info. (Davis, MA)

FRANCE—Radio France Int'l, **3965** at 0400 sign on in FF to Europe. (Schwartz, WI) 0533 in FF with news, ID, interview. // with **7135.** According to Passport to World Band Radio this frequency uses only 4 kW most of the year but in winter is 250 kW from 0400–0600. (Lamb, NY) **5945** at 2307 with news.(Miller, WA) **7135//7105** at 0621 with FF to Africa. (no name) **7280** at 0515 in FF. (Foss, AK) **15155** at 1325, **15300** at 1340, **15315** at 1520, **15365** at 1325 **15515** at 1320 in SS (via French Guiana, editor) and **17630** (French Guiana) at 1325 (all FF except 15515). (Northrup, MO)

FRENCH GUIANA—Radio France Int'l, 21765 at 2048 in FF. (Jeffery, NY)

GABON—Africa Number One, **9580** at 2005 in FF. (Miller, WA) **15475** at 1805 in FF with news, and long program of "rap" type. ID at 1859 just prior to close. (Schwartz, WI)

RTV Gabonaise, Libreville, **4777** at 2139 with Afropop, ID 2145. (Lamb, NY)

GERMANY—Deutschland Radio, Berlin, **6005** at 2215 with domestic service in GG. German pops. (Schwartz, WI)

Sudwestfunk, **7264.7 at** 0830 in GG with domestic service. (Schwartz, WI) 2001–2230 in GG with pop/rock and oldies. (Silvi, OH)

Bayerischer Rundfunk, **6085** at 0821 with pop vocals. GG. (Foss, AK) 2234 with German and American pop-rock. QRM'd by WYFR at 2251. (Schwartz, WI)

Deutsche Welle, **3995** at 0610 in GG to Europe with presumed news. **7285** at 2030 in EE to Europe. (Silvi, OH) **6075** at 2349 in GG with American jazz, **6100** at 2351, same. (Miller, WA)**9735** at 0815 in GG. (Foss, AK) **15275** in GG at 1345, **17765** in GG at 1345. (Northrup, MO)

GREECE—Radio Stathmos Macedonias, **9934.7** at 0129 in Greek. (Foss, AK)

Voice of Greece, **6120** at 2330 in FF; into Greek about 2345. (Miller, WA) **6260** at 2125 in Greek to Europe, music requests including by phone. Also **7250. 7450** at 0654 with Greek to Europe. (Schwartz, WI) 0604 with news in presumed Greek. (Foss, AK) **9420** tentative at 1812 to beyond 2005. WRTH doesn't list them at this hour. (Silvi, OH)

GUAM—Adventist World Radio, **7455** heard at 1000. (Gentry, VA) **13720** at 1157. (Roberts, BC)

GUATEMALA—Radio Cultural, **3300** heard at 0602 with religious programs. (Clemente, Italy)

Radio Chortis, **3380** at 0330 in SS and EE pops, ID "Radio Chortis, transmite 91.5 FM, 3380 onda corta. (Rausch, NJ)

GUYANA—Voice of Guyana, **3290** at 0553 with man in EE, several "rain" songs, ID for GBC at 0601. Best to use upper sideband reception to avoid QRM. (Lamb, NY)

HONDURAS—La Voz de Misiones Int'l, **5890 USB** + carrier in SS at 1200 sign on. ID "HRMI, La Voz de Misiones, Tegucigalpa." Address: Apartado Postal 20583, Comayaguela Distrito Central, Honduras. Running 200 watts per call to the station. Man with religious talk, ID and frequency at 1210. (Rausch, NJ) 0345 to 0422 with vocals, time checks, announcements, religious program, ID, talk with piano in background. (Paszkiewicz, WI)

Radio Internaçional, **4930** at 0330 to past 0430. Much music, several LA ballads, quick ID between almost every song. Listed as 1 kW. (Silvi, OH)

INDONESIA—Radio Republik Indonesia, Tanjung Karang, **3395.1** at 2200 in II with lagu popular music, ID by woman at 2230. Almost perfect grayline at both ends. (Rausch, NJ)

Voice of Indonesia, **9525** in FF at 1900–2000, then EE to 2059 close. (Silvi, OH)

INDIA—All India Radio, **15140** at 1330 with Hindi music. No ID. (Northrup, MO)

IRAN—Voice of the Islamic Republic of Iran, **7100** at 0520 with domestic/Arabic type music. (Foss, AK) (presume Farsi, editor) 9575 at 1812 in presumed Farsi. (Miller, WA) **9745** at 1627–1659 close. Or is Bahrain back on shortwave? (Silvi, OH) (Don't think so, at least not on this frequency. Editor)

ITALY—RAI, **6110** at 0208 with discussion in II. (Miller, WA)

IVORY COAST—Radio Cote d'Ivoire, **7215** at 2242 in FF. (Miller, WA) 2300–0000 in FF with lots of music. (Silvi, OH)

JAPAN—Radio Tampa, **3945 at** 0753 with pops in JJ. (Foss, AK)

Radio Japan, **6110** at 0500 with Media Roundup show. (Turnwald, FL) **9535** at 1910 with news. (Rausch, NJ) 2003 in JJ. (Miller, WA) **9685** at 0817 in JJ. (Foss, AK)

JORDAN—Radio Jordan, **9830** at 1820 in AA. (Ericksberg, MA) 2040 in AA with call-in show, news. (Ziegner, MA) 1947 with home service relay to Europe in AA. (Schwartz, WI) **11690** at 1415 to past 1530 in EE with music. Program line-up through sign off given at 1500. (Silvi, OH)

KAZAKHSTAN—Kazak radio, **7145** at 0000–0100 and 0200–0300 in Kazak with world news, music. (Ziegner, MA) Radio Almaty, partial data card received for **9560.** I think the transmitter for this frequency is in the Ukraine. (Paszkiewicz, WI)

KUWAIT—Radio Kuwait, **6055** at 0202 in AA with muezzin calling faithful to prayer. (Miller, WA)

LEBANON—Voice of Hope, **6280** at 2000. (Gentry, VA)

Voice of Lebanon, **6549.5** at 0420 in AA with commercials in AA, FF. ID by woman at 0430. (Rausch, NJ)

LITHUANIA—Radio Vilnius, **5890** at 0030 with EE news. (Silvi, OH)

MALAYSIA—Voice of Malaysia, Kajang, **6175** at 1647 in Malayan with AA music, IS ": Grenada." (Miller, WA)]

MALI—RTV Malienne, Bamako, **5994** at 2316 in FF with wonderful African music. (Miller, WA)

MEXICO—Radio Mexico Int'l, **9705** at 0339 with non-stop Mexican pops until SS ID at 0358, into EE at 0359 with frequencies, address, request for reports, news, cultural features. Gave address as P.O. Box 21-0300, 04021 Mexico D.F., Mexico. Also heard in EE at 2117 with jazz, business news, poetry, instrumental music, ID. **5985** inaudible both times. (Lamb, NY)

Radio Mil, **6010** at 2321 in SS with romantic dance music. (Miller, WA) 0431–0500, pleasant music, multiple IDs. (Silvi, OH)

Radio Educacion, **6185** at 0052 in SS with Mexican folk music. (Miller, WA)

MOROCCO—VOA relay, **17895** at 1700 with news. (Jeffery, NY)

NAMIBIA—NBC, **3289.9** at 0400 in EE with commercials for Chesterfield and Toyota, ID, NBC News Nationwide, regional music. (Rausch, NJ)

NETHERLANDS—Radio Netherlands, **5955** in Dutch to Europe at 0809. **7285** (via Madagascar? Editor) at 2330 in DD to SE Asia. (Schwartz, WI) **6020** at 2335 with news. (Miller, WA) **6040** at 0132,

NETHERLANDS ANTILLES—Radio Netherlands Bonaire relay, **6165** at 0327 in SS. (Foss, AK) 0447 with news. 15155//15315 at 2128. Into DD at 2130. (Wilden, IN) 1840 with news. (Moser, IL)**17604.5** at 1830 with news. (Davis, MA)

NEW ZEALAND—Radio New Zealand Int'l, **11905** at 0728 to the Pacific. Listener request program. (Schwartz, WI)

NIGER—La Voix du Sahel, **5020** at 2115 in FF. (Roberts, BC)

NIGERIA—Voice of Nigeria, **7255** at 0624. Afro-pops and reggae. (Schwartz, WI) 0705 with Afro-pops. (Foss, AK)

NORTH KOREA—Radio Pyongyang, **7200** at 0537 with joyful marching music and full chorus. (Foss, AK)

Korean Broadcasting Station, **3930** at 1902 in KK. (Foss, AK)
NORWAY—Radio Norway Int'l, **11840** at 1634 in NN. (Moser, IL)
PAPUA NEW GUINEA—NBC Port Moresby, **4890** at 0910 with rock. (Foss, AK)
Radio New Ireland, **3905** at 0850 with music. (Foss, AK)
PARAGUAY—Radio Naçional, **9735** at 2333 in SS with Latin music. (Miller, WA) 0213 with music and multiple IDs in between. (Silvi, OH)
PERU—Radio Calca, **6242.1** at 0445 in SS with IDs, huaynos to 0500 close. (Rausch, NJ)
Radio Naçional, **6095** at 0440 in SS with ballads, prayer, closing announcements, national anthem at 0457. (Rausch, NJ)
Radio Andahuaylas, **4840** at 1035 in SS with ID "Radio Andahuaylas emisora por la familia." Woman with religious talk in Quecha. (Rausch, NJ)
Radio Municipal, **5050.4** at 0320 to 0400 sign off. ID, ballads, phone call, commercials. Tnx Hudak in DXO. (Paszkiewicz, WI)
Radio Villarica, **4886.5** at 1050 in SS with greetings to listeners in Huancayo, ID at 1055. (Rausch, NJ)
Radio Tarma, **4775** at 1103 with ID in SS "La Voz del Peru." (Wachter, FL)
PHILIPPINES—Radio Veritas Asia, **7105** at 2225 in CC with EE ID "This is Radio Veritas Asia, broadcasting from Quezon City. Please stay tuned for the broadcast in Mandarin which follows at 2230 hours GMT on a frequency of **7105** MHz in the 41 meter band." (Rausch, NJ) **9505** at 2303 giving Indonesian address in FF, handbell IS, address in unidentified language. (Miller, WA) **9660** at 1126 with EE ID. (Gentry, VA)
Voice of America, 6160 at 1130–1200 in CC with EE lessons. (Silvi, OH)
POLAND—Polish Radio, **6095** (fair), parallel **7285** (much QRM) at 2050 with EE to Western Europe. (Silvi, OH)
PORTUGAL—Radio Portugal Int'l, **6150** heard at 0430 in EE with ID, frequency info, news. (Jeffery, NY) **9570** at 0430 in EE with a program dated the previous Friday. (Paszkiewicz, WI)
9815 heard at 2025 with FF to Europe. (Schwartz, WI) **15200** at 1335 with ID in PP. (Northrup, MO)
QATAR—Qatar Broadcasting Service, **7210** at 2220 in AA with music and some kind of lecture. (Ziegner, MA) Tentative at 2330–0045. (Silvi, OH) 0045 in AA with mideast music, ID at 0046, radio play. Extended schedule for Ramadan. (Rausch, MJ) 11750 in AA at 1600. (Moser, IL) 1630–1700 in AA. Also **15345** at 1700–1800. (Davis, MA)
ROMANIA—Radio Romania Int'l, **7195.2** at 2110 with EE to Europe. Also on **7105** and **5990**. (Schwartz, WI)
RUSSIA—Voice of Russia, **5940** heard at 2150 with EE to Europe. Better on //**7320**, also heard at 2235. Better reception than on frequencies for North America. (Schwartz, WI) **7125** at 2358. IS at 0000. (Wilden, IN) **7330**

PopComm P.O. *(from page 7)*

mention the millions of U.S. citizens who own CBs that do not have a clue what Mr. Collier's ideas to "improve" CB would do. As far as the inadequacies of AM, if it's good enough for shortwave broadcast and pilots, it's good enough for me. There are going to be TVI and telephone problems and only a very small number of people won't be willing to work with their neighbors to rectify these problems. This is exceptional considering the vast number of CB radios the citizens of our free country own.

