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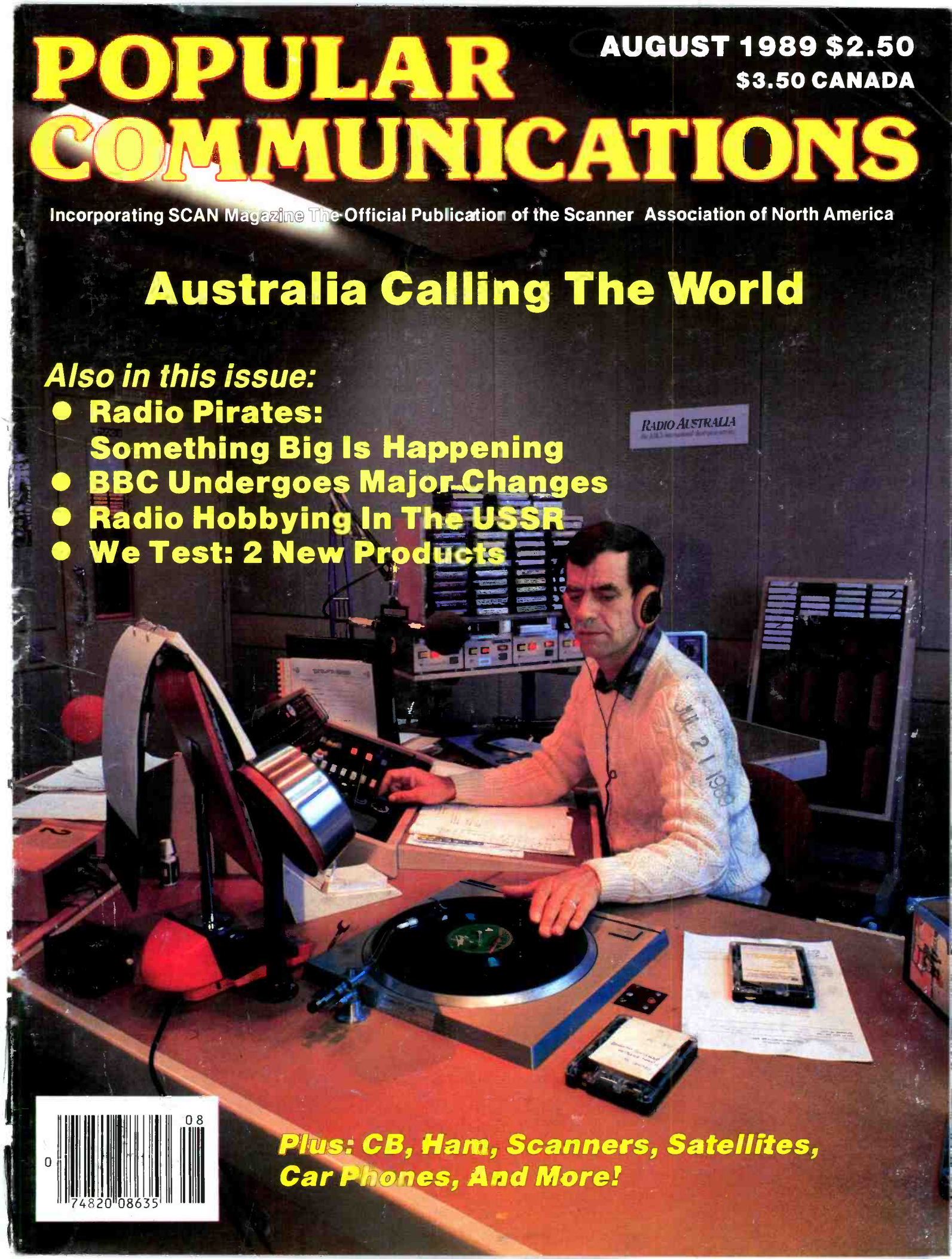

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AUGUST 1989 VOL. 7, NO. 12

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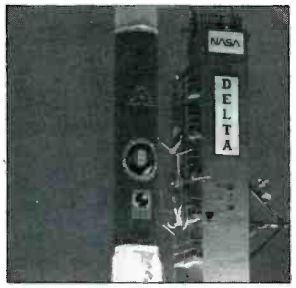

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FEATURES

DEPARTMENTS

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BOB HANSON . . .
MAY WELL HAVE HAD 200,000 FRIENDS.
NOW HE NEEDS THEM ALL . . .

The world of communications has lost a great friend and devoted public servant. On Wednesday, May 8, 1989 Bob Hanson, W9AIF, passed away on the operating table during a delicate and enormously costly liver transplant operation.

Bob will be mourned by literally hundreds of thousands of individuals whose lives he touched throughout the world as a noted columnist . . . public service association executive (SCAN, REACT, Community Watch) . . . communications industry advertising and marketing manager . . . and active radio amateur.

But mourning alone cannot pay adequate tribute to Bob's total dedication to serving others—including his wife of 23 years, Marilyn, and two teenage sons, Peter and Andrew.

Since liver transplants are regarded by some as "experimental surgery," not one dime of the expense—estimated in excess of $200,000—was covered by insurance. We simply cannot allow Bob's wonderful family to live with that impossible burden.

Your help is desperately needed. Immediately. Please, please send your contribution today. Make checks payable to: **Organ Transplant Fund Inc./Robert Hanson** a legally constituted non-profit organization. Any funds collected in excess of those required to pay actual medical expenses will be used to relieve similar transplant victims.

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PRICE	$219	$169	$189	$299	$99
SENSITIVITY					
1 KHz	< 5 mv	NA	NA	NA	NA
100 MHz	< 3 mv	< 1 mv	< 3 mv	< .5 mv	< 5 mv
450 MHz	< 3 mv	< 5 mv	< 3 mv	< 1 mv	< 5 mv
850 MHz	< 3 mv	< 20 mv	< 5 mv	NA	< 5 mv
1.3 GHz	< 7 mv	< 100 mv	< 7 mv	NA	< 10 mv
2.2 GHz	< 30 mv	NA	< 30 mv	NA	< 30 mv
ACCURACY ALL HAVE +/- 1 PPM TCXO TIME BASE.					

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Model CCA Frequency Counter/RF Detector — Ultra sensitive frequency counter optimized for picking up low power RF transmitters. Features include an RF Indicator LED to confirm presence of RF source nearby. RF Indicator has variable threshold sensitivity control that is adjustable from top of instrument. CCA has 8 digit red .28" LED displays. Internal Ni-Cad batteries provide 2-5 hour portable operation with continuous operation from AC line charger/power supply supplied.
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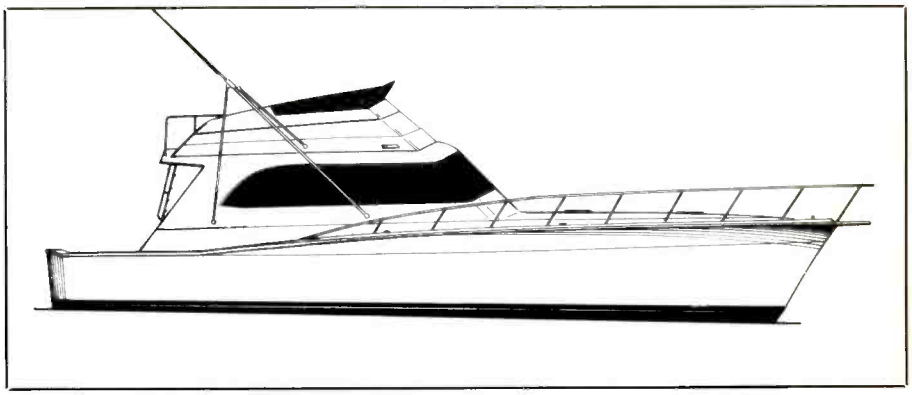
CIRCLE 125 ON READER SERVICE CARD

BEAMING IN

AN EDITORIAL

BY TOM KNEITEL, K2AES

Idle Thoughts On A Summer Day



This is being written from the deck of my boat. In the summer, I'm prone to taking some papers with me on a particularly nice day and work while I enjoy the season. Today, I've got my portable electronic typewriter all set up and it's time for me to write a heated editorial. I came on board with at least three things in my mind that I wanted to become cranky about, but no luck. After an hour or two of drifting on the briny, I find myself in at least a temporary truce with the world.

Fact is, I'm eavesdropping on our local VHF-FM ship-to-shore telephone channel and the conversations are so funny that it's got me mellow and my mind hopscotching around over assorted people and incidents that I've often thought of sharing with you, but just haven't before gotten around to doing.

An hour ago, some other boater hereabouts who, like me, decided to spend the day at sea, felt maybe he should call his boss on the ship-to-shore. "Mr. Reynolds, I'm talking to you from a boat that is speeding eastward at forty knots."

The boss replied, "I'm not interested in your velocity and after Friday's payroll is made out I won't be interested in your direction."

Last summer, I had a friend on board for a day of fishing. It was his first time on a boat and as soon as he saw the VHF radio he couldn't resist calling his wife, even though it was still only 6 a.m. The poor lady was awakened from a sound sleep to hear the operator advise, "There is a marine call for you."

"I don't know anybody in the Marines," said the lady, and slammed down the phone.

The marine operator rang her up again, but this time my friend jumped into the conversation first with, "What hath God wrought?"

"Come home, Charlie," said his wife, "you're drunk!"

That reference to the Divinity reminded me of the man of the cloth who had occasion to spend an hour listening to a shortwave radio and enjoyed it so thoroughly that, within a few months, he had acquired a receiver of his own and had become deeply involved in the DX'ing hobby. Finally the Archbishop had to send for him. "My son," said the older man, "I have always encouraged relaxing and educational avocations, but there is a point when you can become too involved."

The clergyman was crushed. "May I ask why you seem to think I am overdoing it?" he humbly asked.

"I noticed," observed the Archbishop, "that this morning you requested the congregation to turn to Hymn 144 in their *Passport To Worldband Radio*."

Three years ago I was visiting a prominent DX'er who happens to be a college professor, and a bit of an absent-minded one at that. He was displaying his well-equipped radio room when he suddenly stopped and began complaining bitterly that his wife must have cleaned up his desk and removed his 1976 *World radio TV Handbook*. "It's ten years out of date anyway. The current 1986 edition is right here in front of you," I pointed out.

"No, you don't understand," he explained, "the 1976 edition is just the proper thickness to place under my receiver to elevate it high enough off the desktop to tune comfortably."

It's odd how people are so totally different while performing their occupation or profession than when they are seeking to unwind with their hobby. When he's on duty, the chief surgeon at one of the largest hospitals in the East is about as formal and austere as they come. However, when he's pursuing his radio hobby, or socializing with his fellow hobbyists, he has an uncanny and inexplicable aversion to being called "Doctor." He'll willingly accept "Mister," or O.M., and to his intimates he prefers being known as "Mac."

One day, Mac and I were having lunch at an ARRL Convention when a casual acquaintance at the next table cheerfully called over, "Good afternoon there, Doctor."Mac snapped back at him, "Good afternoon to you, manufacturer of shirts, handkerchiefs, underwear, and fancy pajamas."

Then there was the time Mac was at my house when a friend's nineteen year old son dropped by. The lad was a regular borrower of my books as he studied for his ham ticket. I introduced this fellow to Mac and said that the young man was soon to be a ham operator. Mac posed one of his favorite questions to prospective hams, "Will you be joining the League?"

The teen looked at him blankly for a few seconds, then inquired, "What league?"

Mac threw up his hands in despair and demanded, "When they say the band is playing God *Save The Queen*, do you ask *what* Queen?"

This kid has one of those 360-watt four speaker stereo systems in his car, complete with a sub-woofer. He plays this infernal contraption at full blast. I wouldn't care, except that when he stops by to borrow or return a book, he parks in my driveway and leaves the music playing at about 170 dB's. One time he came into the house while I was writing an article. "Your stereo is making such a racket out there," I said, "I can't even hear myself typewrite."

"That's easy to fix," he said with an air of confidence, "Just typewrite louder."

In the April issue, Alice Brannigan's writings included a mention of Betty Boop and her place in TV history. Several readers wrote to me to wonder why Alice neglected to mention that Betty Boop's creator, Max Fleischer, was my grandfather. As a matter of fact, she did mention it. I blue penciled her comment before it got into print, mainly because Alice had said it a year or two earlier and I felt it was redundant. One of those who wrote in, Ed Howie, of Corsicana, TX asked what it was like growing up with Betty Boop, Popeye, and Koko The Clown as

(Continued on page 73)

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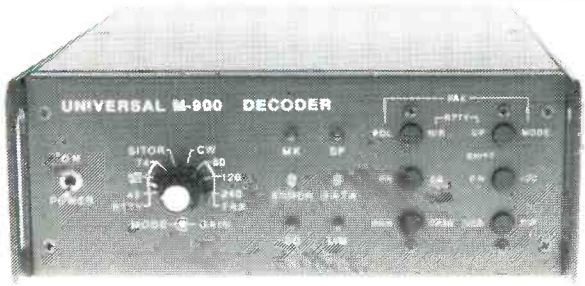

- ✦ Morse Code (CW)
- ✦ Regular Baudot RTTY
- ✦ Sitor Mode A (ARQ)
- ✦ Sitor Mode B (FEC)
- ✦ Facsimile (FAX) FM
- ✦ Variable & Standard Shift

M-900 System Components
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- ➤ Universal M-900
- ➤ 12 VDC Power Supply
- ➤ Your SW Receiver
- ➤ Video Monitor
- ➤ Parallel Printer
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MAILBAG LETTERS TO THE EDITOR

Each month we select representative reader letters for our Mailbag column. We reserve the right to condense lengthy letters for space reasons. All letters submitted for consideration must be signed and show a return address. Upon request, we will withhold sender's name should the letter be used in Mailbag. Address letters to Tom Kneitel, Editor, Popular Communications Magazine, 76 North Broadway, Hicksville, NY 11801.

It's A Real Blast

While tuning the low frequency bands, I sometimes receive strange sounding pulsed signals at about 157 and 168 kHz. These aren't radiobeacons and they don't send any ID's. What are these stations?

Sam Kiamie,
Winslow, AZ

Most likely they're stations in the USAF's Ground Wave Emergency Network (GWEN), which is still in the process of being built. There are twenty frequencies used between 150.625 and 174.375 kHz (1.25 kHz spacing between each channel). Signals are coded and sent at 1200 baud, 600 Hz shift in 2-second pulses. Numerous transmitting sites are used throughout the U.S., with nearly 100 transmitting sites planned to be in operation in another two years. Right now, approximately 50 sites are built. The general mission of GWEN is to provide a strategic communications system which could survive the EMP generated by a nuclear attack against the nation—Editor

All That Litters

Not long ago I purchased a Sanyo TH-5100A cordless telephone while I was on a trip to San Francisco. This was a $129 unit on sale for $89, so you can understand that this was far from an "el cheapo special." However, last month it developed a problem. Local repair technicians that work on Sanyo equipment tell me that they can't fix the unit because they have no record of such a model existing, and therefore, no service or parts. Being that Sanyo is a major brand, I'm at a loss to understand why this cordless telephone cannot be serviced.

K.F. Rashid,
Brooklyn, NY

My guess is that the Sanyo TH-5100A is a gray market item, that is, it was made overseas for use outside outside of the United States because it doesn't conform to the FCC's tech standards. It may operate on unauthorized (in the U.S.) frequencies, or run more power than is permitted. When "overseas only" electronics equipment easily makes its way into the domestic market, it usually ends up in discount shops catering to tourists in New York, Los Angeles, San Francisco, Miami, and a few other cities. As you noticed, not only is the warrant no good in the U.S.A., but it can't even be repaired here. It's strictly glitter for the tourists. Tourist trap discount stores, as it has been pointed out many times before, aren't the best places to shop for electronics, no matter how tempting the price for a major brand product—Editor

More About No-Code Ham Ticket

Thank you for your stand in support of a no-code Amateur Radio license. Such a class of license is long overdue and the only way to revive our hobby. Please continue to push this idea and encourage your ham and non-ham readers to write to the FCC.

Greg Fox, N6QKR,
Fullerton, CA

Yesterday I read POP'COMM for the first time. The first thing I came across was your backing the idea of a no-code grade ham license. I add my own mighty big AMEN to this, and your comments described me perfectly. I became a pilot in 1939. From then to the present (including WWII), I have flown all over Africa and India, and only on one occasion did I need CW when I couldn't get through by AM voice. Since then, I have flown all over the world in USAF transports and with the use of SSB have no trouble getting through. I wanted to get a ham license, and the technical side was no problem for me. In 1964, I became interested in CB radio. In 1981, I got involved with computers. I'm a very innovative individual and could have been an asset to Amateur Radio, however, because a lot of old-timers want everyone to have to go through the same misery they went through to get their licenses, thousands of citizens have lost the ability to be hams. I wish you the best of luck in getting this type of license into being.

David J. Wolbrette, Lt. Col., USAF (Ret.),
Yukon, OK

I found Popular Communications on my local newsstand and enjoyed it so much I quickly subscribed. I've read many thoughts about Amateur radio, and your ideas for a no-code ham license are very logical. I was a USN Radiotech First Class in WWII and worked for 30+ years in electronics. Long ago I decided not to become a ham because of the requirement to learn the code. I am interested in computers and can see many possibilities for them when they are combined with ham radio. Many who are into computers would like to become involved with packet and RTTY, but stay away because of the code requirement. No matter what is eventually decided in respect to a no-code class of license, There will be some who will be displeased. So long as there is indecision, ham radio will be held back from growing the way it must to survive, so let's get on with it.

Robert E. Keene,
Prescott Valley, AZ

RNI Radio Sarah

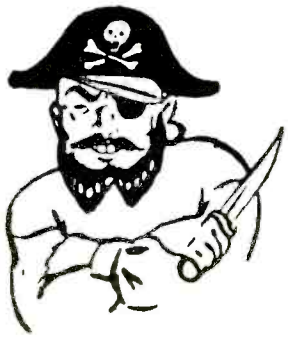
I read the editorial about the plight of the radio shop *Sarah*, as discussed in the April issue *Beaming In*. There are two separate bodies of relevant federal law which in some instances have separate courts. I refer to Admiralty (or maritime) law. In terms of Admiralty law, it's fairly clear what happened to the *Sarah*. In general, the U.S. has no jurisdiction beyond territorial limits unless there is an attack (piracy) on a U.S. registered vessel, or a vessel (or its personnel) submit to the jurisdiction of a U.S. court. There are a few special circumstances involving fugitives that fall under international extradition treaties, but they don't apply here. In the case of the *Sarah*, it appears that the vessel elected to deal with the federal courts almost from the beginning. This decision exposed them to the entire body of the law, irrespective of their geographical location. The issue of the FCC jurisdiction is (at best) only secondary to jurisdiction over the vessel itself. If the *Sarah* were a properly documented foreign flag vessel under the command of a foreign citizen on the high seas, she could not be boarded without consent. Forcible boarding is an act of piracy. You don't see the Coast Guard boarding Soviet surveillance gathering vessels, even within territorial limits. The reason is simply that their crews are prepared to exercise their right to terminate anyone attempting to board them. So, the problem with the *Sarah* was that our existing statutes were applied to parties voluntarily (though perhaps inadvertently) submitting themselves to U.S. jurisdiction.

D.T. Smith, President,
Electrolert, Inc.,
Tipp City, OH

Calling SX-88 Owners

After 30 or 40 years, I finally sold my Hallicrafters SX-88, and in doing so, uncovered a considerable interest in the history and lore of this receiver. As a result of this, I am attempting to locate as many past/present owners as possible to begin a registry of these receivers, much in the manner that classic car enthusiasts have done. Any help in publicizing this project would be appreciated. All interested are invited to write to me.

Bob Forman, W9RJH,
Monmouth, IL 61462-0068



Pirate Radio: Something Big Is Happening!

Big Time Broadcasters Borrow From Radio's Renegades

BY TOM KNEITEL, K2AES, EDITOR

Last March, Westwood One purchased Los Angeles station KIQQ-FM ("K-Lite," 100.3 FM). The station hasn't been the same since. Shadow P. Stevens was hired from a New Orleans station to handle the afternoon drive time slot. Next, New York City's top rated deejay, Scott Shannon, was lured from his spot on WHTZ ("Z-100," 100.3 FM) to take over the morning drive time duties. Then, the callsign KIQQ-FM was scrapped and replaced by KQLZ-FM. That was just for starters.

At that point, the existing "lite adult contemporary" programming format was dumped, along with the old "K-Lite" slogan." Shannon immediately began referring to his new station as "pirate radio," and then embarked on his version of the type of free form rock music format that is usually associated with outlaw broadcasters. Not that, in essence, it was *vastly* different than Shannon's old WHTZ "morning zoo" idea on another station. Still, the sudden appearance of pirate radio references was quite a surprise.

Time was when pirates tried to imitate the legit broadcasters. Now that it's reached the point where heavy duty deejays like Scott Shannon are trading on the image created by pirate radio, we figured that it's time to take a serious look at the pirate radio (also known as *outlaw radio, free radio, alternative radio, underground radio,* and *bootleg radio)* phenomenon.

Scott Shannon, morning drive time deejay at Los Angeles station KQLZ-FM. This popular station now proudly identifies itself as "Pirate Radio."

Nothing New

As a generalized and informal definition here, we'll consider a pirate as a broadcaster operating without necessary governmental consent and/or license. The word "pirate" to describe such a station is no longer as appropriate as it was many years ago. It implies a station that has usurped the operating frequency of a licensed broadcaster and is either interfering with reception of that station, or else is a bogus station attempting to pass itself off as one that's licensed.

Today's pirates hardly fit such a description, but it's too late now to change the term. Besides, it does have a certain flair that stirs the imagination.

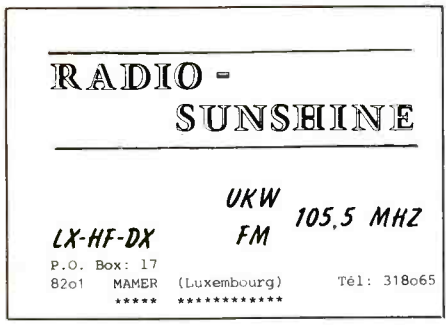
The first pirate broadcaster was Ohio's Dave Thomas. In 1925 he put his station, WUMS, on the air and (on an irregular basis) it operated for almost thirty years, despite enormous efforts by the government to shut it down. See *POP'COMM* of December '84 for the full WUMS saga.

Another milestone in pirate radio was station RXKR, running 5 kW from a large floating speakeasy in 1933. Its appearance off the Los Angeles coast caused considerable interference and generated an international incident. Still, it was the first shipboard broadcasting pirate. RXKR was detailed in the August '83 edition of *POP'COMM*.