I believe the only people who are complaining about the quality of CB are the people who are not using it. Let the ones who ride these airwaves decide!

Albert Nunnery, KD4LLX, SSB-67U

Anyone Interested?

Dear Editor:

As a newly married father, this hobby has provided me with a way of perhaps incorporating my family into my inner world—hope that doesn't sound too way out . . . so I thought it would also be good for the hobby if people with a similar interest got together to share ideas and talk. The ham radio world has its clubs, so perhaps this facet of the radio hobby could profit from this as well. Here's my name and address for anyone on Long Island, NY who is interested in forming a group or merely talking: Michael Addiego, 73 Main Street, Farmingdale, NY 11735 or phone 516-249-9225.

Michael Addiego

Courtesy Is Contagious

Dear Editor:

Your response to Roger in the November issue was an excellent example of applying common sense and logic to some serious observations about our hobby. Those of us who love the hobby realize that we can only govern ourselves and lead by example. We can always remain positive and sensitive despite daily examples of insensitivity and coarseness.

In the words of the old Sunday school hymn, we can "brighten the corner where we are." Courtesy remains contagious and is a force for good.

Andrew Hassman
Marina, CA

Dear Andrew:

Amen!

heard at 0544 with "Kaleidoscope" program. (Foss, AK)

Khabarovsk Radio, **7210** at 0541 in RR with woman singing jazz-type tune, man in RR. (Foss, AK)

Radio Rossi, **7335** at 0653 in RR. (Foss, AK)

SAO TOME—VOA relay, **6035** at 2100 with EE to Africa. (Silvi, OH)

SAUDI ARABIA—Broadcasting Service of the Kingdom of Saudi Arabia, **9730** at 1648 in AA with call to prayer. (Miller, WA) **11910** at 1710 with relay of domestic and general service in AA to Europe. (Schwartz, WI)

SIERRA LEONE—SLBS, **3316** at 2235 with light music, EE. (Clemente, Italy)

SINGAPORE—BBC relay, **3915** at 2245. (Clemente, Italy) **15360** at 0307. (Foss, AK)

SLOVAKIA—Adventist World Radio relay, **5905** at 0500–0556 close. (Silvi, OH)

Radio Slovakia Int'l, **5930** at 0142 in unidentified language. (Miller, WA)

SOUTH AFRICA—Channel Africa, **7185** heard at 0455 in PP with music, ID, IS. (Paszkiewicz, WI)

Trans World Radio via Meyerton, **9525** at 1558. (Miller, WA)

SOUTH KOREA—Radio Korea, **6015** at 0723 in KK. (Foss, AK) **9655** at 1144 with DX program. (Wachter, FL) **15575** at 0312. Man and woman with news in KK. (Foss, AK)

SRI LANKA—Sri Lanka Broadcasting Corp., on new **9730** at 1245 with contemporary Christian music, local time check and ID "You are tuned to the All Asia Service of the SLBC." (Rausch, NJ)

SPAIN—Radio Exterior de Espana, **5990** at 0152 in SS. (Miller, WA)

SUDAN—Republic of Sudan Radio, tentative, **7200** at 2230–2300. (Silvi, OH) **9200** at 1830 in EE. (Gentry, VA)

SWAZILAND—Trans World Radio, **4759** at 0318 in unidentified language to 0330 sign off. Also **9510** in EE at 2100. (Miller, WA)

SWEDEN—Radio Sweden Int'l, **6065** heard at 0030 with "Sounds Nordic." (Ericksberg, MA) **11650** heard at 1540, off before 1600. (Moser, IL)

SWITZERLAND—Swiss Radio Int'l, **5840** at 0600 in GG to Europe. Presumed. (Schwartz, WI) **6135** at 0100 with news. (Ericksberg, MA) 0348 in GG. (Miller, WA) **9905** at 0115. (Turnwald, FL)

TAIWAN—Voice of Free China, **5810** at 2200 via WYFR. (Turnwald, FL) **5950** via WYFR at 0331. (Jeffery, NY) **11745** at 0319 via WYFR. (Foss, AK)

TANZANIA—Radio Tanzania, **15435** heard at 0840. Two women in possible Swahili. (Foss, AK)

THAILAND—Radio Thailand, **4830** at 2230 with local music. (Clemente, Italy) **11905** at 0044 in EE with Asian news, clock chime IS. (Miller, WA)

TURKEY—Voice of Turkey, **5965**—new frequency?—at 2035 in FF with "La Femme, " ID, Turkish music, talks. Parallel with listed **7150//7255//7270**. (Lamb, NY) **5980** at 2313 in TT. (Miller, WA) **9655** at 2300 with news. (Turnwald, FL)

UKRAINE—Radio Ukraine, **5915** at 2203 to Europe in presumed Ukrainian. (Schwartz, WI) **7150** at 0022. (Miller, WA) **9620** at 0800 in presumed Ukrainian. (Foss, AK)

UNITED ARAB EMIRATES—UAE Radio, Dubai, **13675** at 1731 with prayers, comments in AA. (Davis, MA) **15395** at 0834 in AA. (Foss, AK)

UNITED STATES—WINB, Red Lion, PA, tentative, **11950** at 2340 with continuous religious music with IDs every half hour. The music was good (strength) but IDs were very, very weak. Sounded like they were saying WINB and giving box number in Pennsylvania. (Silvi, OH) (This one was due to resume operations. Editor)

UZBEKISTAN—Radio Tashkent, **5975** at 1345 in EE to South Asia. ID at 1355, address, program times and frequencies. (Schwartz, WI) 1200 in EE. (Gentry, VA) **7190** at 0200–0300 in probably Uzbek with regional news. (Ziegner, MA)

VANUATU—Radio Vanuatu, **4960** at 0501 in FF with talk by man and woman, mentions of Vanuatu. (Jeffery, NY)

VATICAN—Vatican Radio, **5882** at 2108 with talk, ID, IS, into SS. Slightly off the listed **5880**. They've used **5882** in the past. //7250. (Lamb, NY) **9605** at 0048 in PP. (Miller, WA)

VIETNAM—Voice of Vietnam, **12020** at 2330 in EE with news, music. (Roberts, BC)

YUGOSLAVIA—Radio Yugoslavia, **6100// 6185** at 2200 with EE to Western Europe. (Silvi, OH) **6185.3** at 2205, news and current events. Parallel **6100** but co-channel QRM there from undetermined source. (Schwartz, WI) **7130** at 0227 in EE to close. (Miller, WA)

ZAMBIA—Radio Zambia/ZNBC, presumed, **4910** at 0444 in unidentified language with talk by man. Barely audible and lost at 0449. (Jeffery, NY)

ZIMBABWE—Zimbabwe Broadcasting Corp., EE on **3306** at 0300. (Gentry, VA)

That does it! Open the curtains and bring out this month's cast for a bow and standing ovations: Lee Silvi, Mentor, OH; Marty Foss, Talkeetna, AK; Ed Rausch, Cedar Grove, NJ; Howard Moser, Lincolnshire, IL; Gerald Gentry, Virginia Beach, VA; Kenneth Hill, Mountain Home, ID; Susan J. Wilden, Columbus, IN; Dave Jeffery, Niagara Falls, NY; Elmer Wallesen, La Grange Park, IL; Don Davis, Pittsfield, ME; Ernie Wachter, South Daytona, FL; F.C. Clemente, Italy; Scott Miller, San Antonio, TX; Tricia Ziegner, Westford, MA; Marie Lamb, Brewerton, NY; Sheryl Paszkiewicz, Manitowoc, WI; Stokes Schwartz, Madison, WI; Richard C. Ericksberg, W. Springfield, MA; Thomas Turnwald, Brandenton, FL and Mark Northrop, Gladstone, MO. Thanks to each of you!

Until next month, good listening! ■

BY GERRY L. DEXTER

Clandestine Communique

TUNING IN TO ANTI-GOVERNMENT RADIO

Today a Regular Broadcaster, Tomorrow a Clandestine!

Bang! Bang! You're a clandestine! It seems that the Zairian regional station Radio Candip at Bunia changed from regular to clandestine broadcaster about that fast when members of the rebel army (Alliance of Democratic Forces for the Liberation of Congo-Zaire) took over the station and were calling on fleeing members of Zaire's army to return to Bunia and surrender.

Depending on how the civil war there is going (or went), the rebels may or may not still be in control of the station. Even though it's listed for just one kilowatt, **Radio Candip** is heard occasionally in North America—sometimes quite well, in fact. Check **5066** for an 0330 sign on.

Of all the globe's places and peoples, Iran, Iraq and the Kurds probably get more attention from clandestine broadcasters than anyone or anywhere else. And nearly all such stations are very difficult to hear in North America. One of the newer ones is the **Voice of Southern Azerbaijan**, which broadcasts in support of the National and Independent Front of Southern Azerbaijan and against the current Iraqi government. Southern Azerbaijan is the Iraqi province of Azarbayjan, which sits next to the Republic of Azerbaijan, formerly a part of the USSR.

The station broadcasts in the Azeri language from 1630 to 1730 on **6055** and 0615 to 0715 using **11935**.

Ed Rausch in New Jersey heard the **Democratic Union of Kurdistan** radio on **4125** at 0335 with generic fill music and an anthem at 0347, an ID in Kurdish of "hura dim keri Kurdistana," them martial music to sign-on announcements at 0400 when they gave an ID in Arabic. A friend of Ed's translated the ID as "This is the public broadcast of the Democratic Union of Kurdistan."

Rausch also logged the **Voice of Iraqi Kurdistan** on **4070** at 0345 with martial music, anthem, call to prayer at 0355 and an ID by a woman at 0400.

The Voice of the Mojahed, operated by the Mojahedin-e-Khalq, now operates according to this schedule: 1500–1700 on **6175**; 1700–2100 and 0300 to 0700 on **3350**, **3850**, **4450**, **4650**, **5150** and **5450** and 0700 to 0900 back on **6175**. Officially, the station calls itself the **Voice of the Crusaders** (Sedaye Mojahed). It claims to have nine transmitters operating in the border regions of Iran. This is an anti-Iranian station which is likely based in Iraq. The frequency usage often varies to avoid jamming efforts.

The Voice of Independent Kashmir operates on **4115**, **5300** and **6300** from 1530 to 1730 with broadcasts in Kashmiri and Urdu. It is also scheduled from 0230 (0228) to 0430 on **5750**.

The still mysterious, always fascinating **New Star Broadcasting** station (Xin Xing Guangbo diantai)is still being heard periodically. One recent reception was from 1440 on **8300**, the most often used frequency, airing four digit number groups in Chinese with an flute interval signal at 1500 and then more of the same. It's also active in the 1200 time frame. Other frequencies sometimes in use are **9725** and **11430** (years ago a 15 MHz frequency was also used) but these are seemingly alternates rather than parallels. Two women do the reading of what are presumed to be coded messages in Chinese. These transmissions can be heard in North America, but reception is often poor. Broadcasts don't start and stop at any particular time, meaning you'll have to sit on the frequency for at least an hour at a time. Glue the headphones to your ears. One day, it'll be in there.

Now you can send e-mail to the anti-government Nigerian station Radio Kudirat at: <rkn@postlin.demon.co.uk>. There are other clandestines who don't even have a regular mailing address (so far as we know).

The Voice of the Islamic Revolution in Iraq is using **7115** and **9610** between 0430 and 0530 and, the name makes it obvious, the station broadcasts in opposition to the Iraqi government. The broadcasts seem to be over high-power transmitters which, if true, doesn't make it too hard to guess who's loaning them out.

The Voice of the Palestinian Islamic Revolution is operating on **5995** and **9670** from 0400 to 0457. Reportedly there are many mentions of Arafat, and not positive references, either.

The Voice of Tibet program is now reported to be airing via a Russian transmitter daily on **7400**, airing daily from 1230 (actually a minute or two earlier) to 1300. This outlet may have replaced the broadcasts over FEBA in the Seychelles Islands, which was using **15445** or, at times, **15480**. Like the transmissions via FEBA, the new frequency is getting some jamming attention from China, which is airing one of its domestic networks on the same frequency during that period.

Ethiopian clandestine **The Voice of Oromo Liberation** may now be operating on **9930** rather than 9870. Check that spot for a scheduled 1600 sign on.

The U.S. government's **Radio Free Asia** service continues to bounce around and add some language services such as Burmese and Vietnamese (the Vietnamese are jamming programming directed at their country) and come and go on various transmitters and frequencies. KHBN, the religious broadcaster on the island of Palau is now carrying the RFA service on **9910** between 1500–1600 and 2300–0000.

The Democratic Voice of Burma, relayed by Radio Norway transmitters, is scheduled on **15170** between 1100 and 1130, broadcasting in Burmese and the Kayan, Karen and Shan languages. It also airs on **9725** at 1430 to 1500.

Your news and notes on the subject of clandestine broadcasting are always welcome; frequencies, schedules, addresses, information on who is doing what and from where. Your continued interest and support are much appreciated.

Until next month, good hunting! ■

The Ham Column

BY KIRK KLEINSCHMIDT, NTØZ

GETTING STARTED AS A RADIO AMATEUR

Public Service—Alive and Well in the '90s

Some hams are worried that cell phones, personal communication service devices and emerging satellite-cellular telephone/data systems will make ham radio obsolete when it comes to providing public safety and disaster communications. After all, why would served agencies rely on "low-tech" amateur radio comms when state-of-the-art services are readily available?

There are two main reasons: The first is the fact that high-technology solutions don't always work as advertised. Many disaster teams have found this out the hard way. Terrestrial cellular coverage areas are far from complete. During one plane crash in Long Island, for example, rescue workers' cell phones were unusable because of coverage gaps. In recent California earthquakes and fires, cell phones and even public safety trunked radio systems failed, causing similar communication problems.

Second, served agencies everywhere will always welcome and rely on the services of trained, expert volunteers—hams—to assist with communications. This lets agencies focus their efforts on lifesaving and the disaster at hand. And in the near future, public-safety minded hams will be equipped with satellite cell phones, VHF/UHF handhelds AND miniaturized HF rigs. Hams can offer voice, visual and data connections over a huge range of frequencies, and we can field thousands of volunteer helpers on and off site.

How hams *perform* their duties in future emergencies may change and evolve with technology, but served agencies will always use and appreciate trained, prepared amateur radio volunteers. The first step, then, for new hams is to obtain the training and experience necessary to do a good job in real emergency conditions.

Serving the Public

Providing comms at public events—parades, races, etc.—is a long-held amateur radio tradition. Although FCC rules prohibit amateurs from relaying certain specific information about race leaders and other information on the progress of an event, hams may assist safety officials at aid stations, operations centers, checkpoints and emergency vehicles.

To get involved, all you need is a handheld transceiver. Most public service communications are handled on VHF and UHF frequencies because few activities spread out beyond repeater range. Two meters is most popular, but other bands are also used.

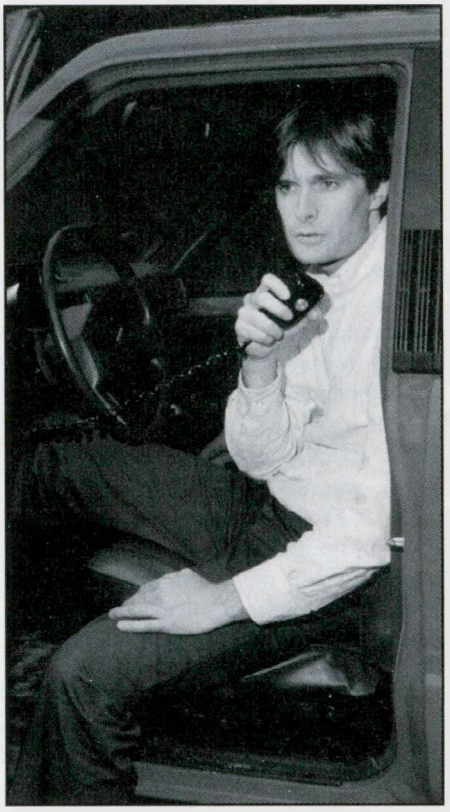
If you're a member of a ham radio club, you've probably already been asked to help out at public events. If you aren't in a club yet, or if your club hasn't engaged in such activities, ask around on the air and check the local nets to hook up with service-minded hams in your area.

Benefits for Agencies and Organizations

For event logistics, an organization can contract with a commercial two-way radio service. When it comes to safeguarding participants and spectators from accidents, confusion and injuries, however, amateur radio provides a corps of experienced, volunteer communications experts with unique equipment and coverage capabilities. Hams can switch frequencies with more agility than public-safety officials or commercial operators. This makes it possible to communicate on several specialized nets simultaneously, on multiple repeaters and on several bands—a plus for any event. When you add TV and data capabilities, hams provide a welcome and attractive package to event organizers.

Be Prepared

The most important element to consider in public service communications is recruiting dependable volunteers. Keep a list of names, call signs and phone numbers and give each volunteer a copy of the list so they can learn who's who if they don't already know each other.



Here's Rick Palm, K1CE of the ARRL HQ staff sitting in his truck with his 2-meter rig.

Confirm participation with each person just before the event. Enlist backup operators to fill in for last minute cancellations. Make sure everybody knows what to do if the event is postponed.

Before the operation begins, meet face-to-face to coordinate your plans. Use simplex frequencies if you can. Check to see if your chosen frequencies will interfere with other activities. If you need to use a repeater, get permission

"Providing comms at public events—parades, races, etc.—is a long-held amateur radio tradition."

"When you add TV and data capabilities, hams provide a welcome and attractive package to event organizers."

from the repeater group before you use the machine.

To avoid snags on the big day, take your fellow hams and an event representative to the site ahead of time. Walk the route with your radios to check signals and pinpoint dead zones or potential trouble spots (utility substations, power company transformers, urban "office canyons," behind hills and around noisy vehicles or equipment). Draw a map indicating landmarks, checkpoints and where operators will be stationed and list all of the frequencies that will be used. Then distribute copies to all ham volunteers and event officials.

Discipline

Large events may require nets on different bands. Each net will have one operator to serve as net control station (NCS). Once the operation begins, the NCS is in charge. He or she generally works from a fixed location, while others are deployed at strategic locations; fixed, on foot or mobile. The radio crew works directly with event sponsors, authorities or served agencies. The hams' task is easy: They simply communicate. They don't make vital decisions, issue commands or furnish aid or advice.

Unless you're a trained emergency professional (many police officers, firefighters, EMTs are hams) your responsibility is to stay out of the way and simply furnish communications. Unless you're briefed and authorized to do so, don't give answers or advice to spectators or participants. There should be event workers stationed where needed, and questions should always be referred to them. It's not up to you to tell runners that refreshments are available at the staging point, for example, even if you overhear race officials saying so. Don't second-guess procedures; hams should *not* interpret rules or direct participants to do anything unless, of course, the event officials have requested that they do so for safety reasons.

". . . take advantage of an opportunity to showcase amateur radio at its best . . ."

Preparation

Your job is to help safeguard participants and spectators at an event. You'll gain valuable experience in case you're needed in an emergency. You'll also take advantage of an opportunity to showcase amateur radio at its best, serving your community with dignity and courtesy. Event organizers, participants, spectators, neighbors, news reporters, public safety officials and others are watching you. Remember the people listening on scanners. Common sense and planning will help you perform admirably.

When you provide communications services for a public event, here are some DOs and DON'Ts to keep in mind:

DO

☑ Know your capabilities and limits (equipment and people).
☑ Show up on time and be ready to work.
☑ Transmit only when necessary.
☑ Dress appropriately and carry an umbrella, hat, sunblock, jacket or other necessities to protect yourself and your rig from the elements.
☑ Set a good example for the amateur radio service.
☑ Have fun!

DON'T

☒ Be pushy or come across with a know-it-all attitude.
☒ Promise anything you can't deliver.
☒ Answer questions unless you have explicit permission to do so.
☒ Make frivolous or confusing remarks on the air.
☒ Leave your post unless you notify the NCS and receive acknowledgment.

The ARRL has some interesting resources available for beginning public-service communicators. To obtain a copy of the *Public Service Communications Manual*, send $1 to ARRL, Field Services Department, 225 Main St., Newington, CT 06111, or point your web browser to <http://www.arrl.org/field> to review the on-line version. The *Special Events Communications Manual* costs $5 (plus s/h) and is available through the ARRL's regular publications department (call 860-666-1541). See you in the parade—or at least along the route. ■

BY RICHARD "RD" BAKER
<utelistener@msn.com>

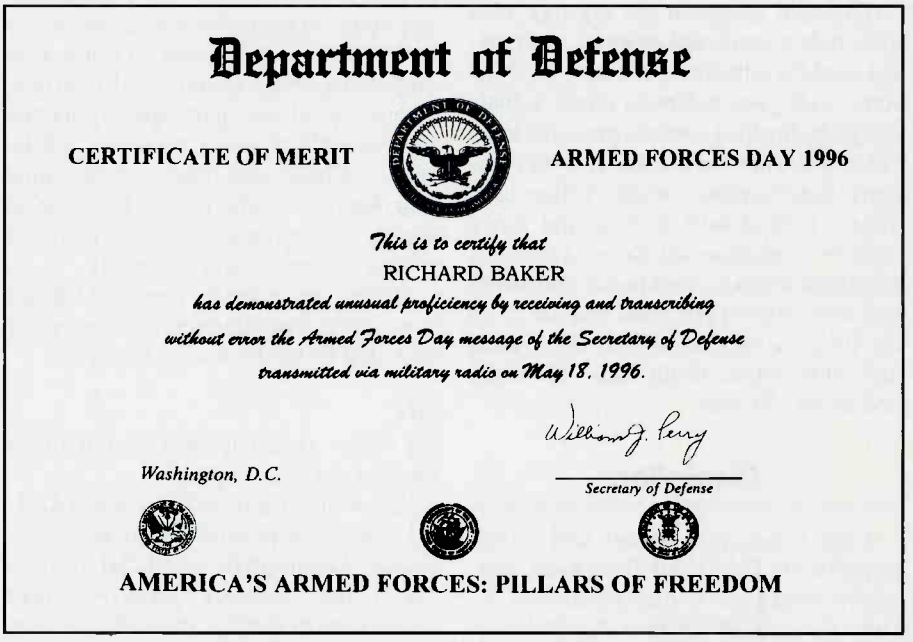
Communications Confidential

YOUR GUIDE TO SHORTWAVE "UTILITY" STATIONS

Armed Forces Day 1997

On U.S. Armed Forces Day, May 17, 1997, the U.S. Army, Navy, Marine Corps and Air Force co-sponsor an amateur/SWL radio program in celebration, featuring Military-to-Amateur cross-band communications and message-receiving tests. The tests give amateur radio operators and SWLs an opportunity to demonstrate their individual technical skills and to receive recognition for their proven expertise in the form of a certificate for proper reception of the annual Secretary of Defenses Armed Forces Day Message. Individual stations also provide QSL cards.