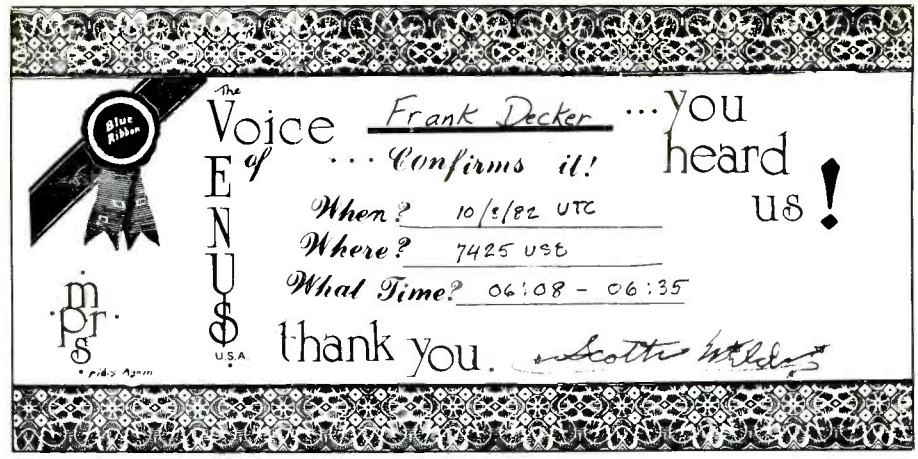
From the late 1920's until the late 1930's there were numerous pirates operating within the AM broadcasting band. Usually, their intention was to pass themselves off as legitimate broadcasters, and many did this quite successfully. Pirate WGM, Jeanette, PA operated as a successful commercial enterprise for several years before they were caught. Their audience was astonished to find out that the town's local broadcaster had never even applied for a license. For the most part, the pirates of this era were commercial in nature, often being operated by hotels, theatres, ballrooms, or stores.

The government closed them down whenever they were uncloaked, although many stations required repeated closings over an extended period of time. While there wasn't always any deliberate or mali-

KQLZ-FM's "Pirate Radio" logo.



Pirate radio is international. Radio Sunshine, on 105.5 FM, is an active pirate in Luxembourg.



The Voice of Venus was a shortwave pirate that preferred SSB mode to AM. DX'er Frank Decker received this QSL from them in 1982.

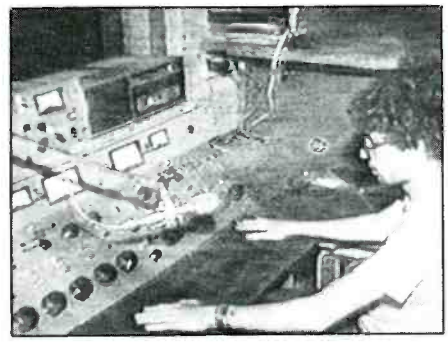
cious intent to interfere with the operations of licensed stations, neither did it seem that there was any special consideration given to avoiding such interference. At night, a low power pirate might cause problems to licensed stations in several states.

Pirates became quiescent after the late 1930's. Other than an occasional broadcast by WUMS or an isolated station here and there, nothing much was heard until many years later when modern pirate radio was born.

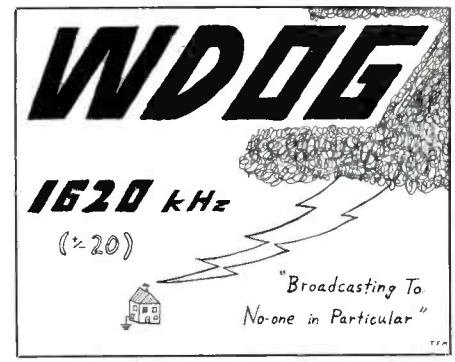
The Rebirth

One of the earliest modern pirates was structured much like a 1930's outlaw, however, it did add the novel twist of showing up in the 60 meter tropical shortwave broadcasting band. This station, calling itself WBBH, played only classical music and was masquerading as a legitimate station operated by a non-existent music school in New Jersey. WBBH operated for several months during 1966 without any problems from the FCC. It was only because of an enthusiastic SWL's casual inquiry to the FCC that the agency had occasion to check its records in order to discover that the station was unlicensed. The strange story of WBBH appeared in *POP'COMM* for January '85.

WBBH, although a pioneer of sorts, was untypical of pirates that began appearing after the mid-60's. Usually, these stations made no pretext of being licensed. Riding in on the crest of the anti-establishment, anti-war, psychedelic subcultures of those years, these stations were free wheeling, satirical, and often outrageous. They were mostly



Ivan at the master console of shipboard station Radio Newyork International during its 1987 tour. Whether RNI is/was a true pirate is open to debate, although the station itself didn't seem to mind the label.



The QSL from pirate WDOG frankly admits that the station was "broadcasting to no one in particular." Fact is, many pirates are little concerned about the size of their audience.

operated as non-commercial or hobby stations by one to four persons in the 18 to 34 age group. The broadcast image of these stations hasn't changed substantially over the past fifteen years, except to the extent that their focus has changed in order to remain current and timely.

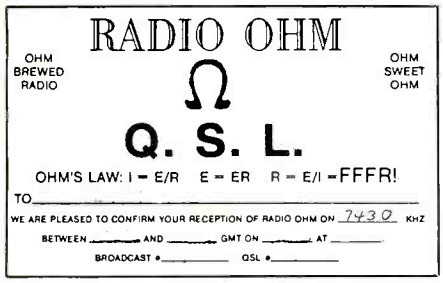
Some stations use self-assigned FCC-like callsigns, but there was little doubt about the pirate status of stations who call themselves *The Voice of the Purple Pumpkin, King Kong Radio, Pirate Radio Central,* or *Jolly Roger Radio.* Although the 60's emphasis on anti-war protest and "turning on" isn't there any longer, the defiance, satire, comedy skits, parody commercials, general irreverence, and music (rock, oldies, and jazz) are still to be found in abundance. These are blended by the pirate deejays into a sound that many listeners enjoy and have come to quickly identify as distinctly "pirate" in nature.

When it's done right, it's clever and wildly entertaining; easily worthy of being adapted to use by commercial broadcasters. As with most formats, when it isn't done well, it's pretty awful. Unfortunately, not all pirates have the talent or resources to make it work.

Presently, there are plenty of pirates, so even if some of them are dreadful, that still leaves others to be entertaining. It's just that you have to sort through and be selective. In New York City, at last count there were at least a full dozen different pirates taking turns at operating on (otherwise silent) 91.9 FM. It got so hectic on 91.9 FM that one pirate operator told me the stations were resorting to the use of a frequency coordinator to maintain the peace between stations there.

Locally unused FM frequencies, or those just above the high frequency edge of the FM band (108 MHz), are popular of late, as are AM operations around 1620 kHz. There are pirates between 7300 and 7500 kHz, and sometimes even stations on the CB channels. Pirates do seem to take deliberate effort to avoid causing interference to licensed stations, althought he FCC invariably complains that pirates either cause interference, or are at least capable of doing so. Since operations above 108 MHz fall within the band assignable to VHF aero navigation facilities, the FCC has been especially irked by pirates who turn up there.

Present day pirates like *Radio Free Willy, Radio Garbanzo, Radio Mouser Worldwide, Radio Lymph Node International, Secret Mountain Laboratory, The Voice of*



Shortwave pirate Radio Ohm confided on its QSL that it was "ohm brewed radio," in the truest traditions of modern free radio philosophy.

This is the studio, control room, and transmitter site for a pirate that was known as Coral Reefer Radio. A CW bug on the desk makes you wonder if the operator is a ham operator.

Laryngitis, *The Voice of Long Island*, old timer *Radio Clandestine* (operating for almost 16 years), plus many others are continuing to carry on and hone the pirate format in its purest form.

A Matter Of Motive

Why do the operators of these stations pursue their calling? The root of the matter is because they like to broadcast and existing FCC regulations don't permit low-power, personalized, non-commercial, shoestring budget, broadcasting stations.

Undoubtedly, in many operators, there's some amount of motivation relating to defying authority and the rush that comes with doing something that carries with it a certain risk of getting caught. Lots of pirates simply say that the best reason they can give is that they love radio, and broadcasting is fun. Also, it's relatively easy to set up a transmitter, microphone, and a way of playing tapes, CD's, or LP's in order to become a pirate. Not that all pirate stations are humble desktop operations set up in the corner of a bedroom. More than a few pirate stations consist of impressive racks of beautifully installed professional quality broadcast equipment bearing names the likes of Gates, Harris, Ampex, Sony, RCA, Collins, etc.

There was a time when pirates were prone to saying that they were broadcasting in order to offer the public the type of music and programming that can't be heard anywhere else. College stations have always disputed such claims, insisting that their own programs included the same esoteric rock, jazz, and other recordings. Now that commercial broadcasters have also zeroed in on the formula, we'll not hear that claim often in the future.

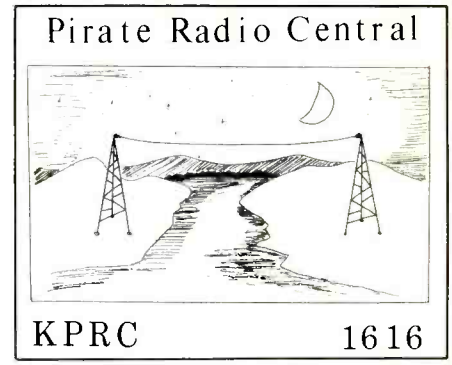
The Fear Factor

Because of a distinct aversion to getting busted by the FCC, the majority of pirates go to considerable efforts to maintain anonymity. The operators of the stations, for instance, use on-the-air names such as Big Wheel, Genghis Huxley, Sal Amander, Jim Nasium, Dr. Klystron, and others of a fanciful nature. Mail drop addresses, where letters addressed to the station are received and then forwarded to the operators, are standard procedure.

Stations may vary or switch their identifications, change locations, as well as run erratic transmission skeds depending upon the amount of paranoia and the real or imagined likelihood of getting caught by the FCC.

Some pirates maintain cautious contact with one another in order to exchange tapes, equipment, and information of mutual interest. Newsletters by/for pirates have appeared on a sporadic basis for several years, some have been rather good, even though there's a lot of paranoia involved. Let's face it, paranoia can't easily mix with information dissemination. An informative newsletter on the subject is therefore a neat trick.

Pirate radio is also not without its jealousies, feuds, factions, and occasional sociopaths; all factors that cause problems for those attempting to encourage the mutual exchange of information. Mostly, though, paranoia seems to be the stickler. For instance, in late 1982, we thought we were doing a favor for a pirate radio newsletter called *Selectivity* by telling our readers where it could be obtained. To say that the guy who put it out was spooked would be an understatement. Now we'll publicize pirate newsletters and clubs by request only, no matter how good they might be.



KPRC was a pirate active on the AM, FM, and shortwave bands.

The Stations

The stations keep coming, although they do run in cycles. The aftermath of any major FCC action against pirates is a temporary lull in station activity as well as delays in new stations commencing operations.

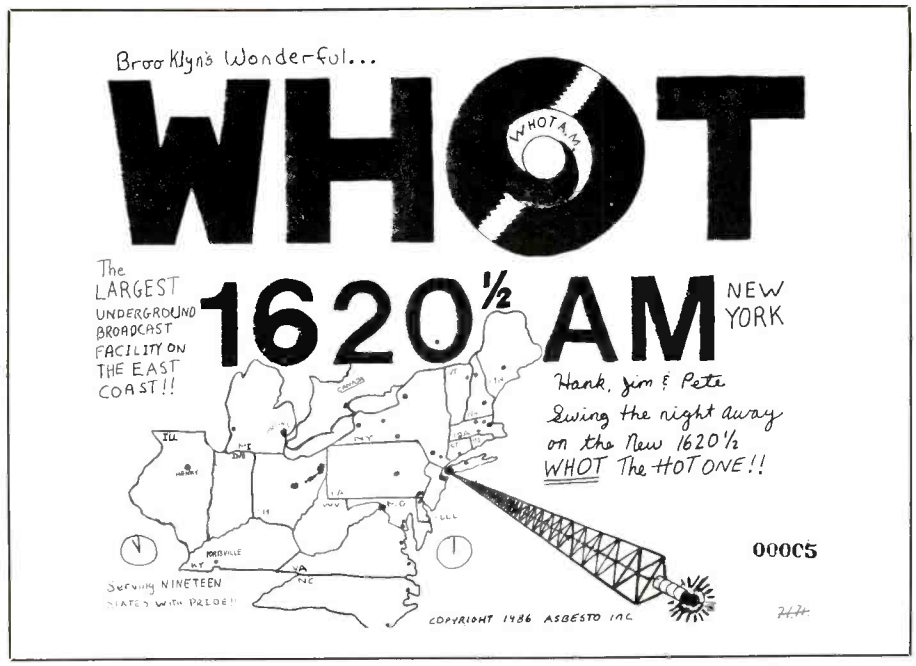
When known, FCC actions against pirates are reported in the pages of *POP'COMM*. We also report on the activities of stations heard operating. This information is supplied to us by those who like to monitor the pirates as well as by the pirates themselves. *POP'COMM* was the first commercial publication to devote a regular column to this aspect of monitoring.

Although it's illegal to operate a pirate station, there's nothing wrong with listening to one. Lots of these stations not only offer good programming, but also QSL's to collect. It is just as "valid" to monitor pirates as it is to tune clandestines, or any other type of stations. As signals sent out into the airwaves, they become fair game for being captured by those who can ferret the (usually) low powered signals from the back-

Radio Confusion's QSL depicted tire-strewn "Scenic Lake Confusion."

Crazy Charlie, shown at the controls of Radio Confusion. This was a very active station in the early 1980's.

ground noise. It isn't at all necessary for you to either support or detest the concept of pirate radio *per se* in order to monitor the stations and collect their QSL's; not any more than you have to agree or disagree with a nation's politics or leaders in order to seek out QSL's from its stations.



WHOT boasted that its signal covered nineteen states on 1620 kHz.

The FCC

The FCC is understaffed, underbudgeted, and overworked. Within the scope of its many enforcement duties, some things obviously take priority over others. It does seem that low profile, low power, pirates that aren't generating actual interference complaints aren't as high on the priority list as those stations running high power, or bringing in complaints of interference or foul language, or whose operations receive major national media attention. A perfect example would be one 10 watt FM pirate I know of.

Located in an isolated valley, the station operator tells me that he's been on the air almost nightly for several years with country and western music, plus announcements of local births, weddings, deaths, arrests, community activities, and other local chatter. Nobody complains, nobody cares. Probably nobody beyond the valley even knows.

The FCC has been presented with many concepts for permitting people to establish small, personal broadcasting stations. For whatever reasons, the agency simply doesn't like the idea. Maybe they forsee such a service as being a chaotic and uncontrollable jumble of stations running more power than is allowed. It isn't beyond the realm of possibility that such would come to pass.

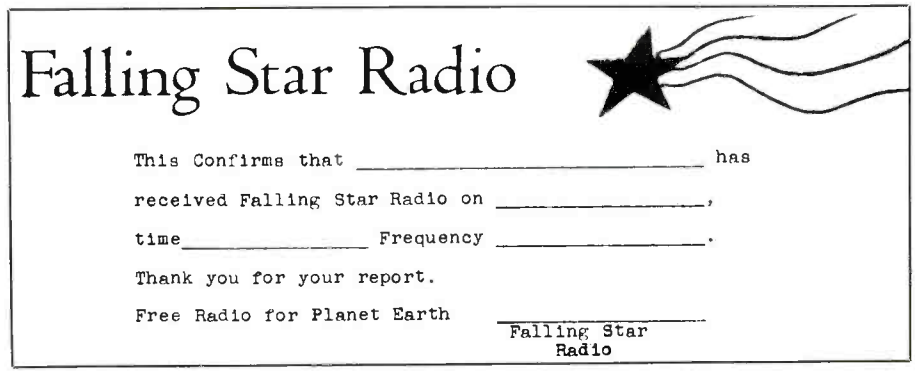
Nevertheless, the FCC's regulations are uncompromising about technical standards and the need for a license to broadcast. Rounding up the necessary funds, securing an available frequency, satisfying the technical requirements, and going through the various stages of paperwork in order to put an FCC-authorized station on the air is a project far beyond the abilities of the average individual. That's why new pirates keep showing up despite restrictive regulations, possible fines and/or imprisonment. After almost 65 years, it's still a risk some are willing to take. It seems that using regulations and enforcement to control pirates is like trying to stop a pot from boiling by clamping on the lid and turning up the heat.

Some *POP'COMM* readers write to suggest that if only we would stop presenting monitoring information on pirates, the audiences would cease to exist, followed shortly thereafter by the exit of the pirates themselves. This naive logic, which ignores the fact that pirates operated for 57 years prior to the creation of *POP'COMM*, supposes that if you pretend something doesn't exist it will eventually go away. If that idea worked, the news media could stop reporting on crime, terrorism, or poverty. We like to think that our readers turn to *POP'COMM* in order to find out what's really happening, and not our version of a make-believe world where pirates are overlooked because some folks don't like them. Then, do we next stop listing *Radio Moscow*? And what after that?

Pirates will remind you that they don't have Arbitron ratings that rank their popularity against other stations. They're broadcasting because they want to and for their own enjoyment. Undoubtedly, some pirates run such awful programs, that they may well have virtually no audience at least some of the time. Other pirates provide no mailing address and, without incoming fan mail and reception reports, are obviously indifferent to finding out the size or tastes of their audience. They don't care whether we write about them.

Like them or not, it does look like the pirates are going to be arriving and departing in the various bands for some years to come. More than that, your favorite rock station may be so impressed with pirates that they're in the process of adopting their image and even name it as their own!

Even though no histories of broadcasting mention pirates, it looks as though they're now making their own unique contribution to audience tastes. An odd development, to be sure. Fact is, now that commercial broadcasters have seized upon the pirate radio format and name, some of the real pirates will probably think that much of the romance and mystique is gone. **PC**



Falling Star Radio is a current shortwave pirate.

Australia Calling The World

A Guided Tour Of This Popular International Broadcaster

BY RANSOM STODDARD, KWA7MZ
PHOTOS BY LARRY MULVEHILL

Millions of people each day tune in *Radio Australia's* programs in English, Indonesian, Standard Chinese, Tok Pisin, French, Thai, Japanese and Vietnamese. Approximately fifty different shortwave frequencies are used to beam these programs out to Asia, the Pacific, African, Indian Ocean areas, the United Kingdom, Europe, and across North and South America. Indeed, even inexperienced newcomers tuning the international shortwave bands with the simplest receivers are sure to number *Radio Australia's* powerful and prevalent signals among those logged on the first try.

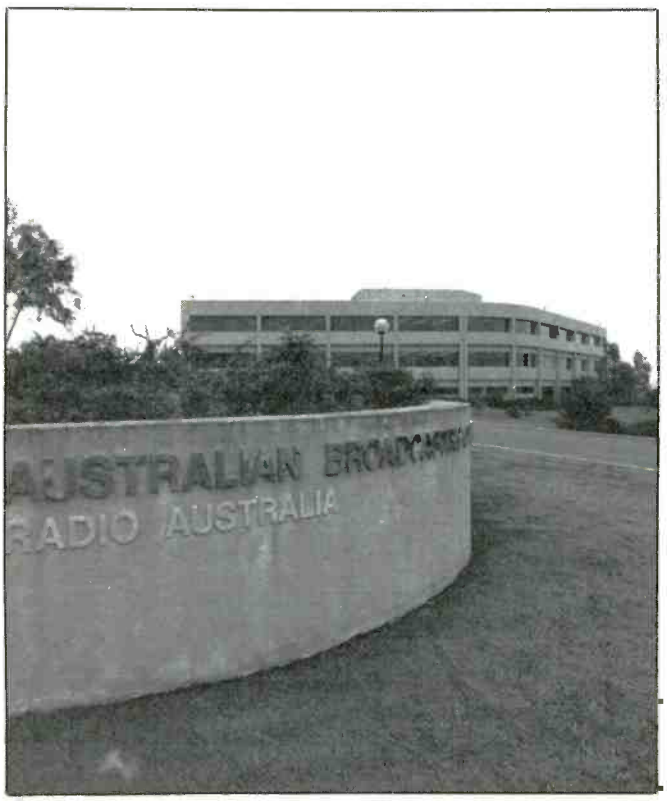
Radio Australia is a division of the Australian Broadcasting Corporation, Australia's national Broadcaster. The ABC is funded by (but independent of) the Australian Government. In addition to *Radio Australia's* overseas services, the ABC also operates more than 100 mediumwave stations (from 50 watts to 50 kW), and 38 FM stations. There are also five domestic service shortwave stations, plus an additional six shortwave transmitters used for regional service in the Northern Territory.

Four Decades

Radio Australia began broadcasting in late 1939. At that time it was known as *Australia Calling*. These programs were all in English, but soon additional languages (Dutch,

Lobby of the Radio Australia HQ building, as viewed from the mezzanine.

Radio Australia's imposing HQ building at Burwood East, outside of Melbourne.



French, Italian, German, and Spanish) were transmitted. During the period of WWII, the station served as voice to allies and enemies alike throughout Asia and the Pacific war zones. In 1945, the station changed its name to *Radio Australia*.

Radio Australia's operations today are from a modern center in Melbourne. This facility has 18 studios and control rooms, each capable of being used independently or together. There are also two news booths, plus a production studio for recording complex musical and spoken word programs.

It takes about 230 people to run *Radio Australia*, with the largest single department (about 50 people) concerned with news and current affairs. Roughly half of *Radio Australia's* employees are foreign-born. Broadcasters for the foreign language programs are usually recruited from their home nations and work under three year contracts.

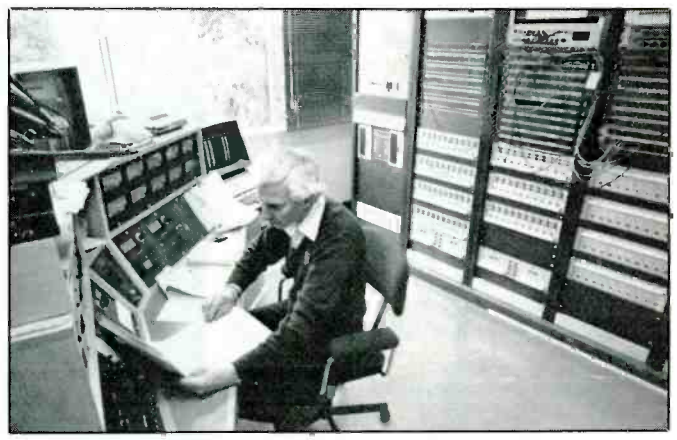
Radio Australia has 13 shortwave transmitters. These are located in the northern, southeastern, and western portions of the country. The largest installation is at Shepparton, Victoria. Others at Carnarvon in Western Australia, on Cox Peninsula, near Darwin, and at Brandon, Queensland.

Although the station can be received on many frequencies in North America, the best (and most popularly reported) transmissions include:

0800 to 1500 UTC on 9580 kHz
1130 to 1400 UTC on 6060 kHz
2200 to 0200 UTC on 15320 and 15395 kHz
2200 to 0400 UTC on 17795 kHz

The station's address is: Radio Australia, GPO Box 428-G, Melbourne, Vic. 3001, Australia. Correct reception reports are acknowledged with an attractive QSL card.

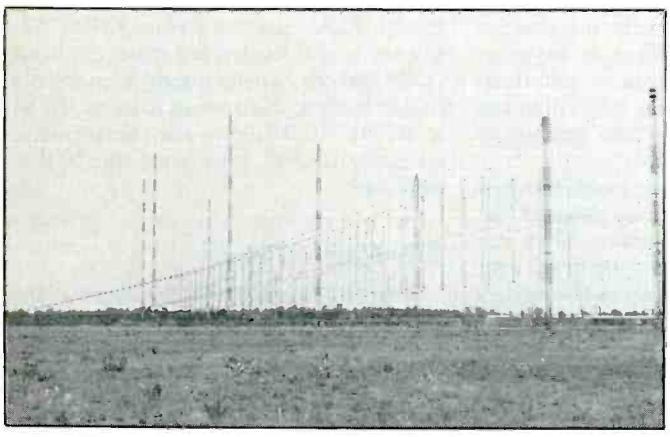
Radio Australia's News and Current Events Department getting ready for a news broadcast.



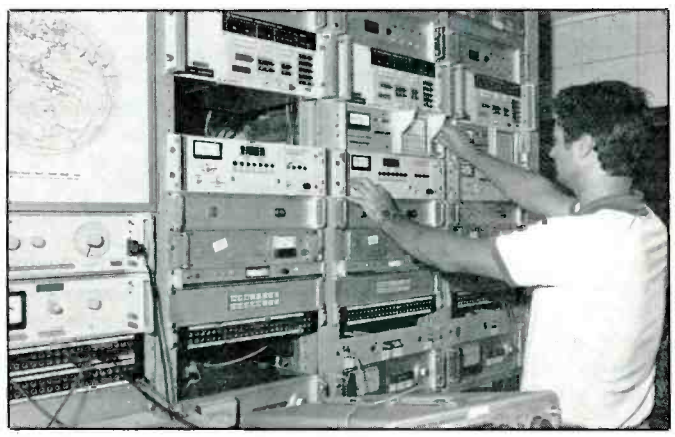
Alan Hiscock, Transmission Supervisor, shown at Master Control in Melbourne.

One of the 18 broadcast studios at Melbourne.

The RA transmitter site at Darwin.



Massive antenna arrays dot the Darwin landscape.



The Darwin facility has three 250 kW transmitters. Here, a technician checks the modulation.

Tuning In On Yesterday

Looking Back At An Earlier Era Of Broadcasting And Wireless

BY ALICE BRANNIGAN

What could be more tantalizing as finding out something about a really obscure little broadcasting station? Some information sent in by Michael D. Manley of Rapid City, SD put me on the track of station KGDY, a station that began its short life in the small South Dakota community of Oldham.

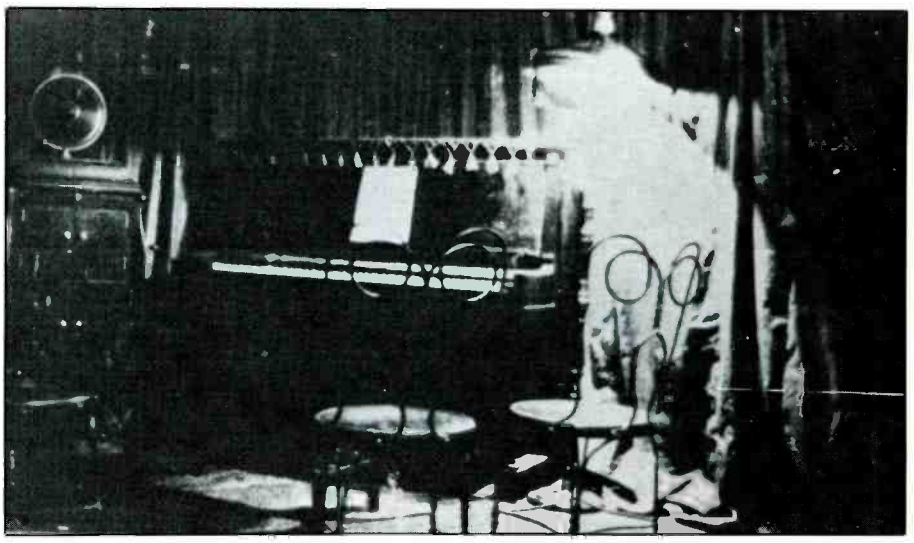
In the 1920's, Oldham had a population of 500. If you count in the grain elevator, the cream station, and KGDY itself, there were a total of twenty-three businesses in town Oldham, just forty five miles southeast of Huron.

Enter upon the scene Alfred Nelson, born in 1895. He was a local boy who liked to tinker and became the best auto mechanic in town. Folks called him "Tin Can" because he could whip together all kinds of engines and machinery from discarded cream cans and other junk. That nickname was later shortened to "Tin-O." He was also a self-trained electrical tinkerer, most likely as a result of working at the local power plant. In 1925 he took a job at Hanson's Hardware Store in Oldham.

That job provided him with a large supply of defunct switches, generators, spark coils, meters, and other doodads. It didn't take him long to collect enough components to assemble a small transmitter, with a desk telephone pressed into service as a microphone. Thus began the career of Oldham's own broadcasting station. Although it had no license or callsign, Tin-O got reception reports from as far away as New York State. His station operated whenever he was in the mood to broadcast, sometimes adding live music or records to spice up the programming.

Eventually the government appeared and demanded that the station be taken off the air until a proper license was obtained. J. Albert Loesch, one of the owners of the Loesch Bros. Pharmacy stepped forward and convinced the government to issue him the license, as he would allow the station to be located in the rear of his store. In 1927 the license was issued with the callsign KGDY for 15 watts on 1450 kHz. The station, known on the air as "The Little Brick Town on The Prarie," operated weekdays from 6:30 to 9 p.m., with Tino-O in charge of the operations.

Three months later the government again appeared and said that, even though Tin-O had constructed KGDY, he wasn't qualified to operate the station. At that point, Loesch had to pay someone to run the station. That meant cutting the schedule down to two nights per week when they could pay a student from the state college in Brookings to drive over and be the operator for $15 per night. Small advertising revenues simply didn't allow for more than that. Even so, the station did manage to hang on, and (in late 1928) moved to 1200 kHz.



Not much to look at, but the main (and only) studio of KGDY was in the back room of Loesch's Pharmacy, Oldham, SD. (Courtesy Michael D. Manley.)

Seemed like everybody in town stopped in to entertain on the accordion, piano, or violin. Or maybe they'd sing a few songs. Once, two local boys came in and sang for an hour and when they were leaving to go home, the clerk at the counter told them that a farmer outside town called in to ask the store to give the boys "the best box of candy you have in the store."

For the most part, the Loesch brothers were happy to do so, for they also sold Majestic radios in their pharmacy. Their station, KGDY, had enabled them to sell a radio to practically everybody in the area, if not to hear the entertainment, then at least to tune in on all of the school functions like graduations and basketball games.

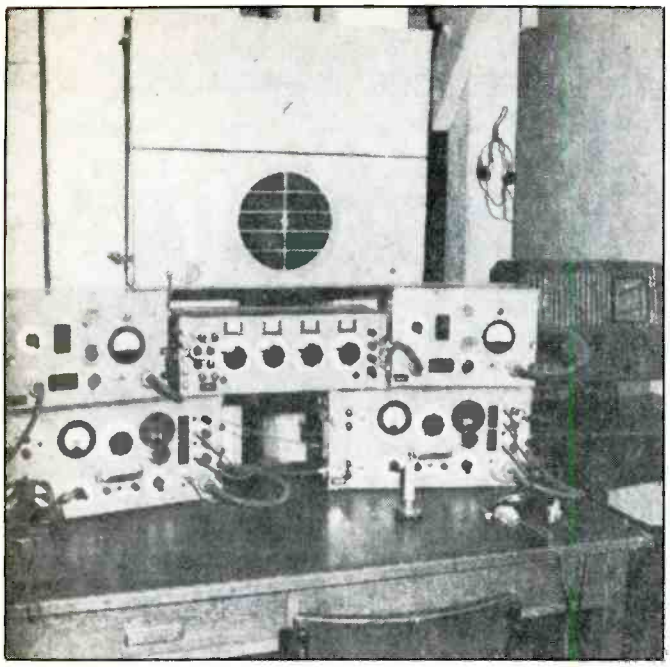
Maybe by 1930 there were no more Majestic receivers to be sold around Oldham, or else hard times had left the area farmers with little money for such luxuries. That's when two men showed up and told Al Loesch that they wanted to put a radio station in nearby Huron, but the FCC wouldn't issue a license because KGDY had the only license they'd allow in the area.

Loesch sold KGDY, and in 1931 it moved to Huron with 100 watts on 1200 kHz, where it became known as "The Voice of South Dakota" from its studios at 347 Dakota Avenue South. In 1935, KGDY shifted to 1340 kHz. By late summer of 1938 the station had gone off the air.

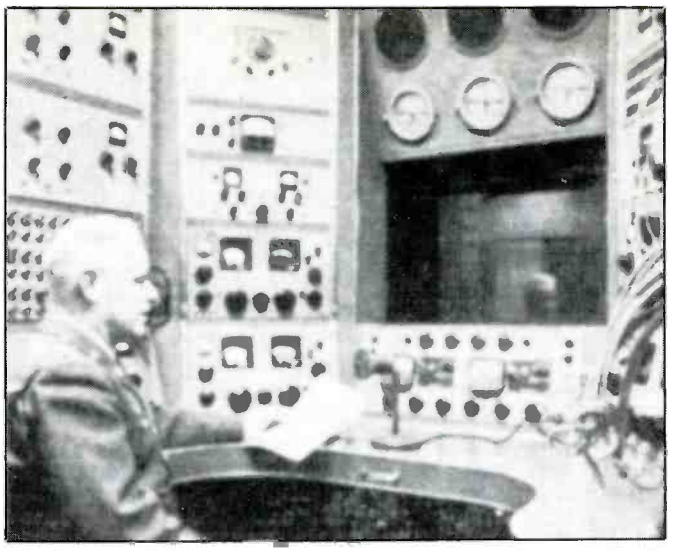
Today, there is still a station in Huron on 1340 kHz, KIJV which runs 1 kW. Even though KIJV uses the former KGDY frequency, and is located just down the street (1726 Dakota Avenue South) from the old KGDY studios, there seems to be no real tie to KGDY. KIJV didn't start broadcasting until July 1, 1947, nine years after KGDY went dark.

For Radio Fans

A reader suggests that we mention the Baltimore Museum of Industry, 1415 Key Highway, Baltimore, MD. This museum displays many antique broadcasting items belonging to the Golden Radio Buffs of Maryland. These items include microphones and other memorabilia from an earlier era. There are also recordings and films,



Winston Churchill hung his headphones here during WWII.



The Presidential Communications Car, revisited with lots of additional information from someone who was there.

and many activities related to broadcasting history. Sounds like something worth exploring if you're in the vicinity of Baltimore.

Although not quite as accessible to North American radio enthusiasts, I wanted to also let you know that Winston Churchill's WWII personal radio broadcast studio and two way communications room are both available for public inspection. They are located in London, England.

The rooms are exactly as they were during the Battle of Britain, and contain all of the original equipment. These facilities, known as the Cabinet War Rooms, are on King Charles Street at the intersection of Horse Guards Road (near St. James Park). They are open every day and are thoroughly fascinating, from what several readers have written to tell us.

Old Business

The mystery "wireless" tower in Troy, OH (March issue) was identified by George L. Katzenberger, who lives in that city. George advises that on July 4, 1876 (to celebrate the U.S. Centennial), a 186 ft. wooden "liberty pole" was raised in Troy's square. The following year, a bronze eagle was added to the top of the pine pole. But in 1891, lightning struck the eagle and demolished the top twenty feet of the pole. In 1892, the pole was taken down.

In 1898, some local citizens decided that the current Spanish-American War situation seemed to call out for the patriotic symbol to be replaced in the town square, which had been unadorned for six years. Private funds were collected to put up a miniature of the Eiffel Tower in the spot where the pole had previously stood.

Two local plumbing shops went to work putting the tower together, with the tower legs firmly sunk into a concrete base. In 1899, a bandstand was built in the base, and the 168 ft. structure was painted. In 1900 it was adorned with electric lights to illuminate the square at night. It stood until 1908, when it had become decrepit and was torn down.

The tower in the town square of Troy, OH in 1908 wasn't for wireless.

In our March description of that tower, we mentioned an early wireless station in the area, Henry Ford's station WNA, in Springfield. We wondered if WNA might have had some connection with the Troy tower. That brought a clarification from Michael A. Schulsinger, of Springfield, OH.

Mike tells us that Henry Ford had personal holdings that included forests, coal mines, and other resources that would produce the materials used for car manufacturing. One of these holdings included controlling interest in *The Detroit, Toledo and Ironton Railroad*. WNA was one of three wireless stations Ford established along the railroad's right-of-way. It operated on 16 kHz with 500 watts, and later 1 kW.

There was also KDEN, Dearborn, MI with 50 watts (later 1.5 kW) on 17.5 kHz; also WJQ, Jackson, OH with 100 watts on 15.5 kHz. Although these were, primarily, used for point-to-point communications there were supposedly some experiments with using receivers located aboard the trains. The experiments were not successful, possibly for no reason other than they required the additional cost of a telegrapher on the

train crew. All three stations were dismantled in May of 1925.

Rolling On

Speaking of railroad radio, in the April issue we had a photo of the train car that President Truman had converted into his rolling communications station. Further information on this station came in from Major William J. Koczon, W2HWQ, of Petaluma, CA who immediately recognized the Army officer in the photo as his old boss, Lt. Col. George McNally, U.S. Army Signal Corps, White House Communications Agency, at the controls of the station.

Col. McNally was a ham operator, and before WWII he was a Secret Service Agent at the White House, as well as a Reserve Officer in the Army Air Corps. With the advent of war, he was called to active duty. With the war on, it was decided that the President had no communications facilities (other than telephones) at the White House or at his several retreats, and that this was a problem.

The Secret Service wanted round-the-clock radio and TTY service, crypto facilities and other secure communications. They also required that all personnel assigned to Presidential duties be cleared by the Secret Service. At that point, the Secret Service requested that (then) 1st Lt. McNally be transferred from the Army Air Corps to the Signal Corps, with his the White House as his Permanent Duty Station.

Major Koczon feels that the communications equipped railroad car was in use from at least the time of President Truman's 1947 campaign. He observes that the railroad car required constant maintenance and updating in order to keep it abreast with rapidly changing postwar developments in communications technology.

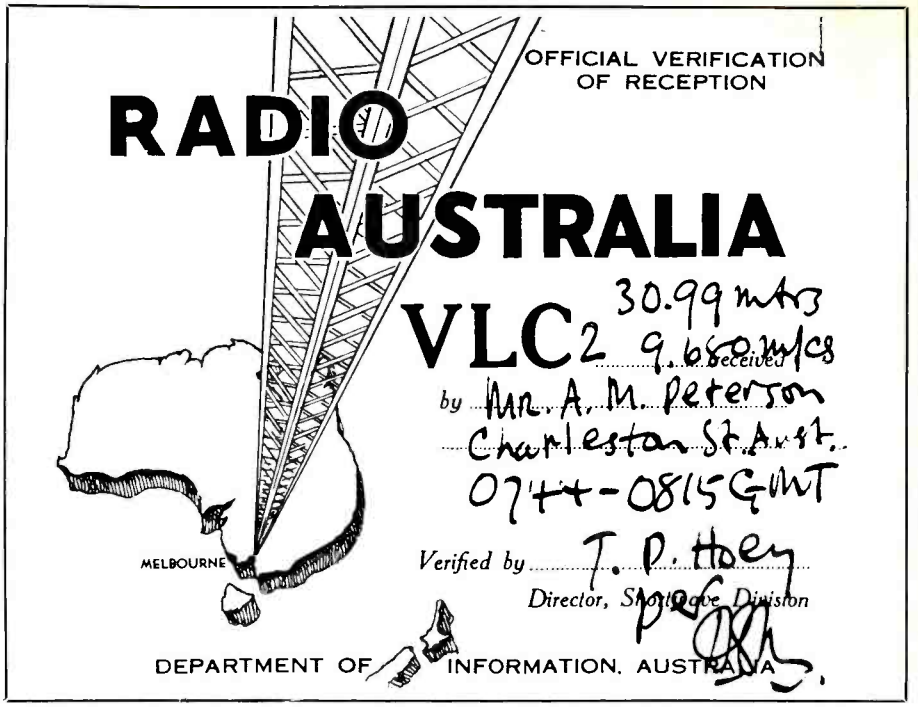
He recalls that heavy train vibrations were a problem, but the antenna was the most vexing problem of all. Due to limited clearance between the top of the car and bridges, underpasses, tunnels, etc., the space available for the antenna was extremely limited. The antenna used consisted of horizontal loops of 1-inch copper tubing, mounted on standoffs, about 8 inches above the roof, for the entire car length.

The Presidential Communications Car, as it was known, was always maintained and stored in Baltimore, even long after it had fallen into disuse. It may still exist somewhere, possibly fully updated and on standby in case it's needed. Major Koczon left there during the "Ike" years.

We appreciate W2HWQ's sharing of these memories with us.

A Question

Dr. Adrian M. Peterson, who is a regular contributor to these pages, poses a question. He recalls that several years ago, at the time the communications facility for the U.S.N. was first established at North West Cape (Western Australia), an entertainment AFRTS station was planned for the area. Instead, though, the Australian Government installed an ABC relay station, 6XM (now running 2 kW on 1188 kHz) at nearby Exmouth. On one occasion, he remembers reading about an American "W" callsign for the projected AFRTS station, but he's never been able to relocate the information.



A QSL from Australian shortwave station VLC, which inspired the callsign used by two American military broadcasting ships. (Courtesy Dr. A.M. Peterson).

If any of our readers have this information, Dr. Peterson's address is 2733 Willow Glen Circle, Indianapolis, IN 46229.

He also comments on the callsign WVLC, which was at first used by the Army ship *Apache*, and then later on the *Spindle Eye* (as discussed in our January issue). You may recall that this was the ship used as the press relay station during the Bikini Atoll A-bomb tests in the 1940's. Dr. Peterson notes that the callsign WVLC was given in honor of shortwave station VLC in Shepparton, Australia.

VLC used a 50 kW lend-lease transmitter originally allocated to OWI-VOA and diverted for use by Radio Australia. In exchange for the use of this transmitter, Radio Australia relayed VOA programs part time, notably the "Philippine Hour." The VLC transmitter began full time shortwave broadcasting on May 1, 1944, with programs sent by landline from Melbourne.

When the *Apache* began broadcasting, the OWI-VOA programs were transferred from Australia's VLC to WVLC, and thus the Australian transmitter ended its role as a VOA relay station.

Wild About Walla Walla

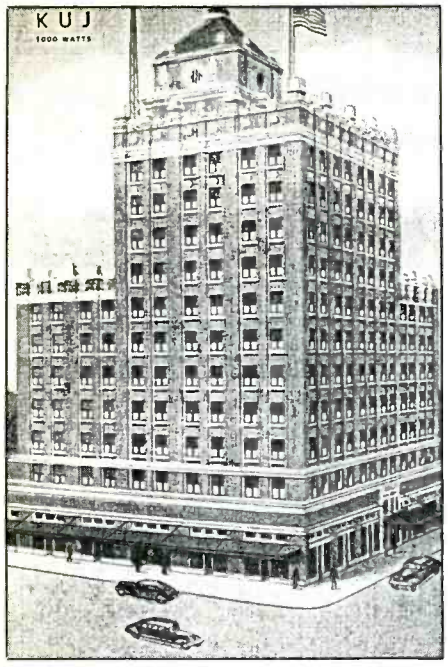
Jerry Rappel, of Davenport, IA regularly forwards us picture postcards that he's located showing broadcasting stations. This time it's a card that was mailed in the late 1940's that shows a hotel in Walla Walla, WA, a tower on the roof, along with the printed inscription "KUJ 1000 watts." Jerry commented that he's never seen a mention of KUJ here, and he hopes we can oblige.

KUJ began operation in early 1928 under the auspices of F.W. Lobeboy and R.W. Kerfoot, who operated from 5811 5th Avenue, N.E., Seattle under the name of the Puget Sound Broadcasting Co. The 10 watt transmitter (on 1500 kHz) was located in Longview, WA. Within two years, they were out of the picture and the station (running 100 watts) was owned by CBS, Inc., at 1346 14th Street, in Longview. This was a brief arrangement, however.

The year 1931 saw KUJ moved to Walla Walla, running 100 watts on 1370 kHz, and operated by KUJ, Inc. The station had checked into the Marcus Whitman Hotel, 2nd and Rose Streets, "the only fireproof and air conditioned hotel in southeastern Washington." The postcard Jerry sent, although mailed in the 1940's, probably represents KUJ the way it looked in the early 1930's. That's because in the late 1930's the station was using two 130 foot towers, and the tower shown on the postcard looks to be only about 35 feet tall. Maybe they counted the height of the hotel when they measured the antenna height.

In the national frequency shuffle just before WWII, KUJ ended up on 1420 KHz, but they had increased their power to 1 kW. And they moved their transmitter site to U.S. Highway 410 at Sudbury Road.

KUJ is still on 1420 kHz, but has used 5 kW for many years. New owners took over in early 1981, and the station is now located at Route 5, Box 513 in Walla Walla. It runs an Adult Contemporary music format. The



Broadcaster KUJ, in Walla Walla, WA was located in the Marcus Whitman Hotel when this 1930's view was captured. (Courtesy Jerry Rappel.)

co-owned FM station, KNLT (95.7 MHz), is programmed separately.

Who's On First

The old debate over which station was the first broadcaster has never been fully been settled. The fact that some stations operated in a ham or experimental status prior to being issued commercial licenses has served only to further cloud the issue. Depending upon how some people interpret history, claimants to who was first include KDKA, KQW (now KCBS), WHA, and several others.

It's worth pointing out that there are and were numerous lesser known claimants, too. No way would we want them to fall between the cracks just because there isn't anybody around to perpetuate their claims.

One contender was Thomas E. New. In late 1918, he started the Precision Engineering Association. On June 30, 1919 this was formed into a corporation known as the Precision Equipment Co., Inc., of 2437 Gilbert Ave., Cincinnati, OH. Precision made and sold Ace brand transmitters and (under a royalty license to Armstrong) regenerative receivers.

Tom New, using an Ace transmitter, communicated with the NC-4 aircraft on its transglobal flight. Soon after, he modified the transmitter for voice and music transmission and, in September of 1919, was issued an Experimental license with the callsign 8XB. Stringing an umbrella antenna on the roof, he immediately began broadcasting. This was more than a year before the November, 1920 KDKA broadcast of the Harding-Cox election returns so often cited as being broadcasting's genesis.

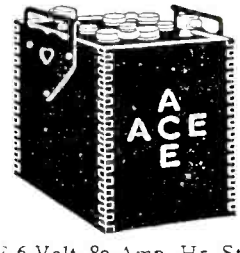
In 1922, 8KB had evolved into broadcast station WMH on 619 and 833 kHz, and a year later it was running 750 watts on 1210 kHz. By 1924, WMH had been sold to the Ainsworth-Gates Radio Co. and was running 500 watts on 710 and 920 kHz, alternating each month with WLW and WSAI. In March, 1925 the station was again sold, this time to The Kodel Radio Corp., which increased its power to 1 kW and changed its callsign to WKRC (a station previously discussed in these pages).

The most relevant factor in the fate of Precision and WMH occurred the day in early 1921 when auto accessory manufacturer Powel Crosley, Jr. decided to buy his nine year old son a radio for his birthday. He was astounded when he learned that a top receiver would cost about $135. He thereupon decided that he and the boy would build a crystal set with an Audion detector for $35. The receiver instantly picked up 8XB from seven miles away and quickly turned Crosley into a radio fanatic. Soon thereafter, he added low-cost radio parts and wooden cabinets to his catalog. Then he wanted to begin manufacturing inexpensive regenerative receivers but he couldn't make a deal with Armstrong for a license under their patents.

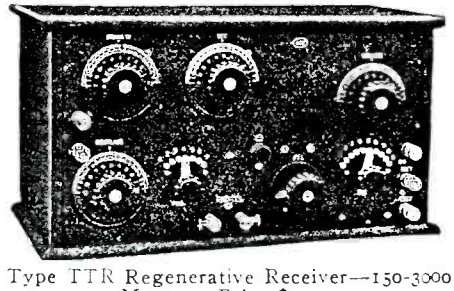
This led Crosley to purchase New's Precision Engineering in order to acquire their manufacturing license from Armstrong. That's when WMH was sold to another company, as Crosley had his own station, WLW (ex-8CR, ex-8XAY) by 1922. For a while, Crosley maintained the Precision name and Ace brand separately from his Crosley Manufacturing Corp., but in 1924 Crosley dropped the Precision and Ace names and consolidated all of his radio interests under the name of the Crosley Radio Corp., a name that was prominent in broadcasting and electronic manufacturing for decades. Powel Crosley, Jr., was often referred to as "the Henry Ford of radio."