In the past, transmissions have included operations in Continuous Wave (CW), Single Sideband Voice (SSB) and Digital modes (RTTY, Packet, and Amtor). Military-to-Amateur cross band operations should take place from 1300 UTC May 17th to 1300 UTC May 18th. However at press time no information had yet been released for 1997 activities. I have included two text boxes listing known prior Armed Forces Day frequencies, and the 1996 SecDef message test times and frequencies. These have remained pretty much the same in 1995 & 1996. To submit test entries, transcriptions of the CW and/ or RTTY receiving test should be submitted "as received." No attempt should be made to correct possible transmission errors. Time, frequency and call sign of the station copied, as well as name, call sign (if any) and address (including zip/ postal code) of the person submitting the entry must be indicated on the page containing the test message. Entries must be postmarked no later than May 31, 1997. Mail your printout as follows: If you copied the message from "AIR", send to: Armed Forces Day Celebration, 89CG SCOJM Alabama Ave STE 3, Andrews AFB Washington DC 20331-6345. For NAV, NBL, NMN, MCL, MPN, ASC, MCP, and MQU send entries to: Armed Forces Day Celebration, HQ Navy Marine Corps MARS, NAVCOMM DET Cheltenham, 9190 Commo Road, Bldg 13, Washington DC 20397-5161. For AAE, AAH, AAZ, or WAR, send entries to: Armed Forces Day Celebration, Department of the Army, U.S. Army Information Systems Command, ATTN ASOP DF-HF, Fort Huachuca AZ 85613-5000.



Department of Defense

CERTIFICATE OF MERIT — ARMED FORCES DAY 1996

This is to certify that

RICHARD BAKER

has demonstrated unusual proficiency by receiving and transcribing without error the Armed Forces Day message of the Secretary of Defense transmitted via military radio on May 18, 1996.

William J. Perry

Secretary of Defense

Washington, D.C.

AMERICA'S ARMED FORCES: PILLARS OF FREEDOM

Certificate sent for proper reception of the SecDef's annual Armed Forces Day message.

New Kid on the Block

Limited maritime coastal station WHU959, Maricom Services, in Foley, Alabama, has teamed up with sister company Message Center Inc., in an innovative concept that has resulted in an upgrade of their system for maritime sitor use. Maricom services is the shared radio facility with each subscriber sharing a prorata share of the maintenance cost, and Message Center provides the operator services. This assures that they are in compliance with FCC rules, otherwise they would have to be licensed as common carrier. The system is designed to give the small vessel operators "big company communications, 24 hours per day 7 days per week", at an affordable cost. Messages may be delivered by voice, fax or computer.

As a result, Maricom has now added Sitor (with Amtor and Pactor service available) on 4440.0, 5145.0, 5760.0, 5845.0 and 8040.0 kHz. I recently came across a traffic list in FEC on 5145.0 kHz, with good signals into Ohio. Traffic lists are run hourly when there is traffic on 5145.0 for now. Some of these frequencies will be changing due to interference. The station (sometimes ID'ed in publications erroneously as Atlantic Enterprises in Kennebunk, ME) has been in business since 1990, and on HF maritime simplex frequencies 4149.0, 8294.0 and 12356.0 kHz for about two years providing services such as radiotelephone calls to vessels. Message Center's staff maintain a 24 hour watch on these marine HF and VHF radio frequencies. According to station owner Rene Stiegler, "we got our start doing commercial cargo vessels in the Gulf and Caribbean." But with the addition of the sitor frequencies, the company is now also providing internet e-mail access for vessels on the high seas. They have also just recently started serving "cruisers", or the various sailing ves-

E-8 Joint STARS aircraft (photo courtesy U.S. Air Force).

sels and yachts that travel these areas.

Their radio coverage area includes the Gulf of Mexico, Caribbean Sea and portions of the Atlantic and Pacific Oceans.

Their transmitting and receiving antennas make use of omni- directional and directional antenna arrays, which allow them to maximize the coverage of their 1000 watt transmitters.

Besides running the company, Rene, K4EDX formerly N4LET, is a long time amateur radio operator. "I got my ham ticket when I was about 10 years old or so. Learned the code with the help of a local ham who would send me live code practice over the air in the evenings. I can copy about 50 wpm now." Besides blazing away in code, he is also active on the Maritime Mobile Service net and the U.S. Navy Mars Afloat Net as well. Rene also invites reception reports. If you would like more information on their services, or to send a report, the address is: Message Center Inc., 307 South McKeinzie St., Suite 111, Foley, AL 36535. Or visit their Web site at: <http://world.std.com/~msgctr/maritime.htm>.

More News

More maritime changes are being reported. All French Telecom coastal stations have ceased their MW CW watch on .500 kHz as of Feb. 1, 1997. Norrdeich Radio and Ruegen Radio in Germany ceased all MW service as of Dec. 31, 1996. Haifa Radio, Israel (4XO), has changed from 8719.0 to 8731.0 for radiotelephone service as of Jan. 26, 1997. Effective Dec. 1, 1996, Stockholm Radio (SDJ), Sweden, now handles the maritime HF radiotelephone service that is a part of the MARITEX ships telex system. The service is provided with the same hardware and personnel that is used for the Stockholm Radio HF Air/Ground services. Primary channels used are ITU 420, 801, 1203 and 1608. These channels were used previously by Goteborg Radio, (SAG). Thanks to the Worldwide UTE News and the many folks who wrote about these updates.

The *Air Force News Service* reports the SR-71 "Blackbird" reconnaissance aircraft is back in business. The SR-71 now stands ready for deployment for the first time since its retirement seven years ago. Two SR-71 aircrews and planes are now mission-ready. The 32-year-old Blackbird remains the world's fastest, highest-flying production aircraft. It can fly at more than three times the speed of sound (Mach 3), or more than 2,000 mph, and it routinely cruises at altitudes exceeding 80,000 feet (15 miles). Although assigned to the 9th RW at Beale, SR-71 aircraft currently operate from a detachment at Edwards AFB, CA. The SR-71's were formerly heard on HF using the call sign ASPEN.

Also released by AFNS, members of the Air Force's newest wing, the 93rd Air Control Wing, finished their first operational deployment to Operation Joint Endeavor. The 93rd ACW and two E-8C Joint Surveillance and Target Attack Radar System, or Joint STARS, aircraft have returned to Robins AFB, GA, from Bosnia. Joint STARS was developed for ground surveillance, targeting and battle management. The aircraft operates a side-looking radar to get data on stationary objects as well as locating and tracking moving targets without flying directly overhead. The airframe is a modified Boeing 707 and carries a phased array radar antenna in a 26-foot canoe shaped radome under the forward part of the fuselage. These aircraft form the "airborne platform" part of Joint STARS, while the other half are U.S. Army Ground Station Modules, or GSM's. The E-8C Joint STARS have been heard using the call signs of RAZOR xx and 'NIGHTSTAR' (see logging on 8968.0). The RAZOR calls seem to be used by the front end crew for GHFS and civil ATC traffic, while NIGHTSTAR seems to be used by the battle staff in the back on tactical nets.

Last, the wandering RAF Volmet has moved again, this time from it's 4715.0 kHz frequency to 5450.0 kHz.

Reader Mail

That rascal Robin Hood from the UK dropped me a line to report catching 3BT3, Mauritius Meteo on 7693.0 kHz in 75 baud baudot RTTY with RY's and ID, then listing frequencies as 3188/7693 and their schedule as 0030, 0330, 0630, 0930, 1230, 1530, and 1830 UTC. Phil Jackman (W8YCN) in New Lothrop, MI, checks in with some beacon catches using "one of the oldest receivers used by one of your readers." Phil used a BC453-B Royal Canadian Air Force surplus receiver, circa prior to 1960. Phil says he enjoys the challenge as the radio uses an analog dial! An impressive list of Mossad/Phonetic Letters station logs came from Takashi Yamaguchi in Nagasaki, Japan. Takashi writes "I made more than 100 memories of Mossad frequencies in my IC-R72 and AR-3030 and subsequently was able to catch a lot of Mossad signals."

Jim Pogue (TN) passes on the call signs for the two Famous Buoy Tender-class cutters the U.S. Coast Guard now in service. USCGC Juniper (WLB-201) is NDJV, while USCGC Willow (WLB-202) is NIIW. There are to be 12 of this 225 foot sea-going buoy-tending cutters eventually. Robert Hall, South Africa, checks in after being down for a "little heart surgery" . . . a quad bypass! I know you all share in my wishes to Robert for a speedy full recovery.

UTE Logging's SSB/CW/DIGITAL All Times in UTC

208: P8—at 0553, 315m at St.Georges-Quest, QC. (AH)
209: NDB GDW, Gladwin, MI at 1501. (PJ)
210: NDB CLO at 0851, 2654m heard at Cali, COL. (AH)
212: JX, NDB Jackson, MI at 0546. (PC)

232: UMZ, Manzanillo, Cuba at 0152. (WP)
234: NDB EQQ, Newnan, GA at 0633, 25w, 70 miles. (KS)
235: NDB CN, Cochrane, ONT at 0655 in AM, new catch/400Hz. (JSM)
239: NDB TCU, Tecumseh, MI at 1457. (PJ)
241: NDB YGT at 0604, 1360m at Igloolik, NW. (AH)
243: OZW, NDB Howell, MI at 0935 (DSB; new freq; ex-242). (PC)
244: DDA, NDB Jefferson, GA at 0635, 25w at 30 miles. (KS)
248: FRT, NDB Spartanburg, SC at 0637, 400w, 130 miles. (KS)
251: NDB ZQA, at 0756, 1194m at Nassau, Bahamas. (AH)
257: CEU, NDB Clemson, SC at 0640, 25w at 80 miles. (KS)
269: EL, NDB Wellsville, NY at 1025. (PC)
272: NDB PIM, Pine Mtn, GA at 0642, 25w at 90 miles. (KS)
275: NDB CW, Mosinee, WI at 0225. (RH)
284: NDB UYF, London, OH at 1450. (PJ)
287: SMR, NDB Santa Marta, Columbia at 0441, 1000 Hz DSB; 1958 miles. (PC)
311: NDB TBG at 1005, 2315m at Panama City, Panama. (AH)
312: NDB "SN", Saipan, Mariana Islands (15.1139N/145.7111E) at 1605. (LF)
327: NDB FXC at 0640, 2793m at Cayenne, French Guiana. (AH)
333: NDB HQU at 0638, 823m at Thomson, GA. (AH) also (KS)+(PC) (Thomson-McDuffie Airport there, finally ID'ed -Ed.)
346: NDB AJR, Cornelia, GA at 0650, 25w at 40 miles (ex-206 at Habersham County (Cornelia, GA) airport. (KS)
360: KIN, NDB Kingston, Jamaica at 0923, now w/400 Hz keying; 1466 miles. (PC)
366: NDB YMW in AM at 0502, Maniwaki, PQ. (JSM)
367: NDB HA at 0702, 6053m at Hao Atol, French Polynesia. (AH)
374: NDB SA in AM at 0452, Sable Island, NS, 2nd time in 10 yrs. (JSM)
375: CHT, NDB Chillicothe, MO at 0752, DSB. (PC)
379: NDB BRA, Asheville, NC at 0655, 100w, 120 miles. (KS)
382: LRJ, NDB LeMars, IA at 0039. (RH)
385: NDB "AJA", Mt. Macajna, Guam (13.4528N/144.7333E) at 1600. (LF)
392: FHZ, NDB Fairront, NE at 0951. (PC)
397: LLJ, NDB Challis, ID heard at 0725, 1871m. (PC)
400: NDB PIE, Bucaramanga, COL heard at 0430. (RH)
404: NDB YSL in AM at 0542, St. Leonard, NB—2nd time in 10 yrs. (JSM)
410: GDV, NDB Glendive, MT at 0827 (DSB; 1443 miles). (PC)
411: NDB VFU, Van Wert, OH at 1438. (PJ)
412: NDB MTU at 0640, 2793m in Mitu, COL. (AH)
423: NDB OC, Ocala, FL at 0200, 360 miles (14.4 miles/watt). (KS)
428: NDB EEJ at 0553 in AM, Sanford, NC, new catch. (JSM)
515: NDB OS, Columbus, Ohio at 1435. (PJ)