Because of 8XB's vehement claims that its broadcasts predated those of KDKA and others who wanted to wear that crown, in 1926 the *Cincinnati Post* assigned two investigative reporters to check into all such claims and announce the true pioneer. Their published findings supported Cincinnati's favorite son, Tom New and his 8XB, as having been first by many months. Yet, the claim of 8XB is only one of several that haven't been heard about for a very long time. We felt it needed a retelling to sustain its life. We just like to keep the pot boiling!

Wow, we used up the space too fast this month. We'll go on standby until September and look forward to hearing from our readers with any old timey QSL's (originals or photocopies), photos, picture postcards, clippings, reference books or station directories, and any pre-1960's wireless or radio items or memories. **PC**



ACE 6-Volt, 80 Amp. Hr. Storage Battery. Price $18.00



Type TTR Regenerative Receiver—150-3000 Meters. Price $75.00

ACE Hard Rubber Dial Price $1.50

We carry in stock at all times a complete line of reliable Radio Supplies for the Amateur and Experimenter.

SEND 5c IN STAMPS FOR CATALOG

AMATEURS!
If your dealer cannot supply you write us direct
Radio 8XB

THE PRECISION EQUIPMENT CO., INC.

Manufacturers and Distributors

PEEBLES CORNER, CINCINNATI, OHIO

DEALERS!
Write us for trade Proposition

CABLE ADDRESS, "ACE" Cincinnati

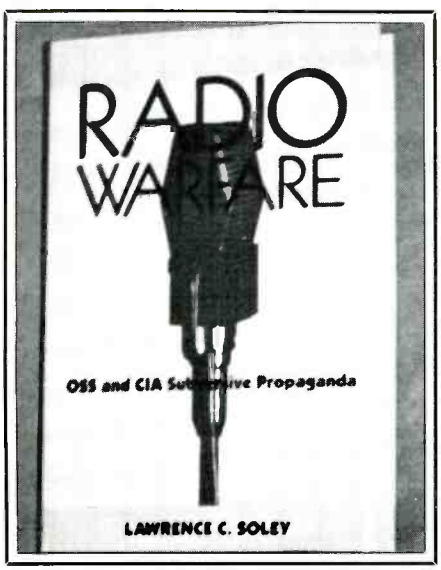
A 1921 Precision Equipment Co. ad mentions 8XB (lower left corner).

BOOKS YOU'LL LIKE!

BY R. L. SLATTERY

Mayhem Via MegaHertz

Radio Warfare is Lawrence C. Soley's probing examination of the covert broadcasting operations used by the Allies and Axis during World War II. These were the classic psychological warfare techniques and strategies that sometimes failed, sometimes succeeded with devastating results. Not only that, they set the groundwork for propaganda operations that are still in use today by various governments, including our own.



The situations described by Soley range from covert and deep undercover, to all manners of counterfeit and gray operations required to meet specific needs of the OSS, OWI, and other agencies on each side. This information was researched from recently declassified American and British archives. Stations such as *Radio 1212* (first discussed in POP'COMM in April of 1983, long before the government opened its secret files) are revealed in considerable detail.

Soley doesn't stop at WWII, he continues on to explore the establishment of the VOA, RFE, Radio Moscow, and other Cold War operations. He discusses the nefarious *Radio Swan*, as well as dozens of other stations with names such as *Finland's Free Radio, The New British Broadcasting Station, Radio Free Yugoslavia, Radio Quince de Septiembre, Osaka Central Radio, Voice of the National Army of Democratic Kampuchea*, and scores of others. Not only are the stations discussed, in many instances, the author goes on to describe what efforts were made in an effort to jam, counteract, silence, or destroy the propaganda stations.

This is a 264-page hardcover book, completely indexed and with exhaustive footnote references. Lawrence C. Soley, who previously co-authored *Clandestine Broadcasting*, is an Associate Professor at the University of Minnesota. He has also written many magazine articles on aspects of propaganda broadcasting.

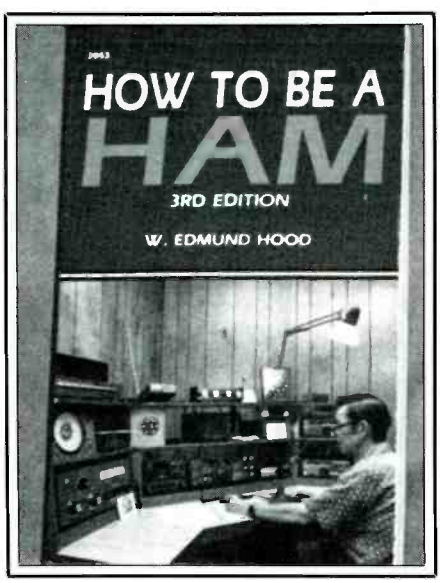
Certainly this study is well informed, as it is well written. For anyone with an interest in the way the pros wrote the books on how to play cat and mouse by radio, it offers a great wealth of information, most of which we hadn't previously seen. A spellbinder in every respect.

Radio Warfare is a $24.95 book published by Praeger Publishers, Division of Greenwood Press, Inc., 88 Post Road West, Box 5007, Westport, CT 06881. Your local bookstore may have it, or you can order it if you let them know the title, author's name, publisher's name, and the ISBN number, which is 0-275-93051-3.

I Yam What I Yam!

Ed Hood has a 3rd Edition out of his book *How To Be A Ham* that you'll want to know about. This is a good, 302-page sourcebook of all manner of handy ham radio reference information that will come in handy for licenses of all grades, Novice through Extra Class. It's even good of you're weighing the possibilities of getting into ham radio at some point in the foreseeable future.

It includes all of the basics of radio electronics and antenna theory, setting up a radio shack for ease of operation, fundamentals of skip propagation, sample FCC exams for getting into the hobby or upgrading your existing license. There are also explanations of FCC regulations, as well as recent changes in the regs, plus info on good operating procedures, new types of equipment available to hams, etc.



Special sections discuss mobile operation, interference, antennas, VHF, taboos, keeping station logs, message handling, CW practice, the FCC, and more. Not that the author was as comprehensive as he might have been, since he didn't get around to discussing QSL's, awards, foreign prefixes, Q-codes, or some of the newly opened bands.

Still, it's got photos, charts, diagrams, and is generally a useful book to have around the shack. The author, who has been licensed for many years as W2FEZ, knows his topics well and explains it most interestingly.

This book is $12.95 from TAB Books, Inc., Blue Ridge Summit, PA 17294-0850. The book's number in the catalogue is 2693.

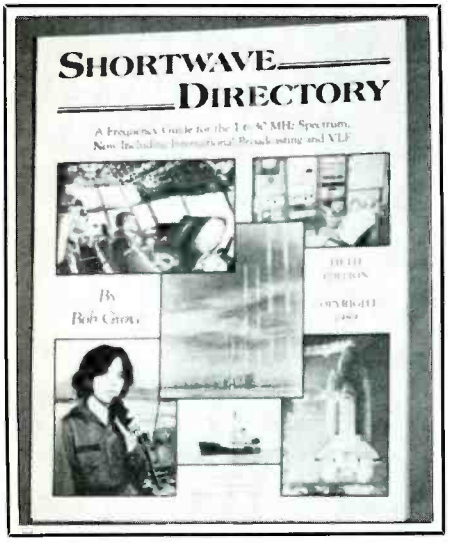
Updated Shortwave Ute Directory

The 1989 5th Edition of Bob Grove's *Shortwave Directory* describes itself as "a frequency guide to the 1.6-30 MHz spectrum." Essentially, it's a guide for HF "ute" monitors, although Bob has now begun including shortwave broadcast and VLF listings.

If you're a "ute" monitor, you'll find that the 5th Edition of Grove's book will provide you with a deluge of data on U.S. and foreign military, maritime, aero, public safety, governmental, space, and industrial stations and networks. He's got callsigns, frequencies, locations, maps, charts, and the whole bit for tuning in SSB, AM, and CW two-way comms.

The previous editions of Bob's directory have all been well regarded, and the book has definitely carved a niche for itself on the reference shelves of just about all fans who monitor shortwave communications activities. That this edition is price tagged for several dollars less than the earlier edition is noteworthy. The new edition is 248 pages.

It's quite a useful book, and if you're a serious "ute" monitor, or even a beginner, you'll undoubtedly want to have this 5th Edition of the *Shortwave Directory* close at hand for convenience and frequent reference. In the ever-changing world of "utes,"

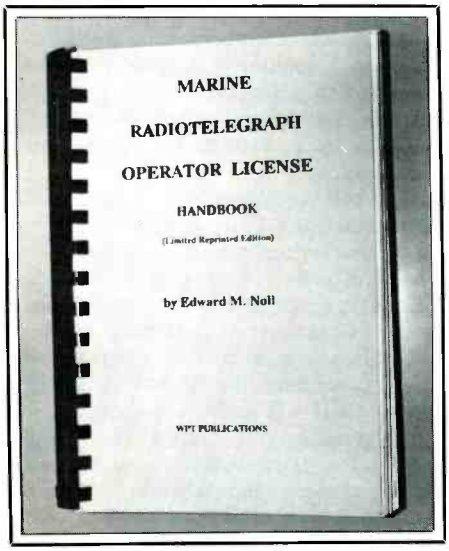


keeping yourself supplied isn't a luxury, it's an absolute necessity. At the new lower price, it's also very affordable.

The Shortwave Directory, 5th Edition, is available from CRB Research Books., Inc., P.O. Box 56, Commack, NY 11725. The book is $14.95, plus $2 postage/handling to addresses in North America. Residents of New York State, please include sales tax.

In Addition

Larry Williams has sent us a copy of his popular *Scanner Frequency Directory*. This 71-pager is a guide to lots of good things to hear on a scanner if you're located in western South Carolina. This is the 4th Edition and it has much new info of value and interest. Price is $7.95 (postpaid) from Radio Research, 10 Elf Lane, Greenville, SC 29611. A worthwhile guide for Greenville and environs.



The Official Vermont Scanner Guide, by Bob Coburn (W1JJO), Steve Donnell, and Dave Sterret is available now and is an indispensable reference to what's to to hear above 30 MHz in the Green Mountain State. It's got public safety, business, GMRS, medical, weather, security agencies, and all sorts of other listings, including the 800 MHz business band. This is a good looking 167-page directory that's a must-have for scanning in Vermont. Price is $14.95, plus $2.00 postage from Official Scanner Guides, P.O. Box 712, Londonderry, NH 03053.

The limited complete reprint of Ed Noll's excellent "Marine Radiotelegraph Operator License Handbook" (1975) has been published by WPT Publications. Of particular help in preparing for for the FCC Radiotelegraph Exam are the nine chapters that detail the technical information related to Element 6 of the FCC test. Radar Element 8 is also included.

WPT supplies a variety of additional items and tapes for radiotelegraph and other license studies as well as additional book reprints. Contact WPT Publications, Reprint Department, 979 Young St., Suite A, Woodburn, Oregon 97071.

Universal Radio has brought out a series of seven excellent pamphlets written to familiarize radio hobbyists with various communications-related topics. These four-page illustrated pamphlets are well written and provide excellent information. Available pamphlets are: #1 SWL'ing; #2 Amateur Radio; #3 FAX SWL'ing; #4 RTTY SWL'ing; #5 Universal's Computer Bulletin Board; #6 Antenna Installations; and #7 Installing RF Connectors. These are all available at no charge, although they would appreciate 25 cents in coins or stamps *for each pamphlet you want* (please specify). They come from Universal Shortwave, 1280 Aida Drive, Reynoldsburg, OH 43068. PC

POP'COMM Product Review

RF Detector And Frequency Counter

Some products have a way of being tantalizing, and the new Model CCB RF Detector, and Model CCA Frequency Counter just brought out by Optoelectronics didn't have any trouble drawing my attention. I think that you'll agree that they're as clever as they are fascinating and useful.

The Model CCB RF Detector

The CCB is for detecting nearby low-power transmitters such as room bugs, or body mikes, placed with the intention of eavesdropping on private conversations. The CCB can even indicate the presence of a 1 milliwatt transmitter within a twenty-foot distance. The unique ten-segment bar graph display successively illuminates the segments as you get closer to the transmitter and the signal strength increases. So, not only can it detect the presence of a bug, but it can also sniff out its exact location for you.

This is a nifty little unit with a self-contained battery. It will fit in your pocket, or in its own soft vinyl carrying case. The unit itself measures 4″ × 3½″ × 1″ and is finished in matte black with red trim, and has an LED display. Weight is only 7 oz., including the battery and removable (BNC connector) telescoping whip.

When UPS delivered the CCB, I had to try it right away. As soon as I took it out of the case, attached the antenna and turned it on, the display lit up. The CCB was sensing RF! Around I went, probing the antenna in various directions with the bar display becoming increasingly animated as I came closer to the source. It turned out to be a "leaky" cable TV outlet. Another source was my cordless phone. Hey, for a minute I thought that some cloak-and-dagger agency had the placed bugged. No such fun, but the CCB proved that it was working!

The CCB is rated for coverage from 10 MHz to 2500 MHz, although it quickly detected 1.7 MHz signals from my cordless phone (maybe the place is bugged after all). So far, I've walked around the neighborhood finding RF sources, and there are plenty just waiting to be detected. Our modern environment literally causes us to be swimming in a vast sea of RF energy.

A 9-volt battery powers the unit. This should last for days, or even weeks, of average intermittent use. If you run the CCB continuously, the battery will provide 3 hours of service.

The construction materials and operations are first class in every respect. A laboratory, or professional detective agency would be proud to have the CCB readily available for use, as will you. The CCB can be obtained in kit form for $79.95 (complete), or factory wired/tested for only $99.95. The TA-100S telescoping whip antenna ($12), and zipper carrying case ($10) are optional accessories.

The Model CCA Frequency Counter/Counter

The CCA is a frequency counter; a pocket-sized device similar in size and weight to the Model CCB. It weighs only about 10 oz. with its (rechargeable) batteries and TA-100S antenna installed. There's an optional zipper case available for carrying in the field.

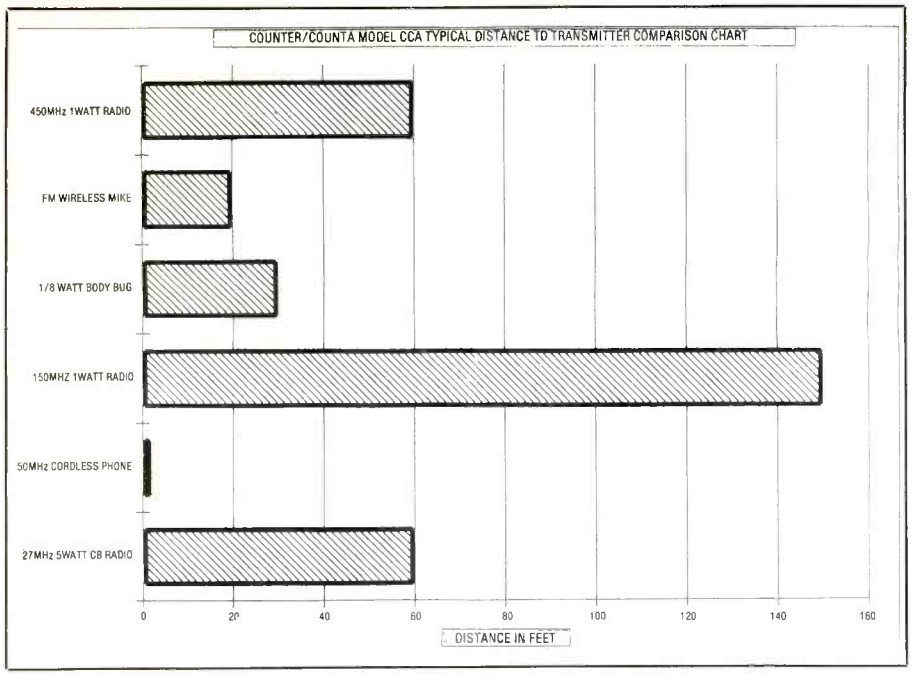
The Model CCA Frequency Counter covers a range from 1 MHz to 600 MHz with an 8-digit red LED display on the panel. A small red threshold indicator LED tells you when the extended range (to 1800 MHz) is activated. That means it's a counter to 600 MHz, plus a detector to 1800 MHz.

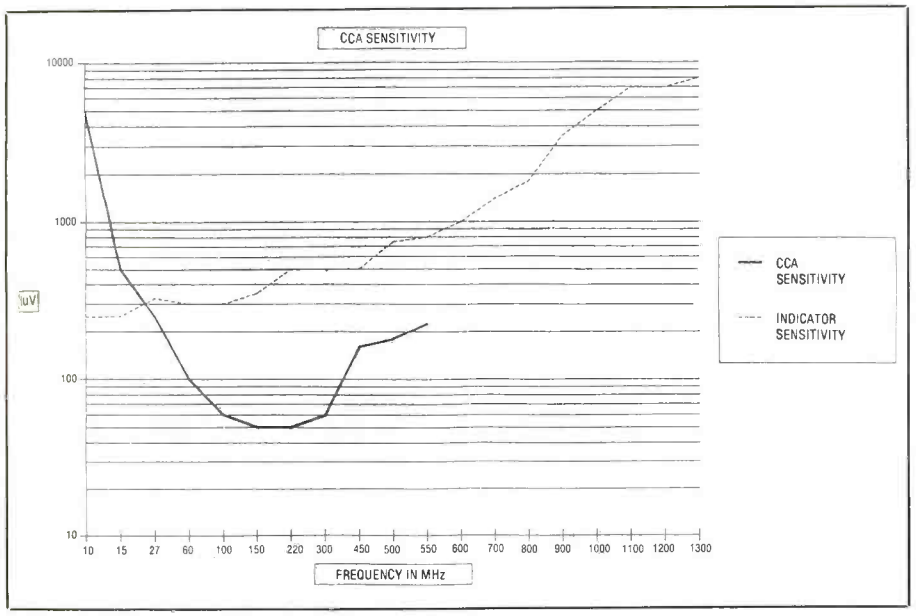
The primary function of the CCA is to pick up RF from almost any nearby RF source, determine its frequency, and then display that frequency. Thanks in great part to its surface-mount, miniature integrated wideband amplifiers, it's the most sensitive frequency counter available, offering better than 200 uv.-per-meter from 27 MHz to 450 MHz. Remember, however, that frequency counters aren't (intended to be) as sensitive as communications receivers or scanners, otherwise, they would be picking up signals from miles away and trying to measure them. A counter has a broadband response to RF energy, as opposed to a tuned response in a receiver that can be peaked to only one frequency at a time.

Various input probes, or antennas, directly interface with the unit's BNC input connector in order to maximize the CCA's applications. You should quickly see the numerous applications this has for CB'ers, hams, SWL's, experimenters, as well as the fields of law enforcement, surveillance, maritime, aeronautical, medical, industrial, broadcasting, scientific and other areas of electronics and communications where RF energy sources need to be detected and measured.

Low cost, combined with rugged portability, make the CCA desirable for those who have serious security considerations. There's a battery charger, too, making the CCA very practical and adaptable for field use as well as overnight charging.

One natural question that arises concerns the distance from the RF source that the Model CCA will work. Obviously, it depends upon a number of variables, including frequency, transmitter power, transmitter antenna gain and radiation pattern, interference from other nearby RF sources, obstructions to signal path, etc. The accom-





panying chart should give you some idea of average distances to be expected from a variety of sources under normally encountered conditions. The CCA selects the strongest signal from those present to make it count. Only one source will be displayed (provided the signal source has sufficient strength to activate the unit); there won't be a "mixed signal" count.

One unique CCA feature we especially like is the RF indicator located above the "gate" switch. It's connected to a separate RF detector circuit having adjustable threshold sensitivity. This allows an adjustment away from the RF source so that the LED is off. Then, when in the presence of RF, the LED comes on. If the LED is dark continuously while sweeping a room, then you may have to adjust the control pot. It should then pop on as you approach an RF source. I found that a cordless phone is useful in adjusting the threshold level.

Although the little RF indicator LED will light in the presence of any nearby RF signal, the CCA requires a continuous RF source in order to determine the frequency of the signal. That means that it will not measure the frequency of an SSB or Pulse Modulated transmitter.

The Optoelectronics Counter/Counter Model CCA carries an MSRP of $299.95, including nickel cadmium batteries, and the AC adapter/charger. The optional TA-100S is $12, the CC-12 carrying case is $10. In all, a fine package to have on hand.

Optoelectronics, Inc. is located at 5821 N.E. 14th Ave., Ft. Lauderdale, FL 33334. Call (800) 327-5912, or (in FL) (305) 771-2050.

Reviewed By Jim Gray, W1XU

DX'ing In The Land Of Glasnost

What's Being Monitored In The USSR

BY IGOR SANNIKOV

It's not often that monitors in the West get first-hand information on DX'ing in the USSR. We are fortunate in being able to present this two part report on how one avid Soviet DX'er enjoys this hobby—Editor.

At the end of 1988, the USSR and other East European nations stopped jamming RFE/RL, DW, and Kol Israel, stations whose signals had been barred from safe passage across our borders for so many years. This dramatic event, which passed nearly unnoticed by our mass media, characterizes Mr. Gorbachev's policy of *glasnost* (openness). On a much smaller level, it was also a great relief for Soviet SWL's since the many jamming signals splashed their noises over on to adjacent channels. DX'ing has been made much more pleasant with the jammers off the bands.

Even with the jamming, however, DX'ing existed. I have been tuning the bands since 1975 from my location in Novoviatsk, a Russian town near the Trans-Siberian Railway more than 900 kM (560 miles) east of Moscow.

The Home Scene

Perhaps its seems odd to begin a discussion of DX'ing by mentioning one's own country. Most listeners probably wouldn't consider stations in their own country as DX, but the USSR stretches out for about 10,000 kM (6,200 miles) from west to east. That means some stations within the USSR qualify as DX, by any definition of that term.

Beginning with international services, R. Moscow's transmitting sites are scattered throughout the USSR, plus Bulgaria, the GDR, Mongolia, and Cuba. The station has never issued an official list of all sites and corresponding frequencies, although perhaps such a listing could be compiled from the site indications shown in their QSL cards.

Besides the programs beamed to North America nd the UK, R. Moscow has a continuous World Service transmission in English, plus a newly started one in Russian. Actually, the Russian is an addition to the *Fifth Program*, which is combined with Home Service relays and intended for Soviet citizens abroad. Another special program is *Atlantika*, for Soviet sailors. One program is intended for Soviet specialists working in Third World countries. In all, R. Moscow broadcasts in 63 languages.

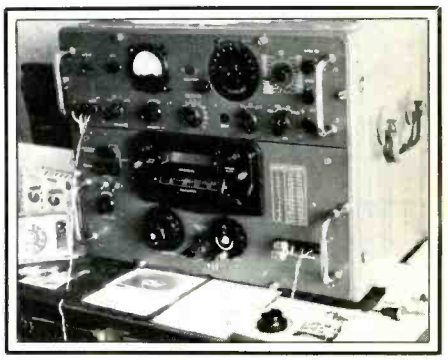
These programs are supplemented by other international broadcasters such as Peace and Progress, R. Tallinn, R. Riga, R. Vilnius, R. Minsk, R. Kiev, R, Yerevan, R. Tbilisi, R. Baku, R. Tashkent, and R. Dushanbe. All of them (except R. Tbilisi and R. Dushanbe) are the only Soviet stations that issue QSL's, although they usually don't send them to Soviet DX'ers.

The Home Service is often incorrectly referred to as R. Moscow. To be accurate, it is Vsesojuznoye R. (VR), which means All-Union Radio. It's made up of three nationwide channels and a *Fourth Program*, which is distributed only to some of the larger cities. National programs are sent out via special transmitters, or are relayed in various bands by local outlets.

It's the local outlets that are the real DX challenges. These are all owned by the government, although there continue to be rumors of forthcoming private or cooperative stations (none have yet been monitored). The structuring of the local outlets is far from homogeneous. There are two "republican" programs in each of the Soviet republics (except Russia), plus a few hours per day of regional, autonomous regional, and city broadcasting. What with 100 languages in use in the USSR, the linguistically oriented DX'er has a chance to sample many languages which would seldom be encountered in daily life.

Local outlets broadcast at widely varied times because the USSR extends out over eleven time zones. The best chance to hear ID's are at 0630 and 1815 local time in each zone. Where no local programming exists, the stations relay the national channels (mostly VR-1 and its time-shifted versions, R. Orbita).

The basic frequency usage pattern for Soviet locals is AM/FM simulcasting (the FM band is 66 to 72 MHz in the USSR). Smaller



R-250 vintage military receiver—the most popular one among Soviet DX'ers (still no BFO circuit and an analogue scale).

European regions (like Smolensk, Orel, etc.) have only FM facilities for their local programs. In metropolitan areas, musical features are always transmitted in FM stereo. Where large, sparsely populated areas need to be covered, longwaves are used in addition to (or instead of) the standard AM band. There are about twenty such stations to be heard.

Some transmissions utilize shortwaves, primarily the 75 meter band (to a lesser extent, the 25, 31, 41, and 49 meter bands). These stations can cover vast areas with local broadcasts, and are especially useful in mountainous sections (such as Frunze, Yerevan, Tbilisi, etc.), or for reaching those at sea (examples are Vilnius on 9710 kHz, via Kaunas, and the *Tikhy Okean* station from Vladivostok).

The use of shortwaves for both local and national broadcasting has made shortwave receivers of Soviet manufacture rather popular. These sets sell for two or three times the price of AM/FM portables.

Results

It's thanks to shortwaves that exotic Siberian sites like Yakutsk, Ulan-Ude, or Vladivostok can be picked up in the European areas of the USSR, such as my location. As for low frequency broadcasters, one of the most interesting (and pleasant to me) examples of DX was when I used to hear news

The QSL from the radio station "RODINA" (The Homeland)—now part of Radio Moscow World Service in Russian.

from my native Kirov (via the Kazan transmitter site) on 254 kHz during my military service near the westernmost point of the USSR. This was about 2,000 kM (1,200 miles) from the transmitter.

There are approximately 180 local Soviet outlets. Broadcasting, at least on FM, is carried out in all administrative territories. This is also true of some towns like Sochi, or Moghilev, which have their own programs even though they aren't administrative centers.

Local stations don't, as a matter of regular practice, issue verifications. Nevertheless, QSL letters have been obtained from many of them. Accomplishing this would require the reception reports to be submitted in Russian, plus a note explaining what a QSL is needed for and what it's supposed to say. There's no need for postage between points within the USSR, although postage is required for mail leaving the USSR. IRC's are of no use to the USSR, and most post offices have never even heard of them. The best solution would be to enclose uncancelled current Soviet stamps. The present rates are .30 kopecks for surface mail, .50 kopecks for air. Naturally, stations engaged in international broadcasting will readily QSL without any return postage, even for their Home Service broadcasts.

Utes

Insofar as utility stations go, the USSR has had its fair share. There are plenty of RTTY stations, aero, maritime, and point-to-point stations active in the internationally allocated bands. One distinguishing feature, however, is that the Russian used in most communications is close to the common everyday vernacular rather than the "bird language" of English that seems to be employed by the U.S. operators monitored.

Another difference consists of the wide use of "ancient" AM mode for VOLMET transmissions and for some point-to-point operations. This makes these transmissions audible on ordinary shortwave receivers. SSB reception is available only on some professional receivers, or with homemade accessories. Other than with the exception of some homemade designs, CW readers, RTTY terminals, and facilities for receiving FAX are virtually unknown to Soviet SWL's.

Scanners aren't on sale in the USSR, and monitoring VHF/UHF communications is by no means vogue in the Soviet Union. Perhaps we are not so curious, or just take care of where we put our noses. These frequencies have never been officially published and there's no chance of getting any QSL's from these stations, anyway. That means, in every respect, monitoring VHF/UHF communications is on a Stone Age level here. The only "action bands" story I know of to pass on relates to a taxi driver in Kirov who overheard some police communications on his two-way radio and that enabled him to detain a murder suspect.

The great variety of broadcasters and abundance of shortwave radios form the fertile soil for the development of DX'ing as it is known in the USSR. But, for certain reasons, DX'ing in the USSR isn't nearly as popular as it has become in some other countries, particularly DX'ing stations within the USSR itself. Even the newcomers start off by tuning in stations in the rest of the world.

In the second part of my report on Soviet DX'ing (next issue), I'll tell you about the overseas stations heard here, political ramifications of SWL'ing, problems with sending reception reports and getting QSL's, clandestines, as well as some other things about Soviet DX'ers.

In the meantime, I am always happy to hear from other DX'ers. If you would like to contact me, write to: Igor Sannikov; ul.Oparina 6, kv.37; Novoviatsk, Kirov obl.; 613015 USSR. PC

Auntie Beeb: What Have They Done To You?

This Is Definitely Not Your Father's BBC! Good Grief!

BY GERRY L. DEXTER

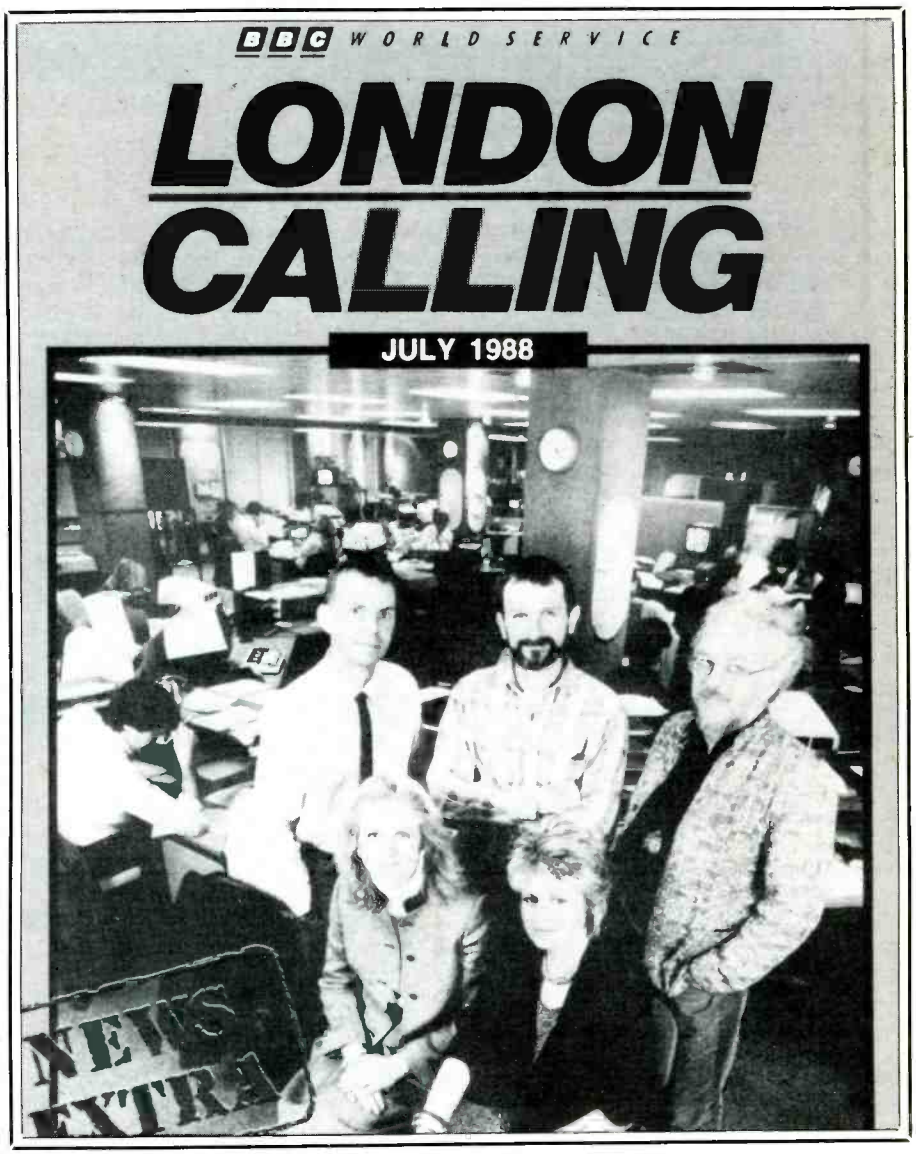
"Nothing," they say, "lasts forever." We all know that and yet there are some things we imagine somehow will, or should, go on and on. Ourselves, for instance. Certain institutions, traditions and ways of doing things. Give us a moment to think rationally about it and we know better, of course. After all, they put lights in Wrigley Field, for heaven's sake. Were you ready for that? Are you ready for this?

Questions of permanence and rationality aside for the moment, shortwave listeners who tuned into the BBC World Service last October 29, or after, had a perfect right to their surprise, even shock. Airtime came for *Radio Newsreel* on that day but it was not majestically heralded by the rousing strains of *Imperial Echos* as it always had been—something almost akin to the laws of nature. Instead there was a polyester, simpy, wimpy parody of the thing, apparently produced on one of those dreadful electronic synthesizer gadgets. Not real music at all, old top! And when the announcer came on he didn't even call it *Radio Newsreel*; just *Newsreel*, as if the "radio" in the title had somehow become obscene, or an embarrassment.

The transformation of the old reliable *Radio Newsreel* into a snazzier product was just one of several megashocks devotees of the "Beeb" received that day and over the days that followed. For October 29, 1988 marked some significant changes in a number of BBC programs.

Worldwide listenership to the BBC stands at around the 120 million mark and has for several years, and there are no known reports indicating that a drop in audience levels was taking place. Even so, the BBC leadership felt it was necessary to make some changes to make some of the BBC's programming, particularly in the news and magazine shows, sound more "now," more "today." This wasn't done on a whim or just because a couple of executives thought it would be a fun idea. Study groups were set up to study the BBC's programming and look at ways of improving it.

The BBC's International Broadcasting Audience Research division (IBAR), which continuously studies and analyzes the BBC's world audience, made recommendations based on its findings via letters, phone and in-person interviews, group discussions and such. Then the data gleaned from this research was considered by program planners along with recommendations made by the study groups. It's safe to say that these changes weren't made without careful planning and research. IBAR is, of course, monitoring feedback from listeners now that the changes have been in effect for a time.



People all over the world rely on London Calling—*the BBC's listening guide.*

Look At These Changes!

If you haven't checked out all of the changes by now, here's a look at the major

BBC WORLD SERVICE

AT A GLANCE

The transmission times of regular programmes given on this page are intended only as a general guide. Some changes will inevitably occur, and readers are asked to check the timing of individual programmes on the Day to Day pages.

World News

Broadcast daily in the World Service *0200, 0300, 0500, 0700, 0800, 0900, 1100, 1300, 1600, 1700, 2000, 2300*; 5-Minute News *1400 (Mons-Fris)*; News summary *0100, 1000, 1200 (Suns only), 1400 (Sats and Suns only), 1900, 2100*

Newsdesk

A half-hour programme including World News and despatches from overseas and UK correspondents *daily 0000, 0400, 0600, 1800*

Newshour

A comprehensive look at the major topics of the day, plus up-to-the-minute international and British news *daily 2200*

Newsreel

News of events as they happen and despatches from BBC correspondents all over the world *daily 0215 (South Asia), 1200 (ex Suns), 1500*

News About Britain

Daily 0309, 1109, 1609

Twenty-Four Hours

Analysis of the main news of the day *daily 0509, 0709, 1309*

British Press Review

Survey of editorial opinion in the Press *daily 0209, 0909*

The World Today

Examines thoroughly one topical aspect of the international scene *Mons-Fris 1645 rep 2009, Tues-Fris 0145 (South Asia), Tues-Sats 0315, 0545, 0915*

Commentary

Background to the news from a wide range of specialists *Mons-Fris 1709, 2309*

Outlook

An up-to-the-minute mix of conversation, controversy and colour from around the world, plus the latest developments here in Britain *Mons-Fris 1400, 1900, Tues-Sats 0100*

Financial News

Including news of commodity prices and significant moves in currency and stock markets *Tues-Sats 0125, 0530, Mons-Sats 0930, Mons-Fris 1925*, brief news *Mons-Fris 0025, 0625, 0728, 1328, 1825 approx, daily* in *Newshour 2225*

Financial Review

A look back at the financial week *Sats* in *Newshour 2225 approx rep Suns 0530, 0930*, brief review in *Worldbrief Suns 0445 rep 1345, 2009*

Worldbrief

A 15-minute roundup of the week's news headlines, plus everything from sport and finance to best-sellers and the weather *Suns 0445, 1345, 2009*

Andy Kershaw's World of Music *Mons 0215 rep 0945, Thurs 0445*

Anything Goes A variety of music and much more. Send your requests to Bob Holness *Suns 1430 rep Mons 0330, 0630*

Assignment A weekly examination of a topical issue *Weds 2030 rep Thurs 0230, 1001, 1615*

Book Choice Short book reviews with four editions each week *Sats 0145 rep Suns 0940, 1709; Sats 1709 rep 2309 , Suns 0745; Suns 2309 rep Tues 0455, 1125; Weds 1740 rep Thurs 0140, 1125*

Business Matters A weekly survey of commercial and financial news *Tues 2115 rep Weds 0430, 0815, 1445*

Composer of the Month *Sats (until 8th) 1830 rep Suns 0030, 1130, (from 15th) 1830*

Country Style With David Allan *Weds 0145 rep 0445, 1115*

Development '89 Reflecting aid and development issues *Tues 1930 rep Weds 0730, 1330*

Discovery An in-depth look at scientific research *Tues 1001 rep 1830, Weds 0330*

Europe's World A magazine programme reflecting life in Europe and its links with other parts of the world *Mons 2115 rep Tues 0145, 0730*

The Farming World *Weds 1225 rep Thurs 0640, 1940*

Focus on Faith Comment and discussion on the major issues in the worlds of faith *Thurs 1830 rep Fris 0330, 1001*

From Our Own Correspondent BBC correspondents comment on the background to the news *Sats 2009 rep Suns 0315, 0730, 1115*

From the Weeklies A review of the British weekly Press *Fris 2315 rep Sats 0730*

Here's Humph! All that jazz *Fris (from 14th) 1945 rep Sats 0430, 1001, Suns (until 9th) 1901*

How It All Began Keith Parsons looks at the origins of some of the major issues in the world today *Weds 0130 rep 0945, 1945*

Jazz for the Asking *Sats (from 15th) 1830 rep Suns 0630, 1715 (until 9th), Weds 1030*

Jazz Scene UK/Folk in Britain (alternate weeks) *Thurs 1345 rep Fris 0130, 0445*

John Peel Selects tracks from newly released albums and singles from the contemporary music scene *Tues 0330 rep Thurs 0830, Fris 1330*

A Jolly Good Show Dave Lee Travis presents your record requests and dedications in his own unique way, including the Album of the Month *Sats 0815 rep 2315, Tues 1515*

The Ken Bruce Show *Sats 1715 rep Suns 0230, Mons 1130*

Letter From America By Alistair Cooke *Sats 1015 rep Suns 0545, 1645, 2315*

The Learning World An international survey of education around the world introduced by John Tuttie *Mons 2315 rep Tues 0430, Weds 1515*

Megamix A compendium of music, sport, fashion, health, travel, news and views for young people *Tues 0030 rep 1130, 2130*

Meridian Each week, three topical programmes about the world of the arts *Sats 0630 rep 1130, 2030; Tues 2030 rep Weds 0630, 1130; Thurs 2030 rep Fris 0630, 1130*

Multitrack All the latest news and music on the British pop scene *Mons, Weds, Fris 1830 rep Mons, Weds, Fris 2330, Tues, Thurs, Sats 1215*

Music Review Incorporating *Classical Record Review* and *Music Now* (see page 13) *Thurs 2315 rep Fris 0815, 1515*

Nature Now *Fris 1445 rep Suns 0915, Mons 0445*

Network UK Looks behind the issues and events that affect the lives of people throughout the UK *Mons, Weds, Fris 1930 rep Tues, Thurs, Sats 0215, 0745, 1330*

New Ideas A radio shop window for new products and inventions *Sats 0150 rep Tues 0445, Weds 1730, Thurs 1115*

Omnibus Each week a half-hour programme on practically any topic under the sun *Tues 1615 rep Weds 0030, 1001*

People and Politics Background to the British political scene *Fris 2130 rep Sats 0230, 1030*

Personal View Of topical issues in British life *Sats 0030 rep 0445, 0945, (from 15th) 1945*

The Pleasure's Yours Write to Gordon Clyde for your classical music requests *Suns 0815 rep 2115, Thurs 1515*

Recording of the Week A personal choice from the new releases *Sats 0045 rep Mons 0545, Weds 2145*

Science in Action *Fris 1615 rep 2030, Suns 1001, Mons 0230*

Seven Seas A weekly programme about ships and the sea *Thurs 2115 rep Fris 0215, 0945*

Society Today A weekly look at the changes in Britain *Weds 1715 rep Thurs 0145, 0430, 0945*

Sports International *Mons 2130 rep Tues 0230, 1030*

Sports Roundup *Mons-Sats* following the *0930 Financial News, 1245; daily 1745, 2101; Suns only 1330*

Sportsworld Weekly sports magazine *Sats 1345 rep 1401, 1515, 1615*

Talking From... Profiles from Northern Ireland, Scotland and Wales *Thurs 2145 rep Fris 0145, 1115.*

Tech Talk Discovering what's new in the world of engineering (see page 17) *Mons 1115 rep 1630, Tues 0815, Weds 0215*

The Vintage Chart Show Past top ten hits with Jimmy Savile *Sats 0330 rep Mons 1030, 2030*

Waveguide How to hear World Service better *Suns 0750, Mons 0530, Tues 1115, Thurs 0130*

Write On Put your points to Paddy Feeny *Thurs 0730 rep 1445, 2130*

Words of Faith People of all faiths share how their scripture gives authority and meaning to their lives *daily 0540 rep 0809, 2025*

THIS ISSUE

Portrait of a conductor: Sir Adrian Boult, born 100 years ago -12 -

Also born in April 1889: Adolf Hitler and Charlie Chaplin - 7 -

New Elements in Music -18 -

The BBC's regular program.

new programs now part of the regular BBC World Service schedule:

NEWSREEL: formerly *Radio Newsreel* has, as noted, been "modernized" with the theme revision as mentioned earlier. It airs daily at 0215, 1200 (not Sundays) and 1500.

NEWSHOUR: This is the major addition to the World Service schedule. *Newshour* combines the talent and resources of both the news and current affairs departments to create a daily, one hour news package. Aired at 2200, the hour begins with world news and worldwide BBC correspondents' reports and also includes backgrounders on news stories, news about Britain, financial and sport news, features and such. The program is hosted by Oliver Scott, Hugh Pryser-Jones, Nick Worrall and Geoffrey Stern (who moved to the show from duties on *24 Hours*). The 2200 time slot was picked because it seemed to offer the best chance at the largest possible English speaking audience. Any choice would have been something of a compromise but 2200 catches the evening audience in Western Europe and Africa, breakfasters in the far east and hits the Caribbean and America's east and midwest in the late afternoon. *Newshour* airs seven days a week.

WORLDBRIEF: This is a weekly 15 minute summary of the week's news for people who like a nicely packaged recap at the end of a busy seven days. It summarizes the major world stories of the week and hits the highlights in sports, finance, major weather trends, best selling books and pop records. The promo for this program talks about a world that moves at an ever-faster pace and one must think the same must apply to this program, that covering all those bases in 15 minutes must be a very good trick. Somehow they manage it. *Worldbrief* is on Sundays at 0445, 1345 and 2009.

WITH GOOD REASON: A round-table discussion featuring three guests and a regu-

CIRCLE 91 ON READER SERVICE CARD

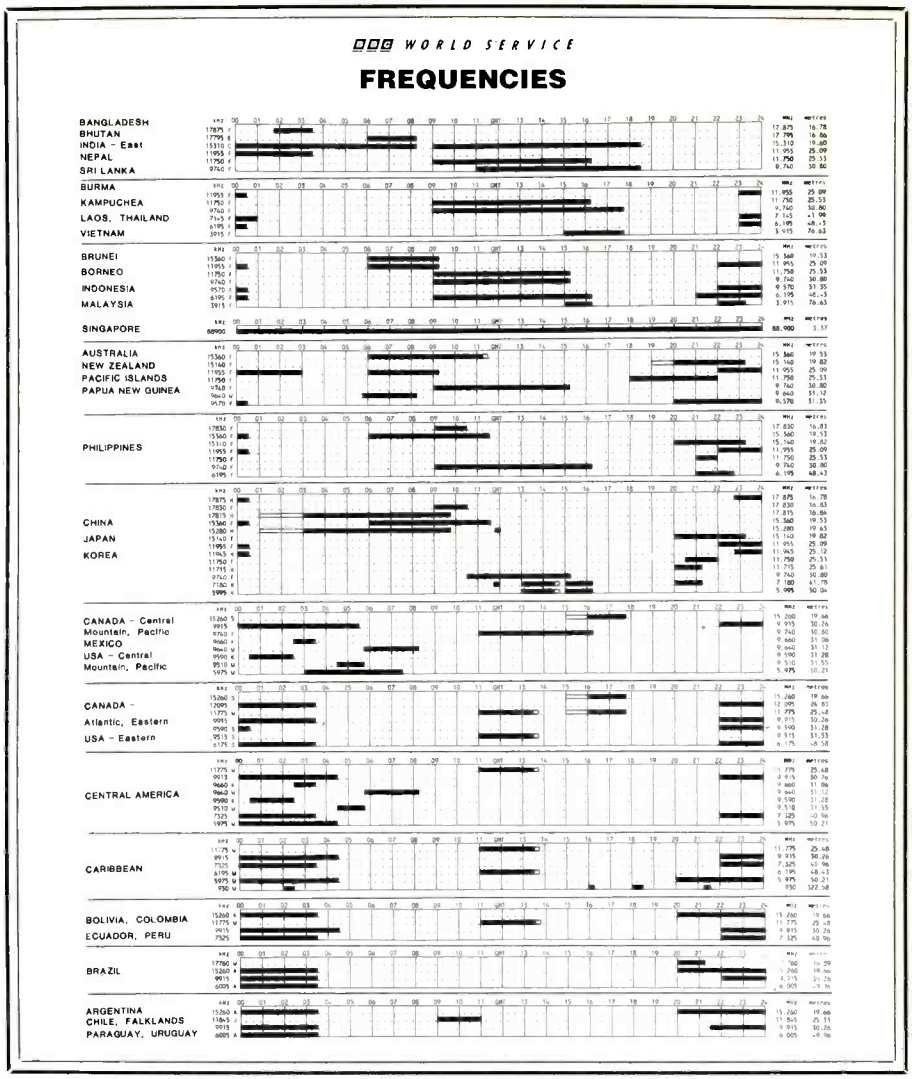
lar host talking about any subject imaginable was introduced at the same time as the rest of the new shows. Host George Scott passed away very early in the series and was replaced by Gordon Clough. By February, however, *With Good Reason* was no longer included in the schedule.