Abbreviations Used For Intercepts

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

526: NDB CYV in Starke, Fl, a DSB at 1500 UTC. (KS)
2182: USCG Group St. Petersburg, FL, & USCG Grp Key West, FL, attempting to work fishing vsl "Rita" who has a medical emergency. Mayport adv that St. Pete is launching a helo for pickup. Hrd starting at 2050. (WP) NFMK, USCGC Seneca (WMEC-906) at 0422 wkg distressed F/V Trinity (96 ft fishing vsl) w/5 POB, vsl is taking on water off the coast of New England. At 0535, F/V Commodore clg MAYDAY for several mins, VAU, CCG Yarmouth, NS, answers & hands off to NMF31, USCG Group Portland. Vsl is a 87 ft eastern rig scalloper taking on water also off New England. CZJV, HMCS Terra Nova (DD-259), a Canadian destroyer ID'ing as "warship Terra Nova" at 0606 wkg Grp Portland offering to assist in SAR, are 105 miles/7 hrs to the north of the vsl. All crews later rescued. (Ed.)
2270: JSR Mossad bcst in faint USB at 2104, also noted on 5091 kHz. (TY)
2461.5: Irish Navy, Dublin, IRL at 2235 in ARQ w/routine msgs.(AB)
2761: OSU, Oostende Radio, Belgium at 0247 in USB w/nav warnings to 0300. (RK)
2872: Mada 51 at 0025 in USB wkg Antananarivo Radio, Madagascar, Mada is call sign for Air Madagascar; B747 enrt Nairobi. (TO)
2932: Tokyo Radio wkg CATHAY 889 in USB at 1801, directed a/c to report waypoint "NODAN" (4025.0N/145.00E) on VHF 126.7. (DS)
2953; YL opr at 2304 rptng ULX in phonetics in faint USB. (TY)
3029; CHARLIE 3, unid French military network, at 2150 in USB w/Oscar 31 in clear & scrambled USB, also ARQ-E3 100bd. (AB)
3195: "R", Russian Navy Ustinov, RUS at 2256 w/CW channel marker. (AB) Same at 2312, weak. (AH)
3458: Guangzhou Volmet at 1412, Beijing Volmet much stronger broke in at 1415, both YL/EE computer voices in USB mode. (DS)
3840: YL/EE rptng YHF phonetically in faint USB. Heard at 1504, and also noted on 5820 kHz. (TY)
3968: 4XZ, Israeli Navy, Haifa, ISR at 0006 in CW w/CQ DE 4XZ. (DG)
4028: YL/SS at 0500 in AM w/5G, weak but readable, much QRM. (GS)
4054: "Fast CW" at 0508 w/5FGs 1x, non-cut zero, good. (AWH)
4065: 3FPM5, M/S Jubilee at 0516 in USB, 47,262 DWT Carnival cruise ship, now w/ Panamanian flag c/s, clg/wkg KMI for R/T tfc, note chg from prior Liberian c/s ELFK6. (Ed.)
4124.5: USCG Group Mayport & USCG Group St. Petersburg at 0405 in USB wkg F/V Rita re injured crewman, Group St. Pete sending helo to hoist the patient. (GS) (poss they were a tad off the normal 4125.0 simplex maritime freq -Ed.)
4165: CIO2 Mossad bcst in USB at 1447. (TY)
4175.5: UCMQ: Unid vsl at 1714 in ARQ w/ Arkhangelsk Radio. (AB) (Russian-flagged TKH Mikhail Cheremnykh, ex-UJDR -ED.)
4213: VIP, Perth Radio, AUS at 1120 in ARQ w/msgs to ships. (EW)
4225: XFM, Manzanillo, MEX at 0406 w/CW ID w/"fist". (WP)
4270: Mossad bcst, YL/EE rptng PCD in phonetics heard at 2135, also noted on 3150/6498 kHz. (TY)
4419: Unid signal hrd here at 0127 in USB, beep tones lasting 1 sec every 5-1/2 secs. (RK) (Royal Navy UKMACCS Coastal Control availability signal -Ed.)
4426: NMC, CAMSPAC Point Reyes, Ca at 1030 in USB w/broadcast, over VIP, Perth Radio, AUS. Hrd in Port Sasebo, Japan. (LF)
4442: SAM 204 at 0025 in USB wkg Andrews VIP for signal ck, SPAR 76 also on freq. (JJ)
4512.5: ETD3, Addis Abbaba Air, Ethiopia at 2310 in 50/400 RTTY. (DG)
4523.6: ROMEO-2-OSCAR wkg at 0812 in USB Coast Guard Group Saint Petersburg re suspicious "Shrimper" class "FSH" checking registration, etc. (JJ)
4570: HZN46, Jeddah Meteo, ARS at 0435 in 100/788 RTTY w/METAR wx reports from Persian Gulf area airfields. (DW)
4645: Tallinn Volmet, EST at 1618 in USB w/EE wx. (AB)
4660: Republic of Korea military broadcast in USB at 1819, typically over modulated OM, sounded like mostly numbers w/occasional phonetics, down within a minute. (DS)
4721: SAM 204 at 0316 in USB wkg Andrews VIP for pp re FAX problems. (JJ)
4724: NATO 38 at 0243 in USB wkg Ascension w/pp Thule, pilot sounded Scottish. (RK)
4752.5: EHM5, JECOR Albacete, Spain (RETYVL) at 0748 in ARQ (100/425) w/SS auto accident report to RETZSC Guardia Civil Cadaz. At 0804, RETYVL, JECOR Huelva in FEC 100/425 w/tfc to unid JECOR. (Ed.)
5090.5: FDG, FAF Bordeux Region, F at 2022 w/CW marker. (DG)
5091: Mossad, YL/weak, repeats "JSR" in phonetics, USB mode at 1602. (DS) Same at 2104 w/QRM from BC, also noted on 2270kHz.(TY)
5145: WHU959: Maricom, Foley, Al at 0745 in FEC w/tfc list (this is a limited coastal station recently on sitor). (Ed.)
5221.5: TYE, Cotonou Air, BEN at 2301 in ARQ-M2 96/400, idle. (DG)
5227: Russian Intelligence, Cuba, at 1200 in

These are prior-year published frequencies and actual logs of Armed Forces Day stations. The year of the logging is noted. Exact frequencies were not released at press time, check ± 2.0 kHz.

AAE, Army HF/MARS Radio Station, Fort Sam Houston, TX 78234-5000
4029.0 kHz, LSB; 7357.0 kHz, RTTY/LSB; 13993.0 kHz, USB; 20940.0 kHz, CW; 27991.0 kHz, USB; 1996, 7358.5 kHz, Sitor-B; 1996, 13993.0 kHz, USB.

AAH, Army HF/MARS Radio Station, Fort Lewis, WA 98433-5000
4020.0 kHz, various modes; 6986.5 kHz, night/various modes; 7311.0 kHz, day/various modes; 10150.0 kHz, CW; 14487.0 kHz, USB; 18211.0 kHz, USB; 20973.5 kHz, USB; 1994, 14487.0 kHz, USB (listening 14346); 1994, 14488.5 kHz, Sitor-B 0440 SecDef msg; 1996, 6988.9 kHz, Sitor-B 0540 SecDef msg; 1996, 10151.5 kHz, Sitor-B 0540 SecDef msg; 1996, 14487.0 kHz, USB.

AAZ, HQ USAISC, Command HF/MARS Radio Station, ATTN: ASOP-HF, Fort Huachuca, AZ 85613-5000
4035.0 kHz, LSB; 6908.5 kHz, CW; 7421.0 kHz, LSB; 13963.5, USB; 21824.0 kHz; 27788.5 kHz, USB; 1996, 13965.0 kHz, USB.

AIR, 89th Communications Group, Andrews Air Force Base, Washington, D.C. 20331
4023.5 kHz, LSB; 6894.5 kHz, CW; 7313.5 kHz, LSB; 13985.0 kHz, RTTY; 13996.0 kHz, CW; 14406.5 kHz, USB; 1994, 4024.5 kHz, LSB (QSX 3850.0); 1994, 6995.5 kHz, CW (QSX 7048.0); 1995, 6995.5 kHz, CW; 1995, 7315.0 kHz, LSB; 1996, 14400.0 kHz, USB.

WAR, Army HF/MARS Radio Station, Fort Detrick, MD 21702-5016
4018.5 kHz, LSB; 6996.0 kHz, CW; 7360.0 kHz, various modes; 13991.0 kHz, RTTY/CW; 14402.0 kHz, USB; 20994.0 kHz, USB; 1993, 4020.0 kHz, USB (QSX 3995.5); 1994, 4020.0 kHz, LSB (QSX 3995.5); 1994, 6997.2 kHz, CW (QSX 7103.3); 1995, 7361.5 kHz, LSB (QSX 7261.5); 1996, 7361.5 kHz, LSB; 1994, 7363.0 kHz, LSB (QSX 7249.0); 1993, 14403.5 kHz, USB.

NAV, HQ Navy-Marine Corps MARS, NAVCOMMDET CHELTENHAM, 9190 Commo Rd, Bldg. 13, Washington, D.C. 20397-5161
4038.5 kHz, RTTY/CW/USB; 7363.5 kHz, RTTY/CW/USB; 10258.0 kHz, RTTY/CW; 14391.5 kHz, USB/CW; 20623.5 kHz, USB/CW; 1993, 4038.5 kHz, USB; 1994, 4038.5 kHz, LSB (QSX 3965.0); 1994, 7363.5 kHz; LSB (QSX 7250.0); 1996, 7363.5 kHz, CW; 1996, 7365.0 kHz, CW.

NBL, MARS Radio Station, Naval Sub Base, New London, Box 200, Groton, CT 06340
4009.5 kHz, RTTY/CW/USB; 7383.5 kHz, RTTY/CW/USB; 14383.5 kHz, RTTY/CW/USB; 20373.5 kHz, RTTY/CW/USB; 1993, 6834.2 kHz, CW; 1993, 6834.5 kHz, LSB; 1994, 6834.5 kHz, LSB (QSX 7250.0); 1996, 7383.5 kHz, CW (QSX 7110.0); 1996, 14385.0 kHz, USB (QSX 14255.0).

NMN, Commanding Officer, U.S. Coast Guard, CAMSLANT-NMN, NAVSECGRUACT N.W., Chesapeake, VA 23322
6968.5 kHz, RTTY/CW/USB; 14467.0 kHz, RTTY/CW/USB; 24782.0 kHz, RTTY/CW/USB; 1993, 6970.0 kHz, CW; 1994, 13975.5 kHz, USB (QSX 14212.0); 1996, 6986.5 kHz, CW (QSX 7050.0); 1996, 14467.0 kHz, USB (QSX 14277.0).