MEGAMIX: A program for teens, *Megamix* is designed to be a lot more than a disc jockey and a stack of pop records to spin. It covers all sorts of subjects—drugs, famine, apartheid in a segment called "London Yelling." Other features deal with the latest in British clothing fashions, health and fitness, travel and work abroad, sports, pop gossip and also features special guests. It's hosted by Anne Bristow and aired on Tuesdays at 0030, 1130 and 2130.

MEDIAWATCH: Newspapers, television, cable, video, radio, telephone. *Mediawatch* keeps an eye on all of these. It's not into DX tips or news of some new religious broadcaster on the air, though. The program looks instead at trends, at the movers and shakers, whether a particular media empire has become too powerful, the consequences of inter-active TV—that sort of thing. Media leaders are also interviewed. The show, hosted by Keith Hindell, is on Thursdays at 0730 with repeats at 1445 and 2130.

FOCUS ON FAITH: This replaced *Report on Religion*. Julie Loyd provides comment and discussion on major issues in religion and also tries to reflect the cultural and historical aspects of religion. The program includes a summary of world religious news as well. It is aired at 1830 Thursdays and at 0330 and 1001 on Fridays.

WORDS OF FAITH: It replaced the former *Reflections* program, which presented speakers who shared their personal religious experiences and insights. The new program looks at the "sources of authority in religious beliefs." In other words it examines the sacred scriptures of the world's major religions. It's aired daily at 0540, 0809 and 2025.



One of the three pages it takes to provide all the times and frequencies for BBC broadcasts around the world.

Audience Reaction

Naturally there were letters sent to the BBC complaining about one change or another. And columnists wrote reams bemoaning this or that. By and large, though, the audience seems to have accepted the BBC's changes of schedule and sound. In any event, we can be pretty sure that things are not likely to revert to the way they were—just as the tympani-sounded "V" for victory, once as much a part of the BBC as Radio Newsre. . . sorry, *Newsreel*, is gone forever. So however we may feel about these changes we may as well accept them.

But none of all this very much diminishes the BBC's well-deserved reputation as the world's greatest broadcaster. And, frankly, if you never listen to it, if you are entrenched purely in SWBC DX'ing or devote your efforts entirely to CW DX'ing of ships flying the Andorran flag, you are missing things of interest because surely the BBC World Service has the most astoundingly varied sked of radio programs ever offered to the ears of mankind, on any band, in any mode, bar none.

Here, for example, are just a few of the things the BBC aired last May: The European Court of Human Rights, Living With Death, Help Yourself (cheap, simple, practical ideas for disabled people), Ten Years of Mrs. Thatcher, They Made Our World (great scientists and inventors), The Baroque Concerto; The Globetrotter's Guide to Popular Music; Voices (profiles of Ray Charles, Rosemary Clooney, Bobby Darin and Louis Armstrong), Jazz Score, Bring Your Own Popcorn (music from films), George Bernard Shaw's "Major Barbara," along with twelve other dramas, and sports coverage of football, cricket, horse racing, motor racing, badminton, tennis, golf and rugby (all live).

Aside from the need to own or have access to a shortwave radio, the next handiest thing to getting the most out of the BBC's offerings is a subscription to *London Calling*, the 28 page monthly program and frequency guide. It highlights what's ahead on the BBC in the month to come, has writeups on many of the programs and includes an extensive frequency/time chart so you can tell where to tune no matter where in the world you live. The magazine costs $15 per year and can be ordered direct from: London Calling, P.O. Box 76, Bush House, Strand, London WC2B 4PH, England. You can request a free copy so you can check it out before you subscribe. Send to the attention of Rosemarie Ried at the above address. Incidentally, the BBC has an address in the US (one of some 60 it maintains around the world) at 630 Fifth Avenue, New York, NY 10010.

So the programming changes are in place and have been running for some months now. We've had time to get used to them. And, as you know, they really aren't all that much a shock to the system after all. Some are even becoming habits. Could be the BBC knew what it was doing all the while?

One thing though. Let's not remind them they're still using good old Greenwich Mean Time! PC

Firefighter Saves Girl Trapped In Fire

A Metro Dade, Florida, firefighter groped his way through heavy smoke to rescue a four-year old girl from a burning building in an unincorporated section of Dade County near Miami.

Firefighter Brian Gaughan, 28, said he never stopped to think about his own safety when he rescued the unconscious Helene Pierre-Louis. A sister and brother, two-year-old Michelle and four-year-old Illiodin Godin Pierre-Louis, also escaped the blaze.

SCAN PUBLIC SERVICE AWARD

"As I carried her out of the house, her body was like a little toy doll, it was completely limp." Gaughan told *The Miami News*. "I pulled off my mask and started mouth-to-mouth. She spit up soot and her body began twitching, and I knew right then that she would live. That made me feel incredibly good."

According to Metro Police and neighbors, the fire started shortly after the children's mother left them alone to do the laundry. She locked the doors of the home and left the keys with neighbors. The windows were covered with security bars. Those security bars initially prevented firefighters from getting to Helene. A neighbor had unlocked the front door before firefighters arrived, allowing Illiodin and Michelle to escape.

Gaughan and firefighter Robert Requate were wearing air tanks and breathing masks as they used a hose to douse flames in the living room. They then began searching for children through the dense smoke.

"There were a lot of hysterical people outside screaming that there were children in these, but we didn't know how many or where they were," Gaughan told the *News*.

While Requate checked one side of the house, Gaughan searched another, and found a bathroom in which he said the smoke was so thick he couldn't see his hand in front of his face. "I groped with my hand around the room," he said. "I reached the foot of the toilet, then the bathtub. By the grace of God, I touched a foot, I knew I had a child. She was lying face down in the tub, no water, with her mouth near the drain, I guess to get air."

Gaughan said he rushed the child outside to the porch and tried to revive her with his breathing mask. He then tried mouth-to-mouth resuscitation and was able to revive the child. "I knew we had to revive her quickly or she wouldn't make it," he told the *News*.

Gaughan knows very well what fire can do. His father, Fire Lt. Donald Gaughan, died when his air supply ran out in a 1980 warehouse fire in Miami's Liberty City section.

For his quick thinking, Donald Brian Gaughan will receive the SCAN Public Service Award, which consists of a commendation plaque and a cash prize. For making the nomination, R.A. Young of Homestead, Florida, will also receive a plaque. Congratulations to both of you.

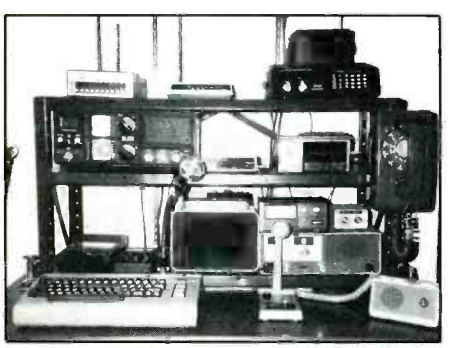
SCAN PHOTO CONTEST WINNERS

Best Appearing

This well-stocked listening post includes plenty of equipment to listen, and several items to talk with, such as a microphone and telephone.

Mark Pietrzak of Buffalo, New York, uses a Realistic PRO-2020 programmable scanner for local police, fire and rescue frequencies. A Regency ACT-R-10 scanner is used for local television and press frequencies. A Regency 2-4S handles airport, utility and miscellaneous frequencies, and a Regency Weather Alert radio helps Mark keep up with any bad weather that may be moving in.

Mark uses a Realistic DX-200 for short-wave monitoring, along with a Commodore 64 computer for CW and RTTY transmissions. When Mark wants two-way communication, he uses a Lafayette Telsat 1023 citizens band base equipped with a phone patch. In the event of a power failure, all equipment can be connected to a backup power supply.



Best Equipped

Larry Williams of Greenville, South Carolina, send us this photo of his rack-mounted monitoring station.

Larry has a lot of scanning capacity in this shack, with two Bearcat 350 scanners, a Bearcat 300, two Regency TMR scanners, a TMR aircraft scanner, and Regency HX-1500 portable. He also uses a Yaesu FRG-8800 communications receiver with a complete set of converters and filters. A five-inch television monitor, Commodore 64 computer with Microlog software and a DAK-9 with general SWR bridge round out the shack.

Antennas in service include an AV-801 Astro-Scan, Cushcraft VHF-UHF beam along with several longwires. Congratulations, Larry!

Broadcasting's Biggest Bomb

Radio's Brightest Star Backing a New Coast-to-Coast Network. These Were The Ingedients of a Monumental Disaster!

BY TOM KNEITEL, K2AES, EDITOR

Nobody doubts the value of a celeb's name tied to a commercial venture—like Paul Newman's salad dressing, Gloria Vanderbilt's designer jeans, Liz Taylor's perfume, Mickey Mouse's wristwatches, Cheryl Tiegs' line of clothing, etc. Of course, a celeb tie-in with a commercial venture is no guarantee of success, and most celebs are smart enough to let professional design and marketing people do all of the actual work on "their" products. One notable celeb disaster involved radio, and a major star who decided to become personally and directly involved.

That star was beloved comic Ed Wynn, known as "The Perfect Fool," and star of NBC's immensely popular *Texaco Fire Chief* radio show in the early 1930's. Wynn's popularity was such that, in areas where it could be heard, 78% of the possible audience was tuned to his program. Even by today's standards, this represents a phenomenal chunk of the public's attention. Ed Wynn was no newcomer to the world of entertainment, by the time he had become a radio star, he had spent many years on the stage. In 1932, when he was 45 and at the peak of his $5,000-per-week radio career, he announced that he was investing $250,000 of his own money in a venture to be known as ABS, *The Amalgamated Broadcasting System*.

Keep in mind that this was during the Great Depression when very few business ventures (other than selling apples on street corners) were being started, and people were supporting their families on $15 to $25 per week. Wynn envisioned ABS as a national network, "an idealistic gesture" (he called it) that would offer employment to the 17,000 actors who needed work.

Ed Wynn, whimsical, zany, and beloved, was billed as "The Perfect Fool." Despite his long and successful career as a vaudeville and radio star, when it came to starting a new radio network, he lived up to his billing. His son claimed that Wynn lost $305,000 on his 1933 business venture!

Getting It Together

ABS wasn't exactly Wynn's own idea. In 1919, he had met a Hungarian classical violinist named Ota Gygi ("former Concert Violinist to King Alfonso of Spain") while they were both in vaudeville. They maintained a casual friendship over the years, and in early 1932, Gygi showed up at one of Wynn's rehearsals with an idea that needed financing. Wynn had plenty of money and was glad to help his friend, especially since Ed Wynn felt the concept had so much merit.

Gygi's idea was to organize a national radio network of small stations in and around metropolitan areas. This "third chain" would compete with CBS and NBC by providing a better grade of programming than they supplied. The idea appealed to Wynn, because it offered actors work, and would help the theatre in general.

Against the advice of many, Wynn agreed to go ahead with the idea, lend his name to the project, be its guiding light, inspiration, commercial coordinator, as well as provide the large amount of seed money to get the ABS ball rolling. Additional financing was supposedly provided by a mysterious anonymous industrialist, and it was hoped that eventually a stock issue would be floated so that the general public might own shares in ABS, too.

The Crown Jewel

The ABS master plan called for the network's headquarters to be in New York City, with network programs to be heard over a station in New York. Independent

stations and small regional networks would then be used to expand ABS outward from there. ABS had hoped to purchase New York's WMCA (570 kHz, 500 watts) as its flagship station and the crown jewel of the chain. The owners wouldn't sell, and ABS had to buy 250 watt WCDA on 1350 kHz, which was not as desirable a frequency as WMCA's channel. Moreover, WCDA shared time on 1350 kHz with several other area stations, and ABS had to buy them, too. Stations WBNX and WMSG decided to sell to ABS, but religious station WAWZ refused. WCDA, WMSG, and WBNX were then consolidated under the single ABS callsign WBNX. The calls WYNN, WFDR, and WMET were considered, but decided against.

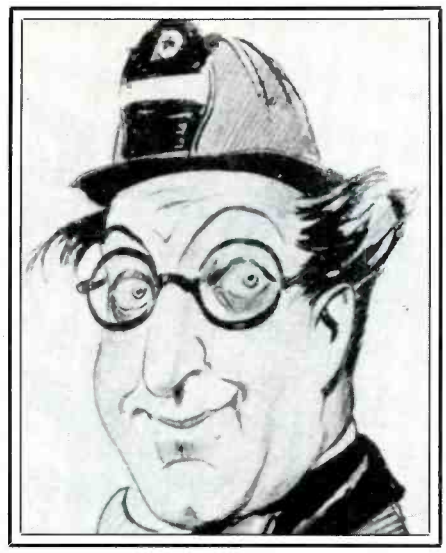
Wynn was the President of ABS. Chairman of the Board was Curtis B. Dall, son-in-law of President Franklin D. Roosevelt. The royal fiddler, Ota Gygi, was the Vice President of ABS. Former banker Graham Adams became the ABS Secretary. The Treasurer was Nelson B. Grove, formerly of the Seaboard National Bank. The General Manager was Harry Goldman, former owner of WMSG.

The ABS offices were installed at fashionable 501 Madison Avenue, in New York City, directly across from CBS. Modernistic blue, green, and orange offices were built, seven studios equipped. Gygi put together a staff that worked through the night planning and arranging ABS, living on rations of coffee and sandwiches, and working for salaries far below those being paid to employees of CBS and NBC. At one point, ABS had run up a coffee and sandwich tab of $300 at the luncheonette in the building's lobby.

The original ABS stations to kick off the chain's operations were called the Atlantic Seaboard Network. These six stations were WBNX in New York, WTNJ in Trenton, NJ; WPEN in Philadelphia; WDEL in Wilmington; WCBM in Baltimore; and WOL in Washington. Other stations in New York, New Jersey, and in parts of New England affiliated soon after, for a total of sixteen affiliates prior to ABS beginning its broadcasts. Wynn claimed that he could have had a coast-to-coast to chain right from the start, and that he could sign up any stations of his choice, but he chose to start out slowly. Plans were to feed the programs out to network affiliates over Western Union lines because they cost less to use than AT&T lines.

Big Business

The ABS relationship with its affiliated stations was quite different than that of either NBC or CBS to their affiliates, as was the ABS strict limitations against lengthy commercials at the beginning and end of programs. Wynn said that he signed up hundreds of actors to appear in quality programs, and if affiliates didn't like the programs after a one month trial period, they could withdraw from ABS. At least fifteen hours of programming per day was guaranteed, with thirty major features available for sponsorship.



Caricature of Ed Wynn in his popular role as NBC Radio's "Texaco Fire Chief." Ultimately, Wynn appeared to panic when faced with the reality of making the choice of giving up starring in his popular NBC show for the opportunity to head a problem-ridden "third network."

Within the broadcasting industry, there were uncomfortable rumblings that none of the ABS executives seemed to have any working knowledge of broadcasting or network operations. They cited the fact that no less than seven tentative ABS starting dates had been announced then skipped over. One ABS exec brought suit against both Wynn and Ota Gygi to get the network functioning. Station WPEN eventually announced that it was no longer connected in any way with the ABS operation.

Maybe the worst thing that could have happened to ABS was when Wynn had to go to Hollywood to begin shooting a film, *The Chief*. Wynn had originally thought ABS would be operational by mid-February, and that he'd be able to split for Hollywood by July and leave it perking along under its own inertia. He had no choice but to go, his contract with MGM required him to be there in July. The question was, with ABS not yet on the air and facing many problems, what would happen without Wynn's presence, guidance, personal attention, inspiration, drive, and assurances to those who were getting nervous.

The answer was in the hands of Wynn's partner, Ota Gygi. Unfortunately, he didn't have that answer, despite the use of a direct wire between Gygi's office in New York and Wynn's dressing room at the MGM studios. Wynn was unable to devote sufficient time to adequately answering Gygi's questions, motivating him, or watching what was taking place at ABS. In short order, Gygi managed to anger the radio critics of all the influential New York tabloid newspapers.

The Big Big Broadcast

When it came time for ABS to finally go on the air with their gala inaugural four-hour broadcast on September 25th, Wynn was still 3,000 miles away and couldn't even appear at the ABS microphones! Furthermore, the wrath of New York's most important radio critics was still in evidence.

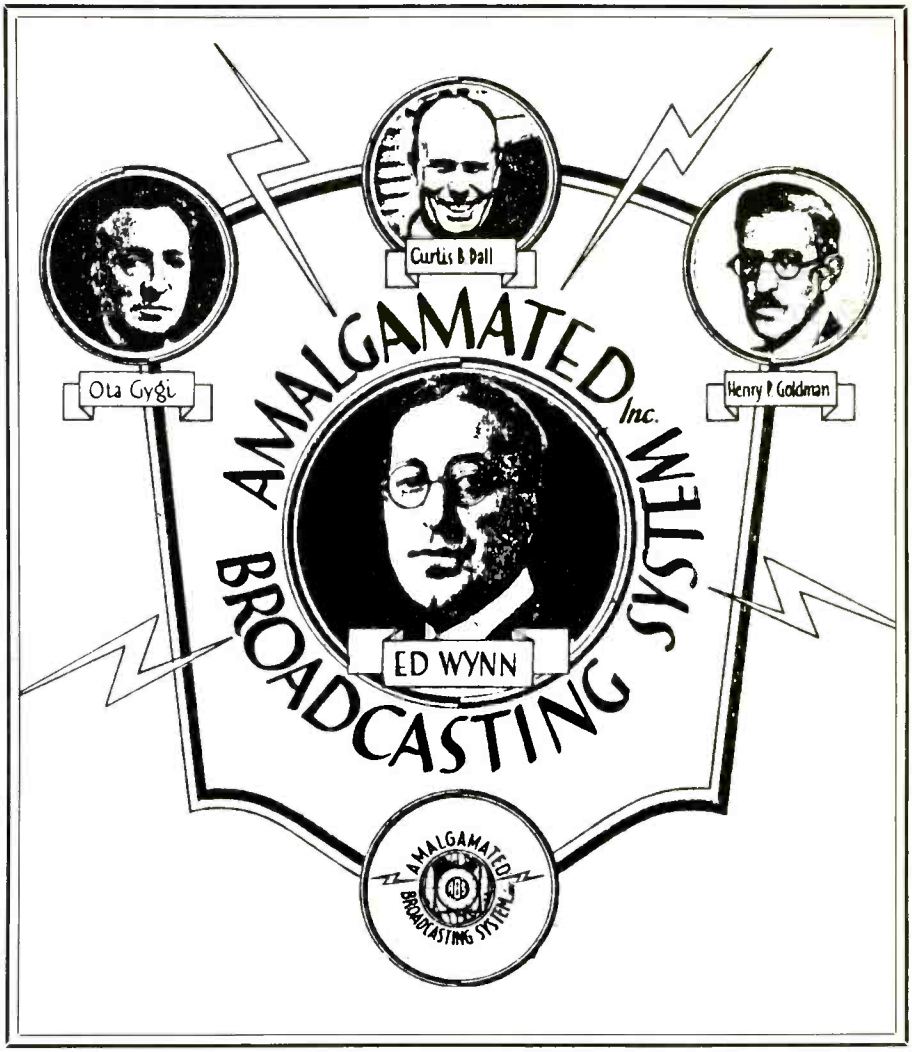
Wynn's "voice" was heard on the ABS inaugural program, thanks to the efforts of a professional voice mimic. Wynn was supposedly listening to all of this over the special direct line to California, but later he confessed that he was busy working on his movie at the time and wasn't listening. The ABS gala was filled with live musical numbers played by the studio orchestra, plus tributes to ABS from various notables, and stations that had sent congratulatory telegrams. One telegram was read from ABS affiliate WTNJ, although for some odd reason, that station didn't even carry the ABS inaugural broadcast.

ABS' large broadcast studio could accommodate 1,000 people, so ABS sent 5,000 invitations to celebrities and to lots of others whom ABS felt might be interested in either advertising or buying stock. They probably figured that if one out of every five invitations produced a warm body, they'd fill the studio very nicely. When most of the 5,000 showed up at 8 p.m. for the inaugural event, there was pandemonium. Thousands jammed into the building lobby, drinking beer, eating salami sandwiches, spotting celebrities, and waiting for their turn to get into the studios. The crowd poured out into the street, some in tuxedos, others in work clothes; men, women, and children blended into a shoving, pushing, shouting, and impatient mass of humanity that was beyond the ability of the police to control even to the extent that a clear path between the curb and building entrance could be maintained.

Jumbo-sized Kate Smith showed up and tried to get through. The crowd and the heat of the summer night almost caused her to pass out. Another singer, Vaughn de Leath, who weighed-in above 250 lbs. actually did faint dead away when struggling to get from the street into the ABS studios.

The crowd, including those in the studio, was getting louder and nastier, and could easily be heard over the ABS microphones. As dignified announcer Norman Brokenshire pleaded with the crowd for quiet and some semblance of order, a glass studio door was heard crashing, someone screamed, hungry guests could be heard fighting with ABS security guards.

Luckily, several remotes had been planned and ABS was able to cut away from the noisy scene going on at ABS headquarters. The evening's broadcast ended just before midnight with a few unexpected words from



The Amalgamated Broadcasting System lasted on the air about five weeks in 1933. Considering the time, effort, money, and ballyhoo involved, it still ranks as one of broadcasting's most monumental flops.

the Sheriff who had shown up to help control the unruly crowd.

The Day After

The following day, ABS put on its full fifteen hour schedule of programming, starting at 9 a.m. and going to midnight, although no affiliates carried each and every available ABS program. There were no commercials planned for the first several weeks of broadcasting, ABS announced, but they said they did have "more than thirty" sponsors ready to go, although ABS was tight lipped regarding its rates for commercial time. As of October 10th, ABS stood at twenty (100 to 500 watt) stations in mid-Atlantic and New England states. Upon Ed Wynn's scheduled return from Hollywood towards the third week in October, commercial broadcasts were to begin and ABS was to be expanded to Chicago's WCFL, Detroit's WXYZ, and other midwestern stations.

Programs being aired over ABS (or announced) included news, operas, musical revues, child psychologists, pop music, American history dramatizations, book reviews, religious and ethnic features, and news commentaries.

The third week of October arrived, and instead of returning to give ABS his personal attention, Wynn dropped a bombshell. On October 23rd, Ed Wynn announced his resignation from ABS, citing his inability to properly function as the network's guiding light during their inaugural phase (while he was in California), and because his NBC/Texaco contract prohibited him from appearing on other programs. He noted that perhaps he had not surrounded himself with the most able executives at ABS. A significant portent of Wynn's discomfort with his role at ABS, he said, came on the day of the network's inaugural broadcast. He said that he was wrestling with a trained bear in a scene they were filming when the bear had "misbehaved." The bear's trainer said that the animal had never before had an accident of that nature. Superstitious Wynn took the incident as a sinister omen for ABS and his participation in the network.

ABS, The Final Chapter

With Wynn gone, and ABS never having signed up any sponsors nor running even one single minute of commercially sponsored programming, things went into a panic mode. General Manager Goldman temporarily took charge, while Vice President Gygi ran around trying to locate another celebrity to replace Ed Wynn. Other broadcasters were approached to aid ABS in its moment of need, although without success. This included John T. Adams, President of the Federal Broadcasting Corp., and Donald Flamm, President of the Knickerbocker Broadcasting Corp. Both said they had refused because they "never had been interested in what ABS did, or has done."

From within the walls of ABS, word leaked out that even before Wynn's resignation, ABS' Board Chairman Dall, and Secretary Adams had quit.

ABS was in turmoil and despair. At midnight on November 1, 1933 when the engineer threw the switch that ended the day's broadcasting, he also ended ABS itself. The network's on-the-air existence had lasted about a month.

The next morning, ABS employees appeared and angrily demanded their salaries. Ota Gygi stood on a desk and, instead, offered them a long and tearful lecture on corporate finances and how it would be bad for them to let their anger over unpaid salaries topple ABS into bankruptcy. He said that ABS owed *him* more money than it owed any of them, but that he was "completely certain that not only the company, but the interests of our creditors may be saved if I am permitted to proceed along my own lines."

Although Gygi ordered the staff to go home, they solemnly filed out of the meeting room to mill about the offices and reminisce, complain, and talk about looking for new jobs. After an hour or so they began to leave, the lights were shut off, and all that remained were abandoned offices and studios.

Within a few days, three major ABS creditors banded together and forced the network into involuntary bankruptcy. A financial evaluation at the time revealed that ABS had $50,000 tied up in furniture and technical equipment; $28,000 in general liabilities; and $10,000 owed in salaries.

The creditors sought relief along three avenues: 1) they wanted to obtain from Ed Wynn a waiver for an alleged claim against ABS amounting to more than $100,000; 2) They wanted to persuade Wynn to pay the employees; 3) They hoped to sell ABS in order to pay the creditors.

Ed Wynn's son, actor Keenan Wynn, recalled in a 1959 interview that the ABS affair had cost his father "305,000 Depression dollars" and that "he paid it all." For all of Ed Wynn's good intentions, and his immense talents and personal popularity at the time, Wynn was left to pick up all of the pieces after the ABS Humpty Dumpty fell. The ABS disaster, followed closely by several other career and business reverses, took its toll on Wynn. Within only a few years, he had a nervous breakdown, and found his career virtually non-existent.

Trooper that he was, Wynn went into TV and won one of that medium's first Emmy Awards (1949), and in 1959 he was nominated for an Oscar (best Supporting Actor) for his dramatic role in *The Diary of Anne Frank*. he passed away in 1966 at age 80, fondly remembered by all who had ever seen him perform in a career that spanned 65 years, and had incorporated work in both comedy and serious drama. Few others had experienced such heights of success, hit such depths of failure, nor been able to bounce back with such tenacity.

For every celebrity backed commercial success like Arthur Treacher's Fish and Chips, or Paul Newman's salad dressing, there are probably two dozen flops like *Billy Beer*, or the 1940's soda called *The Joe Louis Punch*, or Ed Wynn's *Amalgamated Broadcasting System*. Ultimately, the trained bear probably had good intuition, and Wynn was at least smart enough to get out when he did.

Thanks

The author would like to acknowledge the expertise and considerable research on ABS done by Michael Biel, Ph.D., Associate Professor, Radio-TV, Morehouse State University, Morehead, KY. In 1983, at the Annual Convention of the Popular Culture Association, Dr. Biel presented a talk about ABS, illustrated with excerpts from actual recordings of the ABS inaugural broadcast. Throughout the foregoing feature, I have made extensive use of Dr. Biel's fascinating and very thorough research into the life and death of the ABS.

The author also acknowledges and thanks Mr. Arthur Kleiner, of Levittown, NY for the valuable reference materials he generously furnished. PC

PRODUCTS

REVIEW OF NEW AND INTERESTING PRODUCTS

Super Converter II

Introducing the Super Converter II from GRE America, Inc. The Super Converter II comes with all of the features enjoyed with the Super Converter 8001 (810-912 MHz coverage, 9-volt battery or externally powered, etc.) and more. The Super Converter II comes with two BNC connectors allowing in-line connection with hand-held scanning radios, and a bypass switch allowing a return to 400-512 MHz coverage without disconnecting the unit. For more information, please contact: GRE America, Inc., 425 Harbor Blvd., Belmont, CA 94002 (415) 591-1400.

Orion's OR-2300 Rotator

The new Orion OR-2300 antenna rotator using a worm-gear drive method is rated at 35 square feet. Its compact size fits most popular crank-up and stacked towers. The control box has a large, easy-to-read direction indicator with variable speed. Rugged mast clamps accept mast diameters from 1¾ to 3⅛ inches. The flex-mount clamping method self-corrects for misaligned masts and also absorbs windload. Built-in thrust bearing and double bronze bearing decrease friction and load transfer to gear set.

The USA-made rotator sells for $859 and carries a one-year warranty. For more information, contact Orion Business International, Inc., P.O. Box 9577, Canoga Park, CA 91309.

Spybuster Keeps Drivers Aware Of Dangers From Above

More and more, police agencies are using aerial traffic surveillance, and the fleet of aircraft employed for speed-limit enforcement now numbers in the thousands. Unfortunately, aerial enforcement is not without accuracy problems and motorists suffer for it, reports the inventor of the original radar detector.

Help for drivers comes in the form of a new device that detects surveillance aircraft and reminds motorists to keep close tabs on their speed. Spybuster is the latest sophisticated electronic offering from Electrolert's Dale Smith, creator of the Fuzzbuster radar detector.

The only legal way that a vehicle's speed can be measured from an airplane or helicopter is to use a stopwatch to time the vehicle over a known distance, most often a quarter-mile marked by a pair of stripes painted across the highway. The officer in the air determines the car's average speed with a chart and radios the information to police pursuit cars below.

The timing accuracy of the airborne observer—generally no beter than plus or minus a half a second under ideal conditions—has always presented problems in court. The shorter the distance, the greater the effect of the officer's reaction time. Many courts recognize a quarter-mile as the Minimum acceptable distance.

Most ticket errors down on the highway are a result of this short timing distance combined with the pilot's attempt to operate

from ambush. Across a quarter-mile, a one-second timing error means a driver could be traveling legally at 65 mph and find himself unjustly tickets for 70.

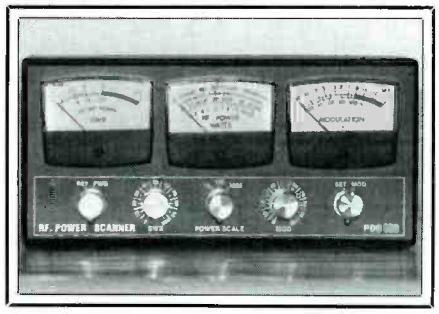
Spybuster take advantage of the fact that while the police are up in the air watching motorists, an FAA radar system is keeping track of aircraft, including police airplanes. All of this radar energy bounces around the environment, "illuminating" metal objects.

Because it can distinguish aircraft from other metallic objects, the Spybuster can be thought of as a 'smart' radio telescope. When alerted by Spybuster that an aircraft is flying suspiciously close, the driver can check his speed and watch for road markers used to time vehicles. This mode of operation makes the Spybuster perfectly legal in all states.

The Spybuster incorporates an omnidirectional sensor with full 360-degree sensitivity. As the device locks onto and tracks nearby aircraft, an audio warning sounds and LEDs provide the driver with information about the aircraft's distance. The driver can adjust a range control, causing Spybuster to lock onto small aircraft as far away as six miles.

Three years in the making, Spybuster is built with custom integrated circuitds using state-of-the-art microstrip and surface-mount technologies. The self-contained unit measures an incredible .74 by 2.75 by 4.25 inches and weighs just four ounces. Priced at $279.95, Spybuster comes complete with a universal bracket for mounting on a dash, windshield or visor.

More info on the Spybuster is available from Electrolert, Inc. 4949 S. 25A, Tipp City, OH 45371, or circle 106 on our Readers' Service.



RF Power Scanner

Para Dynamics power scanners have become the recognized standards of quality in the consumer electronics market. All PDC Scanners are easy to install requiring only two coax connectors, and can be left in-line operation for full time monitoring or these output functions:

Power: Output RF power is read form any one of the three power reading scales: 0-10, 0-100, 0-1000 watts. The power scales are independently calibrated and factory set at 27 MHz. Each of the three scales can be recalibrated to a different frequency, creating three watt meters in one.

Modulation: The voice level output is indicated on the extremely sensitive modulation meter. Ideal modulation would be 100%. An operator can make compensations in voice level, microphone position, mike gain, or add modulation boosters to achieve more effective talk power.

Standing Wave Ratio: SWR is the ratio of maximum to minimum current along the coaxial line. A SWR of 1 to 1 is a perfect impedance match and results in all the power output of the transmitter being radiated as a good signal. Poor impedance match can cause permanent damage to a transceiver.

PDC: Scanners with SWR meters enables the fine trimming of antenna systems plus continuous monitoring of the SWR to detect changes due to leaks, oxidations and weather conditions.

PDC 600 Scanners feature three separate meters for simultaneous readings of all functions for mobile, bench or base station installation. This model features extra large, easy to read meters.

For further information contact: Para Dynamics, 132 N. Main, Union, Ohio 45322, 513-836-0594.

BROADCAST DX'ING

BY ROGER STERCKX, KVT1JH

DX, NEWS AND VIEWS OF AM AND FM BROADCASTING

Reader Donald Brown of Albion, PA writes to this column to say that the Mercyhurst College FM station, WMCY on 88.5 MHz, in Erie, PA used their callsign the first week they were on the air, they later began identifying as "C-Rock" (Classic Rock) and claimed that they were the only station in the nation not to have any call letters. Undoubtedly just wishful thinking combined with lack of information. All broadcasters (except those run by the federal government) in the U.S. are required to have call letters.

Bill Coady, Marion, IL reports he was tuning the band one evening and when he got to 1440 kHz at 2346 Central he logged a "Rock Over London" program. A little while later the station used the theme from *Raiders of The Lost Ark*, announced a callsign that sounded like "WRNO," gave an announcement about "World Radio, New Orleans" and signed off. Almost two weeks later this same station was noted at 2052 Central on a frequency below 540 kHz. Bill couldn't match these loggings up with any broadcast band listings in the WRTVH and asks if we can let him know what he was hearing.

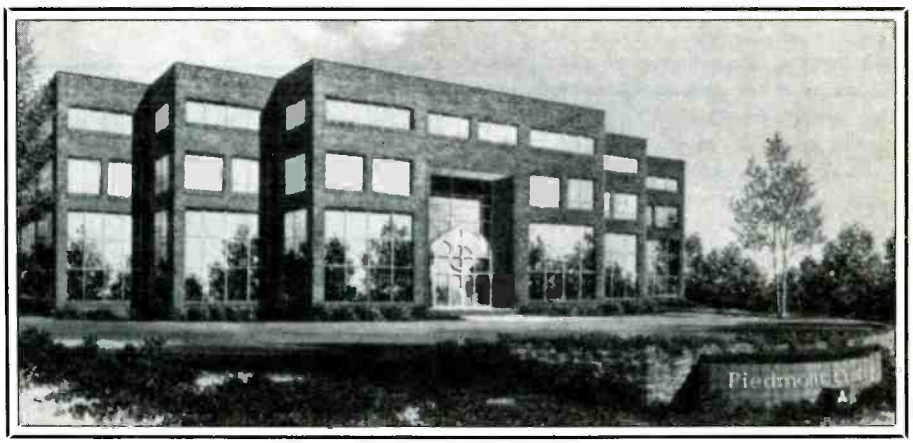
What Bill was hearing was station WRNO in New Orleans, as billed, except that the station does not operate on mediumwave frequencies. WRNO is a shortwave broadcaster that uses seven different frequencies between 6185 and 15420 kHz. How that translated into the reception Bill reported isn't known. WRNO-FM operates on 99.5 MHz.

From Birmingham, MI we hear from Gerard T. Staeger that the Cubans operating between 540 and 900 kHz have really been booming in of late and was wondering if others have noted this, too. We know that at least the operators of WRFM (830 kHz) in Hialeah, FL have noticed it. The station went on the air a year ago and has suffered such severe interference from the powerhouse Cuban on 830 kHz that the future of WRFM is threatened.

Gerard reports regular loggings of the following Cubans:

570 kHz Radio Reloj
600 kHz Radio Rebelde
620 kHz Radio Rebelde
640 kHz Radio Progresso(?)
670 kHz Radio Rebelde (over WMAQ)
710 kHz Radio Rebelde
830 kHz Radio Taino (over WCCO)

Gerard surmises that possibly the Cubans are attempting to make some point about our Radio Marti. This appears to be the case, and also get his objections recorded about TV Marti, now testing on TV Channel 13.



Here's a preview of what the new HQ's for High Point, NC's WGLD and WOJY will look like. The AM/FM stations should be taking up residence in the fall, sharing the structure with other occupants.

Richard W. Parker, KB2DMD, of Trenton, NJ wants to know how and why he was picking up the North American Service of Radio Moscow at 2100 Eastern on 1040 kHz. The program on 1040 kHz was being simulcast with their shortwave transmission. He has listened there several times again for this but it was never heard again. Our guess it was a relay from the Cuban on frequency inasmuch as 830, 1040, and 1160 kHz seem to have been selected by the Cubans for use in putting signals into the U.S. for political purposes. If anybody has better guesses, we're open to all thoughts on the subject.

What's better than an even swap? That's what the owners of WEKS-FM in the Atlanta suburb of LaGrange, GA must have said to the owners of AM/FM combo WFTQ/WAAM in the Boston suburb of Worcester, MA. The owners agreed to exchange stations on a barter basis with no cash involved. WEKS-FM (104.1 Mhz) was estimated to be worth about $15-million. A similar value was placed on WFTQ/1440 and its sister station, WAAF/107.3.

Station Fined

A Trenton, NJ station, WIMG, has been fined $7800 for repeated violations of FCC Rules. The station operates on 1300 and is owned by Norfolk, VA-based Willis Broadcasting, licensee of some 20 other radio stations across the U.S.

Many of the violations related to the Emergency Broadcast System which is designed to quickly alert residents to imminent storms or other man-made situations that could threaten public health or safety. WIMG's equipment to receive and generate the EBS Attention Signal was defective such

Applications For New AM Stations

Mulberry, FL	780 kHz
Clarksville, GA	1500 kHz
East Point, GA	1260 kHz
Princeville, HI	630 kHz
Tioga, PA	680 kHz

Applications For New FM Stations

Hartselle, AL	106.1 MHz
Orange Grove, CA	100.3 MHz
Liberal, KS	102.7 MHz
Norton, KS	106.7 MHz
Rozel, KS	98.7 MHz
Salina, KS	88.5 MHz
Williamstown, KY	106.5 MHz
Pittsfield, ME	99.5 MHz
Yazoo City, MS	93.7 MHz
Poplar Bluff, MO	103.5 MHz
Delhi, NY	100.3 MHz
Manchester, OH	101.3 MHz
Union City, OH	97.5 MHz
Avis, PA	99.9 MHz
Riverside, PA	92.3 MHz
Belle Fourche, SD	95.9 MHz
Abilene, TX	92.5 MHz
Cameron, TX	101.3 MHz
Jefferson, TX	104.5 MHz
Richfield, UT	97.5 MHz
Saltville, VA	106.1 MHz
Clarksburg, WV	90.1 MHz

Application For New TV Station

Hartfort, CT	Ch. 18

AM Callsign Changes

New	Old	
KHNC	WZOI	Johnstown, CO
KRGO	KLIP	Fowler, CA
KSFT	KKJO	St. Joseph, MO
KSGB	KSVZ	Forth Worth, TX
KZXR	KDON	Salinas, CA
WCQL	WQMI	Portsmouth, NH
WGCV	WPLZ	Petersburg, VA
WJMP	WKNT	Kent, OH
WKDP	WYGO	Corbin, KY
WKKU	WSSH	Boston, MA
WKRP	WNVI	North Vernon, IN
WOGR	WQCC	Charlotte, NC
WOPA	WMXA	Chicago, IL
WXLF	WTYC	Rockhill, SC
WYYN	WTNT	Tallahassee, FL

FM Callsign Changes

KASH-FM	KASH	Anchorage, AK
KGLX	KUUL	Gallup, NM
KKJO	KSFT	St. Joseph, MO
KODJ	KNX-FM	Los Angeles, CA
KOOZ	KLTW	Great Falls, MT
KOZY	KVVC-FM	Cabool, MO
KQLZ-FM	KIQQ	Los Angeles, CA
KSKD	KNKN	Sweet Home, OR
WEMX	WCBG-FM	McConnellsburg, PA
WGMM	WNBR	Big Flats, NY
WGRY-FM	WLAI	Roscommon, MI
WHTO	WHTO-FM	Muncy, PA
WIIN	WCKO	Vicksburg, MS
WKFP-FM	WYGO-FM	Corbin, KY
WKXA-FM	WHMQ	Findlay, OH
WLAK	WRLR	Huntingdon, PA
WLIN	WEQZ	Gluckstadt, MS
WMML-FM	WLPR-FM	Mobile, AL
WMFD-FM	WHSL	Wilmington, NC
WSPW	WLPZ	New Carlisle, IN
WTNT	WTNT-FM	Tallahassee, FL

Applications To Change AM Stations

Desert Hot Springs, CA	KUTE/880	Incr. power to 3000/900 watts
Georgetown, DE	WSEA/900	Incr. nite power to 5 kW
Titusville, FL	WGOR/650	Incr. day power to 5 kW
McDonough, GA	WZAL/1540	Incr. power to 2.5 kW
Evanston, IL	WONX/1590	Incr. day power to 3.5 kW
Maryville, MO	KNIM/1580	Incr. day. power to 1 kW
Ferris, TX	KDFT/540	Add nite svc. with 220 watts
Green Valley, WV	WAMN/1040	Move to 1050 kHz with 1.43 kW

Applications To Change FM Stations

Canton, IL	WBYS-FM/98.3	Move to 107.9 MHz
Jennings, LA	KJEF-FM/92.7	Move to 92.9 MHz
Tioga, LA	KISY/98.3	Move to 103.5 MHz

FM Changes Approved

Palm Springs, CA	KPSI-FM/100.9	Move to 100.5
Macomb, IL	WJEQ/103.1	Move to 102.7
Kingman, KS	KAPH/99.3	Move to 100.3
Socorro, NM	KMKQ/92.7	Move to 104.7
Manteo, NC	WZZI/98.3	Move to 98.1
Okmulkee, OK	KOKL-FM/94.3	Move to 94.1

New AM Station Authorized

Dungeness, CA	1600 kHz

New FM Stations Authorized

Dadeville, AL	88.7 MHz
Henry, IL	100.5 MHz
Manchester, IA	94.7 MHz
Brusly, LA	96.3 MHz
Bay City, MI	90.1 MHz
Glen Arbor, MI	95.9 MHz
Grand Marais, MN	100.5 MHz
Holly Springs, MS	94.9 MHz
Shelby, MT	97.9 MHz
Elmira, NY	90.3 MHz
Waterloo, NY	98.5 MHz
Clinchco, VA	93.1 MHz

New AM Callsign Assigned

KGVV	Templeton, CA

New FM Callsigns Assigned

KCOA-FM	Ava, MO
KCCX	Commerce, OK
KDEE	Cameron, MO
KESO	So. Padre Isl., TX
KIPP	Delta, UT
KLUB	Lane County, OK
KMAK	Orange Grove, CA
KPSD-FM	Faith, SD
KQTX	Odessa, TX
KREJ	Medicine Lodge, KS
KSJD	Cortez, CO
KTCF	Crosby, MN
KVPO	Berwick, LA
KWRP	San Jacinto, CA
WCJC	Van Buren, IN
WJCF	Nashua, NH
WLKO	Fort Plain, NY
WQTI	Marion, SC
WRDJ-FM	Bridgewater, VA
WRZI	Buffalo, KY
WTMY-FM	Greenwood, SC
WVFM	Campton, NH
WXZY	Ruckersville, VA
WZFR	Tomah, WI

that it would be unable to participate in the emergency system.

Other violations included: excessive transmitter power; improper record keeping of station logs and public inspection file; lack of a designated chief radio opertor at the station.

The Commission had received complaints that alleged WIMG was in violation of FCC Rules. It was claimed there was frequent "dead air time" which suggested the lack of an operator on duty at the station.

An FCC engineer inspected the station and found the station operating in apparent willful violation of the FCC's rules. The Commission had found similar violations in previous station inspections in August 1983 and September 1985.

Reader comments, loggings, photos, QSL's, station logos and bumperstickers, news clippings and other items relating to AM/FM/TV broadcasting are invited. PC

POP'COMM Tests: Datametrics Communications Manager

Interface Your PC With An ICOM R-7000 And You Enter A New World

As if the ICOM R-7000 25-to-2000 MHz scanning receiver weren't already a hairy-chested brute, connecting it to an IBM compatable computer via the Datametrics Communications Manager ("Scan") software makes it something altogether different, and even more awesome.

With Scan, you can prepare as many lists of frequencies that you wish to review. Scan will assist you in creating these lists (files). When you use one of these lists, Scan will display the information you have previously entered about the frequency. For instance, when Scan stops on 415.70 MHz, it will display "Air Force 1 Telephone Downlink" (assuming you have already told Scan that's what this frequency is). Scan will log the activities for your later review.

Scan lets you check out more frequencies than the R-7000's memories can hold, and lets you change the frequencies at will, one at a time or an entire list made up from your own selections. And you can store more lists of frequencies than you could ever use. Scan knows the channels you program into the R-7000 and will store them into a computer file. Later, Scan will load those frequencies back into the R-7000 from the file. You can have numerous sets of frequencies to load into the R-7000 mrmories, thus setting it up for specific projects when the computer can't be connected.

With an R-7000 receiver, a PC, and Scan, you can turn your station on, advise Scan what frequencies you're interested in, and leave town for a couple of days. When you return, you'll have enough information waiting for you to do a complete analysis of frequency usage. It's a great way to find either the highly used frequencies or those used less often.

Datametrics provides a small interface box that has two cords that plug into the back of the R-7000, and one cord that connects to the computer. Then you plug the interface box into 115 VAC and you're all set to go. The entire Datametrics Communications Manager system (software, hardware, and manual) runs $299. You get your choice of disk sizes, 5.25" or 3.5".

Datametrics is located at 2575 S. Bayshore Drive, Suite 8A, Coconut Grove, FL 33133. If you've got an ICOM R-7000 receiver and an IBM compatable PC, you'll find Scan to be a significant asset to your monitoring capabilities. **PC**

```
                    SCAN MEMORY FILE
                 Filename : MONITOR.FRQ

   ---- Parameters ----              -- Status Indicators --
Longest duration :      0        Frequency :        800.6000
Minimum duration :      0        Signal :                OFF
Delay :                 2        Time :             06:42:51
Autolog (O,S,D) :       O        Monitor time :         1.05
Bounceback :            0        Scan rate :            9.65

Air rescue command channel

  800.0000  800.1000  800.2000  800.3000  800.4000  800.5000
  800.0100  800.1100  800.2100  800.3100  800.4100  800.5100
  800.0200  800.1200  800.2200  800.3200  800.4200  800.5200
  800.0300  800.1300  800.2300  800.3300  800.4300  800.5300
  800.0400  800.1400  800.2400  800.3400  800.4400  800.5400
  800.0500  800.1500  800.2500  800.3500  800.4500  800.5500
  800.0600  800.1600  800.2600  800.3600  800.4600  800.5600
  800.0700  800.1700  800.2700  800.3700  800.4700  800.5700
  800.0800  800.1800  800.2800  800.3800  800.4800  800.5800
  800.0900  800.1900  800.2900  800.3900  800.4900  800.5900


F1-Help F2-Codes F3-Params F4-Lockout F5-Pause F6-Resume F7-Main
```

This is how a file comes upon your screen.