MCL, MARS Radio Station, Base CEO Bldg. 24, Marine Corps Base, Camp Lejeune, NC 28542
7373.5 kHz, RTTY/CW/USB; 14478.5 kHz, RTTY/CW/USB; 24803.5 kHz, RTTY/CW/USB.

MPN, MARS Radio Station, Marine Corps Base, Bldg. 2699, Cap Pendleton, CA 92055-5001
4007.0 kHz, RTTY/CW/USB; 7381.0 kHz, RTTY/CW/USB; 14463.5 kHz, RTTY/CW/USB; 20936.0 kHz, RTTY/CW/USB; 1996, 14463.5 kHz, USB; 1996, 14487.0 kHz, USB.

NAV-2, MARS Radio Station, 1050 Remount Road, Bldg. 3231, North Charleston, SC 29406
4013.5 kHz, RTTY/CW/USB; 7371.0 kHz, RTTY/CW/USB; 14470.0 kHz, RTTY/CW/USB; 20678.5 kHz, RTTY/CW/USB; 1996, 14470.0 kHz, USB.

MCP, MARS Radio Station, MCAS CEO Stop 34A, Cherry Point, NC 28533
4825.0 kHz, RTTY/CW/USB; 7378.5 kHz, RTTY/CW/USB; 13528.5 kHz, RTTY/CW/USB; 19955.0 kHz, RTTY/CW/USB.

MQU, MARS Radio Station, D.C.I.D. - MCCDC, Quantico, VA 22134
4038.5 kHz, RTTY/CW/USB; 7345.0 kHz, RTTY/CW/USB; 14838.5 kHz, RTTY/CW/USB; 20987.0 kHz, RTTY/CW/USB.

NMH, USCG Systems Command, Alexandria, VA
1993, 4015.0 kHz; 1994, 4015.9 kHz; 1993, 7345.0 kHz, USB.

AAR, Fort Bragg, NC
1993, 4035.0 kHz, LSB; 1994, 4035.0 kHz, LSB.

NPL, San Diego, CA
10133.0, 75/170 RTTY

AEM1FGT, Army Special Op's, Haau, Germany
1994, 14406.5 kHz, USB.

NZJ, MCAS El Toro, CA
1993, 14478.5 kHz, USB; 1994, 14478.5 kHz, USB.

AEUI, MV Mississippi, U.S. Army Corps of Engineers, Memphis, TN
1995, 9811.5 kHz, USB; 1996 9811.5 kHz USB (QSX 7273.0); 1995, 15312.5 kHz, USB; 1996, 15314.0 kHz, USB.

USB, SS w/call-up "277 277 277 00000", xlnt. Same station as previously noted on 5446 et al. (AWH)
5257: Unid all day, the "Bored Man's" CW net active intermittently all day, but didn't get any useful tfc, no IDs even, usually one station will pop up w/a grp count then 5FGs then go silent for long periods of time. 5465 net active also, but stations usually ID (3LGs) there. Think the latter is a net that was around 7409 for years and years. (AWH)
5320: C4P at 2305 in USB wkg "Corpus", USCG Corpus Christi, TX, req that C4P's destination come up on this freq. (DW)
5320.5: RETXX, MOI Madrid, Spain at 1551 in ARQ w/msg to RET..(rest garbled) (AB)
5417: YL/SS in AM at 0733 MON w/5FG's, signal weak, ended at 0744 w/ 2 "final"s. Carrier signal rmd on frqcy til 0745. (KM)
5422: Lincolnshire Poacher broadcast starting up in USB at 1706, w/Lincolnshire Poacher jingle 12x, followed by YL/EE repeating "506-27" 10x, continued to 1510, then 3 sets of double tones & into 5FG's, ea passed 2x, noted //6485 at 1711, //8464 at 1714. (DS)
5479: Unid at 1134 in USB, MASTERPIECE w/BIG TIGER & MYSTERY SHIP, w/radio cks. (AB)
5493: Lufthansa 597 at 0003 wkg Brazzaville, selcal AL-DM, ARP MOROS, 0003, FL350, BT 0013, LURTI next. At 0026 Speedbird 56 wkg N'djamena, selcal BP-CL, ARP BUNLU 26, FL350. Both in USB. (TO)
5526: Varig 803 at 0647 in USB wkg Belem w/ARP FL370, est 48W 0718. (TO)
5530: CIO2 Mossad bcst at 2149 in USB. (TY)

5535: Speedbird 226 heard at 0132 in USB wkg Speedbird London re Lajes wx 0300-0600. (KW)
5539: Republic of Korea military comms in USB at 0543, 2 OM's strong, app trying to set up a data link which came across as a strong high-pitched steady tone. Similar stuff w/different stations hrd on 5565 at 0600. (DS)
5550: American 1444 at 2232 in USB wkg New York Radio w/selcal ck LP-KQ, abeam FLANN at FL270. (TO)
5553: Varig 828 at 0616 in USB wkg Belem LDOC w/selcal ck CR-FK, @15W 0608, FL350, est PORGI 0658. (TO)
5643: Argentina 1881 at 0842 wkg Auckland w/ARP 180W at 0844, FL300, 175W 0917 170W next at 0947. At 0820, New Zealand 136 wkg Brisbane for selcal EK-BC. New Zealand 15 at 0854 Wkg Honolulu est 13N150W, 1014, FL350. (TO)
5655: Malaysian 2626 wkg Singapore Radio in USB at 1449, a/c reported over posn "DODRO" (0427.3N/10838.3E) next. (DS)
5670: Iraner 841 heard at 1758 in USB w/Madras @ "SAPLO" FL390, selcal BH-AM, reg EP-IAD is a 747SP Kuala-Lumpur to Tehran. (JSM)
5680: Sweden Air Rescue, S at 1017 w/X96. At 1249, Plymouth Rescue, G w/SMG 34, posn. Gottland Rescue, S at 1300 w/Riga Rescue, radio check. At 1301 Kinloss Rescue, G w/Seaking 137, rdo ck. Koksijde Rescue, BEL at 1330 w/BAF 93. At 1345 RAF, Architect, G testing. At 1354, Gluecksburg Rescue, D w/Mission 4823, rdo ck. (AB)
5688: Spy "Babbler" at 2239 in USB, SS/YL w/chanting long sets of numbers, most 3 digits at a time. At 2245 different YL broke in w/ "oye oye" then back to the first YL again. At 2251 mostly unreadable statement "esta es la transmission ... todo bien" (VERY unusual) then back to the second YL, much weaker audio. At 2254, SS OM w/long counts briefly then gone. Sounds like may be same outlet as 8900.0 USB. Evening operation uncommon among these stations in recent years. (AWH)
5691: Irkutsk Volmet w/YL/RR in USB at 1627, strong. (DS)
5710: Lockheed Flight (ground) at 1458 in USB wkg Lockheed 5414 (a/c) to 1745, comm checks at t/in, ground having trouble w/txs & appeared on 5710.3 once. 5414 called in at :15 increments w/flt ops normal. At 1645 said "ops normal on whiskey 134", at 1745 meant " . . .miles east of Charleston, inbound, no debrief required", so apparently test flight of some kind. (AWH)
5711: Cape Radio, w/"We're at nine minutes & holding." ann at 0820 in USB. (JJ)
5748: Swedish Rhapsody numbers station heard at 2200 in AM w/Music Box & 10-count, 5FG's. (AB)
5785.3: RETA, MOD Madrid, Spain at 1931 in 50/200 RTTY. (DG)
5841: At 1927 PANTHER (DEA Nassau, Bahamas) in USB wkg 62 ALPHA, 37 CHARLIE & TROPICS 201 re attempting a search of a suspected unid vessel w/4 targets on board. TROPIC 201 tells 37C they will proceed in as far as possible & launch their inflatable. At 1949 an explosion of some sort has occurred, targets have used gasoline to burn the load & boat. Ltr 62A adv PANTHER suspects in custody. (MF)

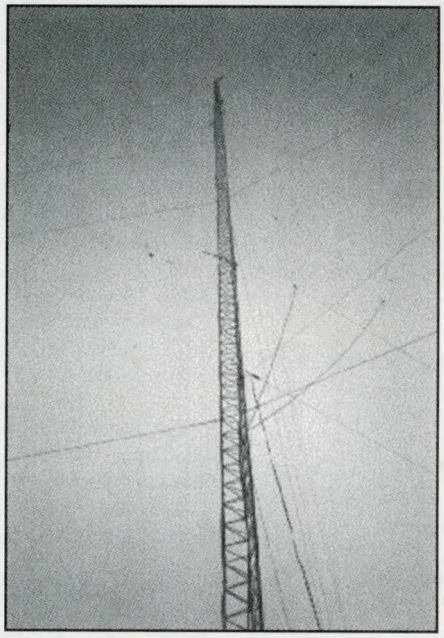


Photo of some of Maricom Services antenna arrays (photo courtesy Maricom Services).

6215; ZLM, Taupo Radio, New Zealand at 0735 in USB w/two-tone SAR alert, YL then gives vsl info, v.weak here. (Ed.)
6250: Russian intelligence, Cuba (ex-SOUD) "Russian Hermaphrodite" at 0408 in USB YL/EE w/5FG 2x. (AWH)
6303.5: SQMO, M/T Aquarius at 0655 in ARQ w/TG's in Polish. (WT)
6340.5: NMF, USCG Boston, Ma. at 2100 w/120/576 WEFAX NOAA Surface Analysis chart. (JW)
6341.3: HWN, French Navy, Houilles Naval at 1305 in 150/1200 RTTY w/testing, chatter. Also noted on 6344.6, 6348, 6351.3, 6354.7, and 6358 in same bauds. (DG)
6501: USCG Marianas Section, Guam, w/maitime weather broadcast, included warnings about typhoon 36-whiskey (Gail), tropical storm 37-whiskey (Ernie) & tropical depression 38-whiskey (unnamed). Was USB heard at 1551 to 1605 in the usual computer generated voice. (DS)
6531: Spook station at 1711 to 1750 in USB, sounds like same station reported on 5414, mostly open carrier w/a little telco noise but clean otherwise; punctuated w/occ freq domain scrambled voice accompanied by 100/170 digital signal w/voice reading characters at EAM pace. Have had carrier here previously but never any modulation. (AWH)
6532: Quantas 114 wkg Honolulu at 1523, reported posn "AMTEC" (0500.0N/14300.0E), FL 330, estimating BASIL (0000.0/14251.4E) at 1600. (DS) Reach 9404 at 1055 wkg Naha but barely readable. Both in USB. (TO)
6553: Royal Tongan 201 at 0935 in USB wkg Nadi ACC w/clearance to descend into Fu'Amotu. (TO)
6586: Speedbird 58 at 2242 in USB wkg Accra ACC w/ARP, TERBA 34, FL350, is 747-400 reg. G-BNLW, ETA LHR 0618. (TO)
6623.8: Spy "Babbler", SS/OM w/long counts heard at 1547 tune-in, not telco audio, so probably someone at the "la finca" checking things out locally. At 1610 recheck had SS/YL traffic, telco audio. Off shortly after 1700. (AWH)
6640: N128NA in USB at 0026 w/New York Radio, just dep't Aruba for Miami, 727-200 Freighter (Capital Cargo Int'l). (JSM)
6697: Unid w/31 letter groups in USB at 1312, approx 12 different groups. (JW2) (USN freq, probable EAM, they have been hrd b/cast here before -Ed.)
6715: SHOERACK at 0139 in USB & data wkg MacDill, re coordination setup & passing data traffic. (KW)
6745: Mossad bcst to MIW2 at 2120 in USB w/heavy QRM from Chinese BC on the same frequency. (TY)
6785: YL/SS in AM at 0619 WED w/5FG's, ended at 0628 w/3 "final"s. Carrier signal rmd on frqcy til 0638. (KM)
6856: Unid Numbers station at 0500 in CW w/Cuban cut numbers, preamble "25942 93782 65684". Lost a bunch of the first msg as his xmtr kept dropping off but the second & third got out ok. (WT)
6925: KKN50, U.S. Department of State, Washington D.C. at 0522 in CW w/intermittent 1-2 minute segments between 0522 and 0555 UTC w/marker. (KM)
7499: Unid (Marines most likely here) at 2220 in USB wkg in ANDVT. (JJ)
7643.7: RFVI, French Forces Le Port, REU at 0120 in ARQ-E3 100/425, idle. (WT)
7690: ACROBAT, Andrews AFB, Md at 2103 in USB wkg PUNISHER on unid "loop back circuit" w/data set-up. (Ed.)
7765: Cape Radio at 1905 in USB wkg KING 1, KING 2, HAWKEYE, USS Boone, & DoD Cape, was in support of the launch of the shuttle. (JW2)
7838: OM/EE in AM at 2032, repeats "879-879-879-1" to 2035, then "2369-49" twice & into 5FG's, ended at 2040 w/"000 000" w/o repeating text, the "-49" was the group count. Op had Indian or Pakistani accent. (DS)
7868: 6MK50, Yonhap, Seoul, S. Korea at 0757 in 50/425 RTTY w/nx in EE. (WT)
7983.7: RTFJ, French Forces Dakar, SEN at 0803 in ARQ-E3 48/383 idling. (DW)
8047: "BASE 2" calling "BASE 1" for a radio ck, no joy at 1602 in USB. (JJ)
8176: VID, Darwin Radio, AUS heard at 1208 clg all ships listening on 6206 kHz. At 1125, VIP, Perth Radio, AUS w/wx for western Australia. (EW)
8303: LOR, Argentine Navy, Puerto Belgrano at 0624 in 75/675 RTTY w/SS plain text "Radioaviso", several chart corrections & navigational hazards msgs. (DW)
8360: D7OL, M/V Ocean Crown in CW at 2142 w/KFS w/AMVER, 48-22N/139-03W strng 299 deg @11.8kts for Japan. (JSM)

CW receiving test has always been conducted at 25 WPM for the special Armed Forces Day SecDef message to any amateur radio operator or short wave listener desiring to participate. A 10-minute call for tuning purposes normally begin at 18/0230 UTC with the message transmitted at 19/0240 UTC. In view of MARS dropping the use of CW, it's unknown at this time if this test will be broadcast. In 1996 the following stations used these frequencies:

TRANSMITTING STATION	FREQUENCY (kHz)
AAE	20941.5
AAH	6988.0, 10151.5
AAZ	6908.0, 21825.5
AIR	6896.0, 13997.5
WAR	6997.5, 13992.5
NAV	10259.5, 20625.0
NBL	14385.0, 20375.0
NMN	14468.5
MCL	14480.0
MPN	7382.5, 14465.0
NAV-2	7372.5, 20680.0
MCP	7380.0, 19956.5
MQU	7346.0, 20988.5

Digital modes broadcasts normally are transmitted 0340 UTC (RTTY, 100WPM, NARROW SHIFT); 0440 UTC (PACKET); and 0540 UTC (AMTOR/SITOR). These are the 1996 frequencies:

TRANSMITTING STATION	FREQUENCY (kHz)
AAE	7358.5
AAH	6988.0, 14488.5
AAZ	7422.5
AIR	13986.5
WAR	13992.5
NAV	10259.5
NBL	7385.0, 14385.0
NMN	14468.5
MCL	7375.0, 14480.0
MPN	14465.0
NAV-2	7372.5, 14443.0
MCP	7380.0, 13530.0
MQU	7346.5, 14840.0

8367: 5BYL, M/V Maria Diamanto heard at 0325 in CW clg XFM, Manzanillo R., MEX, no Joy. (WT)
8379.5: JJHU, M/V Noshiro Maru at 2240 in ARQ wkg NOJ, USCG Kodiak, Ak, posn 3356N/11905W, login 27087 JJHU. (WT)
8396: SKFQ, Royal Swedish Navy minehunter/training ship HMS Carlskrona (M-04) at 0024 in ARQ wkg Goteborg Radio w/BBXX wx obs, ship is on annual cruise to show the Swedish flag. (Ed.)
8401.5: UTOK, TKH Akademik Evgeniy Paton at 0813 in 50/170 RTTY w/TG's. (DW)
8421.5: 9AR Rijeka, Croatia at 0336 in ARQ w/CW ID. (WP)
8435: XSQ, Guangzhou Radio, China at 1019 in ARQ msg to ship. (EW)
8459: NOJ, USCG Kodiak, AK at 0020 w/120/576 FAX w/very good wave analysis N. Pacific. (WT)
8464: YL/EE in USB heard at 1941, passes 5FG's, ea 2x; at 1945, 3 sets of double tones, 6 repeats of the Lincolnshire Poacher tune, & down. (DS)
8467.5: JJC, Kyodo News at 0907 in 60/576 FAX w/nx fax in JJ. (DW)
8571: UFN, Novorossiysk Radio, RUS at 1708 in CW w/tfc list. (AB)
8574: LGW, Rogaland Radio, Norway at 1103 in CW w/QSX marker: QSX 4185/8368.5/12552.5. (WP)
8641: Mossad lady passes 5LG's at 1423 in USB, also noted on 7913/9130kHz. (TY)
8933: Lufthansa 492 at 1924 in USB wkg New York Radio, pp JFK ops re wx & possible divert from Vancouver to Calgary, a/c was at 64N/105W. (KW)
8968: NIGHTSTAR (also ID's as RAZOR 22), E-8 Joint STARS a/c at 1954 wkg McClellan GHFS w/pp RAYMOND 19 re status of tanker GASSER 41 re thunderstorms in the AR (Aerial Refueling). (MF)
8971: TRIDENT 03 at 2231 in USB wkg BLUESTAR w/posn report: N -0111 W -1140. (JJ)
9043.5: RANGER at 1940 in USB wkg 242 with data. (JJ)
9130: Unid, poss Russian Intelligence/ex-SOUD station hrd on 9120 recently, at 1230 to 1250 w/open carrier, then went into 40+ wpm FSK CW, sounds like being sent w/bug as opposed to keyboard, 500 Hz shift. (AWH)
9251: Over The Horizon radar noted at 0830 to 0900. (SB)
9459: ZKLF, Auckland Meteo, NZ at 0830 in CW w/wx warnings. (WT)
10075: N700GD at 1541 wkg Houston Radio w/selcal ck "HM-CQ" & Gander wx 1500z. N545S at 1545 wkg Houston re Dulles Int Aprt (IAD) wx 1715z. N334DB at 1550 wkg Houston re relay to company dep Van Nuys (CA) 0640 hrs local. All in USB. (KW)
10423.3: YMA20, Anakra Meteo, Turkey at 1351 in 50/850 RTTY w/wx. (DG)
10656: SOUD, RUS at 1045 in 75bd RTTY msg to NOB on link 70004.(AB)
10798.3: RFLI, French Forces Fort de France, MRT at 1100 in ARQ-E3 192/425 FF bulletins from meteo France + msgs Toulouse to marine Paris (SS)
11175: MOOSE 15 wkg MacDill at 1917 w/pp Hilda East (Scott AFB, IL). (RK)
11178: Netherlands Navy 234 at 2031 in USB wkg PJK in EE re arrival time. (RK) (PJK is Suffisant Drop Naval, Curacao -Ed.)
11181: NIGHTWATCH activity at 0115 w/COURTYARD, REPRIMAND, POOLCUE w/data & rdo ck's. (RK) PACAF 01 wkg McClellan AFB for pp re SATCOM setup at 2015. (JJ) Both in USB.
11217: DIXIE 04 clg DIXIE Control on "High-Fox" (HF) no joy at 0022 in USB (I

have seen the DIXIE call IDed as ANG out of Alabama.) (JJ)

11267: Unid letter groups in USB at 1547. (JW2) (Emergency Action Messages (EAM's) have been hrd broadcast on this former USN HICOM frequency -Ed.)

11330: Air France 090 at 2009 in USB wkg New York Radio w/selcal ck EK-GJ, ARP PRISS, FL330. (TO)

11638.1: DDH, Offenbach Meteo, GER at 1224 in 50/425 RTTY w/wx for European locations. (EW)

12478: WCIO, SS Arco Anchorage at 0022 in ARQ w/tlx to AMI Long Beach. (WT)

12662: 7TF8, Boufarik Radio, ALG at 1239 w/CW marker, ID. (WP)

12721: SPH, Gdynia Radio, POL at 1406 in CW w/CQ DE SPH. (EW)

12747: Mossad broadcast in USB at 1118, YL passes "MIW2" in phonetics until 1120. (DS)

12857: 6WW, FN Dakar, SEN at 2048 in 75/850 RTTY w/voici testing de la station six whiskey whiskey + RSs/SGs/10 count + voye le brick geant que j'examine pres dy grand wharf. (SS)

13020.4: VRX60, Hong Kong Radio at 1410 in CW w/marker. (LF)

13206: 370 clg PLANTATION Ops at 1822 in USB, no joy. (JJ) (reportedly USAF 16th Special Op's Wing at Hurlburt Field, Fl. -Ed.)

13245: NIGHTWATCH activity here at 1906 in USB w/SENSITIVE, TRUNION & WAR46 passing tfc on Z220. (RK)

13356: Jamaica 002 1750 USB wkg Jamaica 010 & Jamaica Dispatch re Lajes wx, 010 was attempting to relay info from dispatch. (KW)

13426.3: DKI, Bulgarian Embassy, Cuba at 1510 in 75/500 RTTY w/QSA checks, wkg unid on unknown return freq, weak. (AWH)

13533: YL/EE in very weak USB at 1001 w/ann EZI phonetically, also on 11565/6840 kHz. (TY)

13953: P6Z, MFA Paris, F heard at 1142 in FEC-A 192/425 w/circulars to various locations in FF. (EW)

13961.5: HDB20, MFA Berne at 1430 in ARQ w/5lgs. (SS)

14455.5: VHC, Navy Canberra, AUS at 0642 in PICOLLO 6 w/DE GFH RYRY & engineer msgs. (EW)

14680: "Atencion" station, Cuba, hrd at 2000 in USB SS/YL w/callup for "365 02", fair level, highest freq I've seen this one on in awhile. (AWH)

14840.4: HGX56, Hungarian Embassy, Cairo, EGY at 1136 in DUP-ARQ 125/170 w/msg to Budapest in unid lang. (EW)

14855.3: DOR, MFA Sofia at 1030 in 150/500 RTTY w/diplo nx tfc.(DG)

14990.7: Unid, prob Egyptian Diplo hrd at 1530 in ARQ idling, signed off "FDG FXAA". (RH2)

15016: NAVY JW280, C-9B 'Skytrain' of VR-62 "Motowners", Selfridge ANG, Detroit, MI hrd at 1739 in USB clg MacDill no joy. (Ed.)

15861.7: RFFXCCS, CENTRANS Favieres at 1423 in ARQ-E 96/353 idle, ltr 5lgs on circuit XXI. (SS)

15961.7: RFLI, French Forces Fort de France, MRT at 1234 in ARQ-E3 192/385 w/ Controle de voie. (RH2)

16106.9: SAM, MFA Stockholm hrd at 1659 in ARQ-SWE 100/356 w/3 chr blocks, plain text. (DW)

16697: C6KR7, M/V Winter Moon hrd at 1820 in ARQ w/AMVER tfc, login 26125 WINMON. (WT)

16798.1: RTMS Kapitan Smelov heard at 0855 in 50/170 RTTY crew TG'S to Novorossiysk. (RH2)

16801.6: UOWB, T.H. Fastov at 1119 in 50/170 RTTY wkg Moscow (UAT), then crew TG'S to Murmansk. (RH2)

16816: ZSC, Cape Town Radio, RSA at 2024 in ARQ w/CW ID. (WP)

16940: XSW, Taichung Radio, Taiwan at 0952 in CW w.CQ DE XSW. (EW)

17022.5: WLO, Mobile Radio, AL at 1939 in FEC w/tfc list. (JW)

17184.8: KFS, Palo Alto Radio, Ca at 1927 in CW w/marker. (JW)

17410: Mossad lady passes 5LG's at 0942 in USB. (TY)

17441.5: 5YE, Nairobi Meteo at 1115 in 100/835 RTTY RY'S/ID & wx. (RH2)

17976: PENNANT 18 (sounded like) wkg Offutt Global at 2012 in USB for pp to HILDA WEST re 2335z arrival at Andrews AFB. (JJ)

18411.6: MFA Jakarta heard at 1100 in FEC-S 96/170 w/Political & Economic Nx/EE. (RH2)

20048: "S", Russian navy Arkhangelsk, RUS at 1009 in CW w/channel marker. (AB)

20304.7: MFA Cairo heard at 1050 in ARQ idling. (RH2)

This months contributors: (AB) Ary Boender (the Netherlands); (AH) Al Hemmalin (RI); (AWH) Albert W. Hussein (FL); (DG) David Gentile (UK); (DS) David Sabo (S. Korea); (DW) David C. Wright (TX); (Ed.) ye editor (OH); (EW) Eddy Waters, (Australia); (GS) Gary Seven (NY) (JJ) Jeff Jones, (CA); (JSM) Steve MacDonald (BC, Canada); (JW) John Whitehead (Montreal, PQ, Canada); (JW2) Jeffrey Willson (FL);

(KM) Ken McWatters (TX); (KS) Kevin Scott (GA); (KW) Ken Windyka (MA); (LF) Larry Fields (aboard ship near Guam); (MF) Mike Fink (FL); (PC) Perry Crabill Jr (VA); (PJ) Phil Jackman (MI); (RH) Russ Hill (MI); (RH2) Robert Hall (Cape Town, S. Africa); (RK) Richard Klingman (NY); (SB) Siegfried W. Best, (Germany) via FAX; (SS) Stan Scalsky (MD); (TO) Tony Orr (VA); (TY) Takashi Yamaguchi (Nagasaki, Japan); (WP) Walt Petersen (FL); (WT) Wade Taylor (CA). Thanks to all! ■

Cellular Privacy Issue Contacts

Mr. Thomas E. Wheeler
President, Cellular Telecommunications Industry Association
1250 Connecticut Avenue, NW Suite 200
Washington, DC
Phone: 202-736-3213
fax: 202-331-8112.
E-mail: <wowcom@ctia.org>

Your U.S. Senator can be reached at:

Office of U.S. Senator _____
U.S. Senate
Washington, DC 20515

Your Congressman/woman can be reached at:

The Honorable _____
U.S. House of Representatives
Washington, DC 20515

Phone: 202-224-3121 for members of the Senate Subcommittee on Communications and House Telecommunications, Trade and Consumer Protection.

get tapped on the shoulder and warned that those nasty, awful scanner listeners are out there listening, their ears perk up and they're amazed. What's wrong with this picture? It's my belief that, sure, the great majority of us realize our conversations can be overheard on cell and cordless phones, but don't take the threat as serious as politicians do. Hmmm, maybe it's because

"It seems that when the cell users get tapped on the shoulder and warned that those nasty, awful scanner listeners are out there listening, their ears perk up and they're amazed."

the folks that are *overly* concerned are the ones with the most to lose if a third party hears the wheeling and dealing. Surely the privacy issue existed during the days of mobile phones, forerunners of the cell phones.

What this is *really* about is the recent political snafu where a Florida couple is alleged to have overheard and tape recorded a cell phone conversation. Why is it that we only hear about this privacy issue when a politician trips over his shoelaces? C'mon folks, if you were a government official or corporate big-wig, wouldn't you own a digital or scrambled phone so you could keep a secret a secret? Sure, you and I probably would, but what fun would that be for those listening? After all, the military and government have *far more* frequencies and far more pressing business, and they've been scrambling their comms for years! It works for them, but not the cellular industry.

Stay tuned because it's not over 'til Congressmen Markey and Tauzin sing. Trouble is, we may not like the tune, and unless we let these folks know that the mere act of listening to a communication should NOT be a crime, but the use of information obtained by listening is and should remain a felony, we'll always be "those darned scanner users!" It's time to let the CTIA and your elected representatives know that you can have all the anti-monitoring laws in the world but it still doesn't relieve the industry from its inherent responsibility of providing privacy for cell phone users. They deserve nothing less, and as taxpayers and law-abiding extra eyes and ears for our public safety professionals, we ask nothing more. ■

CEMA Survey Shows Cellular Phone Users More Concerned with Service Reliability and Pricing Than Privacy

In an informal telephone survey conducted in February, the Consumer Electronics Manufacturers Association (CEMA) asked 150 American cellular telephone users what they thought about cellular telephone privacy. Most users responded they believe their conversations on cellular phones to be less secure than on their corded phones at home. However, most Americans are willing to accept diminished privacy rather than pay a premium for a more secure phone. Fewer than one out of four American cellular phone users would pay a 20 percent premium for a cellular telephone which is 100 percent secure.

"Most cellular consumers believe cellular calls are less secure than corded or cordless phones and appear unconcerned about this," stated Gary Shapiro, CEMA president, while testifying before Congress. "Furthermore, relatively few cellular customers would pay a 20 percent premium to receive a 100 percent secure call."

In fact, only 15 percent of the respondents considered privacy the most important issue in the use of their phones. Cost of cellular service and reliability of service were much more important to users, rating 36 percent and 29 percent respectively. Another 15 percent consider clarity of sound the most important issue.

Fifty-six percent of the respondents realized that their cellular phones were less secure than their corded or cordless phones. Just over half of users (55 percent) were concerned about privacy and their conversations being intercepted. When it comes to putting money on the table to enhance the phone's privacy, only 21 percent would pay 20 percent above the cost of a regular cellular phone for a more private model.

No telephone conversation can ever be 100 percent secure. Most consumers understand this fact, especially for cellular conversations. Technological advances in digital encryption have added security and privacy in cellular and cordless phones. These digital phones can be found in most consumer electronics retail establishments.

The survey was formulated by CEMA and fielded by the Verity Group of Fullerton, CA on February 3 and 4. All results have a margin of error of ±5 percentage points. Copies of Mr. Shapiro's testimony can be found on CEMA's web site, <http://www.cemacity.org>.

CEMA is a sector of the Electronic Industries Association (EIA), the 73-year-old Arlington, Virginia-based trade association representing all facets of electronics manufacturing.

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The Loose Connection

RADIO COMMUNICATIONS HUMOR

BY BILL PRICE, N3AVY

A Whole New Kind of Mouse Trap

Please don't take the story that I'm about to tell you as encouragement to do what I do; I've been crazy for years, and you're probably just starting out—so as a beginner, don't try this at home, even *with* supervision.

As scanner enthusiasts, my friend Norm and I usually keep our cordless phone conversations short and sweet, saving any "sensitive" topics for a hard-wired-landline where we can speak freely. We know one guy in particular who tunes into most of the cordless phone calls in our tiny little town, and that never really bothered us *per se*, but there have been a couple times when he's yelled out a few "secrets" in the shopping center parking lot, for instance, that many of the townspeople thought would be better left unsaid. The man really *needed* a lesson in citizenship.

My family had deeded an old two-story block building to be used as a community-center, and when I inherited the family homestead, it meant I would live next door to the center. Even though title had passed to the town, it was my own inability to say "no" that kept me taking care of the community-center grounds when I could be off fishing instead.

While Norm and I sat contemplating the subtle differences between our two favorite brands of fermented beverages, we wondered just what we could do to make our surreptitious friend stop eavesdropping on us, while perhaps placing him in the most "educational" situation possible—a situation that might give a person ample time to contemplate his misdeeds and perhaps change his ways. Norm and I sat for several hours mellowing and speculating until the perfect plan—the one that met all our instructional criteria (and would give us the most laughs)—took shape.

Bob's greed was one thing we knew plenty about. That greed would assure us that his actions would be as predictable as a rat in a maze. As we continued to mellow, we thought that in addition to our basic plan to send Bob on a wild goose chase after some "free money," we'd see

"We know one guy in particular who tunes into most of the cordless phone calls in our tiny little town . . ."

if I couldn't wrangle some "fishing time" out of this whole deal as well.

Norm walked home and looked from his second story window to make sure Bob was home. Norm called me on a hardwired phone to let me know, then we got our "scripts" out. Norm hung up and called me again, this time on his cordless phone; we knew Bob was listening, because the minute Norm picked up and got a dial-tone, he could see Bob swing his antenna toward Norm's house.

"Willie!" Norm said, "Did you get that bag into the house all right last night?"

"Naaah," I answered, sort of whispering. "Mildred was up when I pulled in the driveway. She was taking the car this morning, so I couldn't leave it in the back seat. I threw it up on the top of the building next door—you know—the community-center? It has a flat roof, so no one'll see it there for a while. I *still* can't believe those "dopers" thought we were cops and scattered like that. I lost count at around $4,000, and there's still more to go—seems like there'll be about six grand 'til we're done counting."

"Hey, found money is found money," Norm said. Think you can spare a handful for your old pal?"

"Fifty-fifty," I said. I do need you to do me a favor, though."

"What's that?"

"Well, when Mildred comes home this afternoon, she wants me to be ready so we can leave right away for the mall, then out for supper, and I hate leaving that bag sitting up there when there's no one around. If I leave my ladder propped up against my house, could you stop by after dark, lean the ladder over next door and grab the bag? You can stick it on the workbench in my garage, and no one'll notice one more brown paper bag. Heck, you can count it out and take your half home with you—just leave my half of the money on the workbench."

"Sure," Norm said. I'll be out 'til after midnight, though—got a date with Jeannie. Think it'll be OK if I show up about one o' clock in the morning?"

"I don't see any problem with that 'cause we probably won't be home 'til about two. If you're there when we come home, just stay out of sight 'til we get into the house."

"Sounds like a plan to me," Norm said. I'll call you in the morning."

Norm hung up the cordless phone and called me right back on the hardwired phone. Said he could see Bob outside with his climbing belt on, heading up his tower with a pair of binoculars, looking toward my place. Now all Norm had to do was call another half-dozen of Bob's "victims" and invite them over to my place for the late show.

As soon as it got dark, I dug out a brown shopping bag, chopped up some old magazines on my paper-cutter, crumpled the top of the bag and tossed it up on the roof of the community-center next door. My son was surprised when I gave him the car for the night, and didn't understand why I wanted him to stay away from the house until 2 a.m., but he was glad to oblige. The $20 bill left his jaw a little slack, too.

At half-past midnight, four 200 watt floodlights indeed "flooded" the community-center roof while Norm appeared from behind a bush and removed the ladder. The look on Bob's face was already worth the effort, but it got better as his additional "victims" quietly applauded from the ground below. I leaned out my attic window and called across to Bob, telling him he could either start singing "I'm Sorry" in his best Brenda Lee voice or I would notify the police that there was an armed prowler on the roof of the community center. Today eight citizens in our town have copies of that rare video-footage, and Bob has so-far kept his word honoring a commitment to keep the community-center lawn trimmed for the next two years. ■

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