THE HAM COLUMN

BY KIRK KLEINSCHMIDT, NT0Z
AMERICAN RADIO RELAY LEAGUE HQ

GETTING STARTED AS A RADIO AMATEUR

"Where can I find more information about ham radio? What kinds of amateur-radio magazines are there? I can't find ham-radio books at my local book store. Where can I buy them?"

These questions are well represented in the mail I receive from *POP'COMM* readers. Fortunately, amateur-radio books and magazines are plentiful, as are sources of ham radio information. In this month's column, I'll examine a popular subject among hams—their favorite magazines.

Amateur Radio Magazines

United States hams have a lot of latitude when it comes to choosing amateur radio magazines. In addition to the "big four" (*CQ, HAM RADIO, QST*, and *73*), there are many smaller, special-interest publications. These smaller publications cover contesting, RTTY, slow-scan TV, VHF/UHF, moonbounce, DX, classified ads, late-breaking news, and many other topics. Advertisements for the smaller publications can often be found in the large ham mags.

Let's start by examining the four "slick" (large-circulation, general-interest) ham magazines. I've listed them in alphabetical order. I'm sorry if I forget to mention your favorite column or make a comment you don't agree with. There's a lot of interesting and useful stuff to be found in every ham magazine, but, because of space limitations and natural human bias (mine!), I may miss a thing or two this time around.

This well-equipped shack belongs to 21-year-old Fred Liddell, KB2BUY, of Baldwin, NY. This photo was taken while Fred was working DX stations in one of the ARRL-sponsored DX contests. In that contest, Fred worked 14 countries on 10 meters (he's now up to 38 countries confirmed). Fred became interested in ham radio via SWL'ing, and has been a POP'COMM *subscriber since 1982. Most of his hamming and SWL'ing is done with his Kenwood TS-440S transceiver, shown on the middle shelf. Fred now holds an Advanced-Class license, and was first licensed as a Novice at age 18. With a little luck, by the time you read this, he'll have his Extra-Class license.*

CQ

CQ has been published since just after World War II—1945, it says so right on the cover. And, speaking of the cover, they're usually built around an eye-catching photograph. *CQ* offers a mix of general-interest articles: profiles of VIP hams, human-interest stories, historical pieces, product reviews, and regular columns on awards (*CQ* sponsors several well-known DX and prefix-hunting contests and awards), contesting, propagation, world-wide tidbits and antennas. *CQ* does not place a heavy emphasis on construction projects (there are always one or two per issue, usually for uncomplicated and simple to build items. There are plenty of major advertisers, and the classified-ad section is growing in size. A one-year subscription costs $19.95. Write to: *CQ*: 76 North Broadway, Hicksville, NY 11801.

Ham Radio

According to the editor and publisher, *Ham Radio* aims to be amateur radio's technical journal, and features lots of construction projects and how-to articles, minus the usual "political" bantering and general-interest columns and articles. I think that describes *Ham Radio* perfectly. If it's lots of construction articles and technical information you're looking for, you'll probably enjoy *Ham Radio*.. To me, *Ham Radio* fills a niche sort of "diametrically opposed" to that of *CQ*. The classified-ad section is a little on the skimpy side. *Ham Radio* has been published since 1968. A year's subscription costs $19.95. Write to: *Ham Radio*, Greenville, NH 03048-0498.

QST

As the monthly journal of the American Radio Relay League, *QST* enjoys the largest circulation of any amateur-radio magazine, and has been published since 1915 (ARRL is now celebrating its 75th anniversary). *QST* aims at having something for almost everyone: construction projects, general-interest articles, product reviews, contest and awards information and some 25 monthly "Departments" that cover a wide range of ham-radio topics. Lots of major advertisers can be found in *QST*, and the classified-ad section is extensive. Twenty-five dollars will buy you a one-year ARRL membership that includes *QST* and other benefits. Write to: *QST*, ARRL, 225 Main Street, Newington, CT 06111.

73

73 magazine ebbs and flows under the direction of its dynamic editor/publisher, Wayne Green, W2NSD/1. If there's one thing Green does best, it's the production of long, searing, and controversial editorials. I always read *73* to see what "Uncle Wayne" has to say. You might not always agree with him, but few things will get your ham-radio blood boiling (or curdling) faster than a Wayne Green editorial. That is, after all, his intention. The rest of each issue is usually filled with several construction articles, product and book reviews, and plenty of special-interest columns. One particularly interesting column is called *73 International*. One particularly interesting column is called *73 International*. It's filled with news and information submitted from ham-radio correspondents from around the world. As with all of the "big four," *73* has plenty of major advertisers. The classified-ad section is in the medium-sized category. A one-year subscription goes for $19.97. Write to: *73*, Circulation Dept., WGE Center, 70 Rte. 202 North, Peterborough, NH 03458-9995.

Books on Ham Radio

All of the previously-mentioned magazines offer a wide selection of ham radio books. Descriptions of the titles and ordering information are available in each repective issue. Books published by the ARRL and The Radio Society of Great Britain are available directly from the ARRL (see address below).

Because I'm running out of space, I'll have to save the information on some of ham-radio's smaller publications until later.

Any questions, comments or topics you'd like to see covered in *The Ham Column*? If so, drop me a line at ARRL, Dept. PCN, 225 Main St., Newington, CT 06111, and I'll do my best to address them in a future issue. If you send along a photo of you and your shack or listening post, I'll send you a copy of the popular *Novice Survival Guide*. Some of you are trying to be sneaky by sending for the *Guide* without including a mug shot! Don't be shy—a little notoriety may be just what you need!

Good luck in your quest for information. See you next month. PC

TELEPHONES ENROUTE

BY TOM KNEITEL, K2AES

WHAT'S HAPPENING WITH CELLULAR, MARINE & MOBILE PHONES

Mentions here in previous columns of cellular phones outside of the USA and Canada produced reader letters asking for additional information on the bands used in other nations, and similar data. Unlike most radio services, which individual nations locate on various bands, cellular frequencies and systems in many CMT-equipped nations (except in Europe) are generally compatible and utilize the same equipment suitable for North American operation.

Customs regulations don't allow you to bring your CMT into Australia, Israel, New Zealand, South Korea, Thailand, and Zaire. In those nations, and in some European nations, you can rent a CMT by the day, week, or month from cellular service suppliers there. You can bring your CMT with you to Hong Kong and they'll assign you a temporary number to receive calls for a fee of US$ 20 per day plus US$ 2 per minute air time. Similar arrangements (for different fees) may be arranged for in Bermuda and in the British Virgin Islands. It's a good idea to check in advance before trying to bring a CMT across any international border.

In England, where there are more than 500,000 phones served by the nation's suppliers, CMT service is notoriously poor and has been the subject of considerable grumbling for the average monthly fee of about 80 Pounds Sterling.

When they work, they're great; but in London three out of every five calls you make aren't able to be completed due to interruptions, interference, disconnections, and weak signals. There are also complaints about high air time charges, too few frequencies, and shoddy equipment. Last January they were working out arrangments to change the whole system.

In December of 1987, a taxi company in Staffordshire decided to use CMT's for dispatching their cab. Within months they had returned to relying upon radiopaging, complaining that service was too unreliable to assure that they could reach the taxi to give the address to the driver. They stopped paying for the CMT, advising the rental company that it was "not of merchantable quality." The CMT company brought suit for breach of contract.

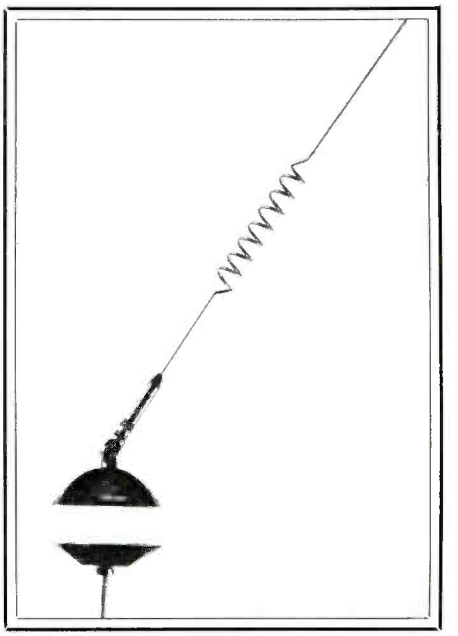
CMT's went into service with far fewer technical problems in North America, where the service continues to expand and improve very smoothly.

Life Saver

The West Shore Advanced Life Support Service, Inc. (WSALS) provides emergency paramedic service to patients in Cumberland, York and Perry Counties of Pennsylvania. Since its founding (in 1985) WSALS has answered more than 10,000 calls and assisted local ambulance services. WSALS relies on a traditional UHF system to transmit EKG telemetry and to speak to physicians at the Emergency Medical Resource Center, but they find that this service doesn't provide a sufficient number of frequencies to meet their needs. WSALS then met with representatives of Cellular One of Pennsylvania at that point.

The Cellular One people arranged for WSALS to use a transportable cellular phone and special modem package that transmits EKG telemetry directly to emergency physicians. This provided a higher quality signal throughout the WSALS coverage area without the need to build an entire new network.

The FAX-305 sends and receives FAX through your cellular phone.



Most of the circuitry is on the exterior of the glass with the Larsen KG-825 antenna.

Services

Contel Cellular, Inc., of Athens, GA has expanded its cellular services into several new areas, including Owensboro, KY; Rapid City, SD and its environs; and Greater Burlington, VT.

CMT usage in the USA is expected to jump from its present level of almost 2-million to 10-million within the next five years, for those of you who are keeping statistics.

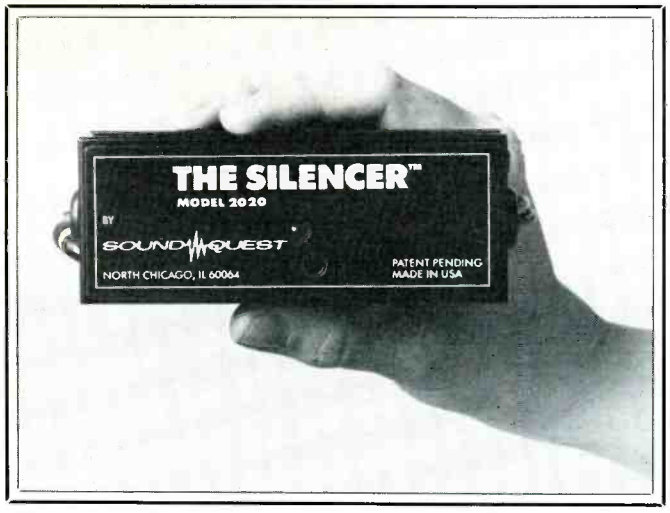
It's growing overseas, too. Last year, France selected Sweden's Ericsson company as the equipment supplier for its entry into the new pan-European digital mobile phone system GSM (Groupe Speciale Mobile). This year, Switzerland also picked the Ericcson digital cellular system.

The new Swiss system will cover the Geneva area with one mobile switching unit, one base station controller, and two base stations. It will be operational in about two years with a capacity of 5,000 subscribers. The pan-European digital system is being developed by eighteen nations which presently depend upon different systems. The new system will make it possible to use the same equipment throughout Europe. England is also switching over to this new system as part of its improvement plans.

New Hardware

Nissei Electric USA, Inc., introduced its FAX-305 portable FAX unit known as the FAX-305. While the unit can be used over landline telephones, it is primarily a mobile device intended to be used from a vehicle while hooked to a cellular phone.

The FAX-305 provides an acoustic coupler, as well as RJ-11 jacks, which makes the device versatile insofar as where it can be connected. It's lightweight (less than 9 lbs.), so it's easily suited to being transported by means of its own carrying handle. It operates from rechargeable batteries, or it can be run from the recharger (that plugs into a car's cigarette lighter). The manufacturer's specs say that the FAX-305 can process about 25 full size pages on a single charge. The unit is supplied with an AC power sup-



The Silencer keeps your callers from knowing about your tacky taste in music.

The NYNEX 832-SR cellular phone dials 20 numbers on your voice command.

ply and charger, plus a sixty foot roll of thermal paper.

The FAX-305 provides a "fine" mode for high resolution printouts. It may also be used as a photocopier. The FAX-305 carries an MSRP of $1399; my suggestion is to see one in action to determine if (for that price) it's going to produce the results you need. Although I haven't had any personal experience with this particular device, several other transportable FAX machines I have used produced only so-so copies that were too light for my tastes. One would also have to inquire about the effect of the heat in a closed car on the thermal paper used in any of these machines.

The FAX-305 comes from Nissei Electric USA, Inc., 3 Reuten Drive, Closter, NJ 07624. Write to them directly for more info, or circle 102 on our Readers' Service.

The Larsen Kulglass KG-826 series on-glass mobile CMT antenna offers 3 dB gain and is available with a choice of connectors—PL-259, MPL type, TNC type, or a male N-type. The antenna is also available without any connector. A fourteen foot length of RG-58/U coax comes with each model, the connectors are shipped unattached.

The antenna is cut for the 806 to 896 MHz range and is a $\frac{5}{8}$ over $\frac{1}{2}$ wave collinear type. An interesting feature is that the impedance matching circuitry is on the portion of the antenna mounted on the external side of the glass, thus allowing a low impedance power transfer of RF through the glass.

For more information on the KG-825 series, contact Larsen Antennas, 11611 N.E. 50th Avenue, Vancouver, WA 98668, or circle 103 on our Readers' Service.

The Silencer isn't an accessory for your AK-47, it's used with your CMT. This device is used to automatically shut off your stereo as soon as your CMT begins to ring, thus saving you the time and inconvenience of doing the job manually. By avoiding the inevitable frantic scramble to turn off the stereo when the CMT rings, it adds a safety factor to the entire opertion. When you hang up on the call, the stereo can turn itself back on. *The Silencer* comes in several models, one just shuts off the stereo and doesn't turn it bakc on; another model can either turn it on or off (or turn off just the speakers); a third version is for eardrum-blaster stereo systems having several amplifiers—it interrupts the stereo signal before it reaches the amps.

Gadget is especially useful to physicians, attorneys, judges, engineers, public officials, and other serious type people who prefer that callers weren't let in on the fact that their taste in music runs to Homer and Jethro or Ozzy Osbourne.

The Silencer is sold by CMT and auto sound suppliers with different models selling in the $40 to $70 range. For more information, contact the manufacturer, Sound Quest, 2250 Greenfield Ave., North Chicago, IL 60064, or circle 104 on our Readers' Service.

NYNEX Mobile Communications has a winner in their Model 832-SR advanced voice-activated cellular phone. This CMT can dial up to 20 pre-programmed phone numbers just at the sound of your voice! It also allows users to leave a 15-second personal voice message to incoming callers when the vehicle is unattended.

The 832-SR has memory capabilities for 99 phone numbers, and it has an RJ-11 jack for use with FAX, computers, and modems. There is also one-touch dialing for five different numbers. To use the voice actuated dial-up feature, you simply press any key on the 832-SR and say the name of the person you want to call. The CMT confirms the name and then dials the number. Since it also offers hands-free operation, the user never really needs to pick up the handset. The 832-SR can recognize two different voices, so if two persons normally use the CMT, each can use it for 10 numbers apiece. The unit has auto redial and all of the other features in top-of-the-line CMT's. The MSRP is $1595 for this one.

For more information, contact NYNEX Mobile Communications Co., 1 Blue Hill Plaza, Pearl River, NY 10965. It's possible that this CMT may be available only in certain limited geographic area of the Northeast.

We'd like to hear from you with your questions and anecdotes about cellular, also from manufacturers and cellular service suppliers. **PC**

SATELLITE VIEW

BY DONALD E. DICKERSON

INSIDE THE WORLD OF SATELLITE COMMUNICATIONS

Star Wars

The first battle of Star Wars is already being fought. The two unlikely participants in the battle are former allies: NASA and the Air Force. These two agencies have been rivals for many years; each wants control of the space program. The Air Force has always played a larger role in the US civilian space program than most realize. They prefer to keep a low profile and let NASA take both the glory and the heat. The Air Force has strengthened its control over the space program with the loss of the Challenger and the backlog of DOD payloads waiting for launch.

Three future Shuttle flights, during the next two years, will be SDI related and six will carry spy satellites into orbit. So, NASA, our civilian space agency, becomes militarized of necessity. In light of the two agencies delicate relationship and their continued struggle for control of the space program, it is unlikely that the Air Force or DOD will voluntarily loosen its tightening grip on the Shuttle's launch schedule, even after the present backlog is eliminated. Even if you are in favor of the militarization of the US space program, you can't deny that civilian control has worked well for many years. Our greatest accomplishments in space have taken place under civilian control, i.e., Apollo; and our greatest failures have taken place when this control was partly relinquished to what President Eisenhower called the Military-Industrial Complex, i.e., Challenger. And what of the Challenger accident? It may be more of a morality play about corporate greed than an indictment of NASA.

The militarization of space will have dramatic effects on all future space projects. It will signal the victory of the military-industrial complex over the civilian and political control of the space program; the direct result of ignoring President Eisenhower's warnings. And let's not forget that 'Ike' was certainly no peacenik.

The first dedicated SDI shuttle mission will be STS 35, scheduled for November of 89. This mission will conduct infrared background signature studies. During the next two years several SDI related experiments will be conducted from space. The Army will conduct an experimental program called TERRA. It will study military exercises from space. The Navy and Air Force will have a variety of programs designed to refine tracking and targeting techniques. This is the area of most concern and difficulty for SDIO (Strategic Defense Initiative Office). The first systems to be refined will be the space based lasers. Not those mythical beast you see in the SDI proposals by defense contractors, but a simple targeting laser like those used by ground troops to target tanks or storage areas during military exercises. There is a saying in the military: If we can see it, we can kill it. This means if we can get a laser on it the missile can't miss the target, it will score a direct hit. We hope to be able to do the same from space when needed. There will also be continuing studies by the Navy and Air Force to identify aircraft and ships from space.

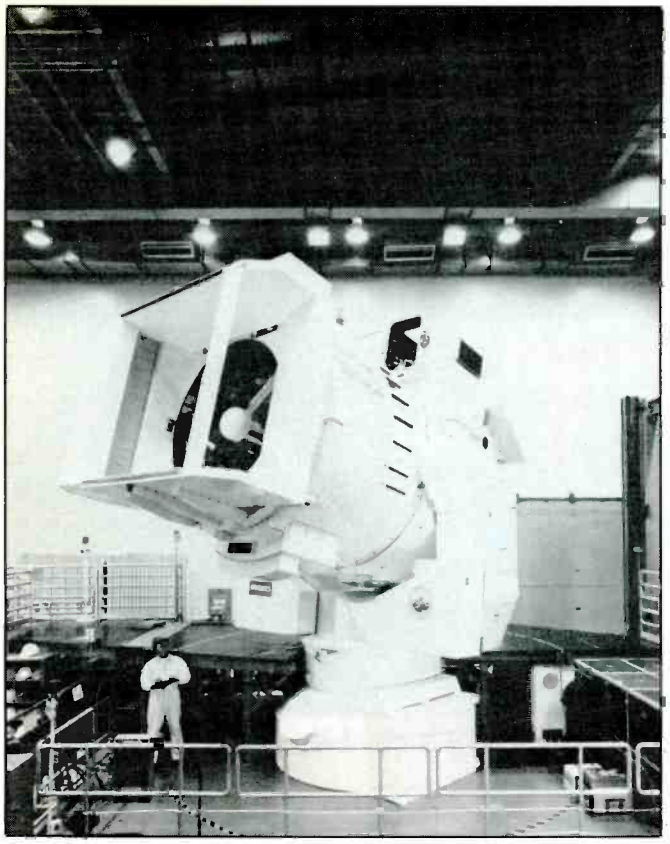
Low powered laser tests have already been conducted from the Maui Facility in Hawaii. (DOD)

The Air Force began testing the F-15 ASAT (Anti-Satellite) weapons again in May of 1988. That was when the first, in a series of ASAT targets, was launched from Wallops Island, VA on the Scout rocket. There will be at least three additional tests during the next three years. The missiles used to take these targets out can be armed with a variety of warheads, nuclear or otherwise; but the current ASAT weapons are simply space based land mines which use kinetic energy to take out the target. The Soviets have a similar system which is ground based.

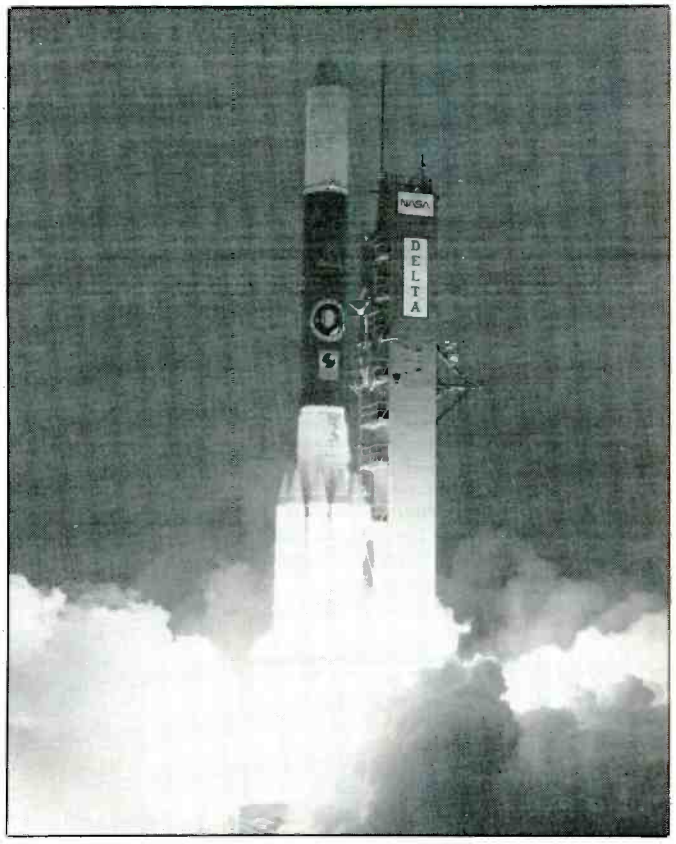
The high tech Star Wars systems as proposed by Reagan, do not exist and are not going to be possible at all until new technology is discovered. This will take us well into the next century. Though our first experiments from space were conducted in 1984, our first full scale test from the space shuttle will take place in 1990 on Discovery mission STS-38. The crew will test a new laser from StarLab. StarLab is a special payload bay module designed just for SDI experiments.

Space Research Frequency Allocations

10.003-10.005 MHz	1,427-1,429 MHz
15.010-15.100 MHz	2,200-2,290 MHz
18.068-18.168 MHz	2,290-2,300 MHz
19.995-20.010 MHz	8,400-8,500 MHz
25.005-25.010 MHz	
30.005-30.010 MHz	14.8-15.35 GHz
	21.1-21.2 GHz
39.986-40.02 MHz	21.2-21.4 GHz
40.98-41.015 MHz	22.21-22.5 GHz
137.0-144.0 MHz	34.2-34.7 GHz
272.0-273.0 MHz	36.0-37.0 GHz
	50.2-50.4 GHz
400.1-401.0 MHz	54.2-58.2 GHz
401.0-402.0 MHz	116-126 GHz
403.0-406.0 MHz	150-151 GHz
	174.5-176.5 GHz
	200-202 GHz
	235-238 GHz



The Navy's High Energy Laser at White Sands, NM. (DOD)

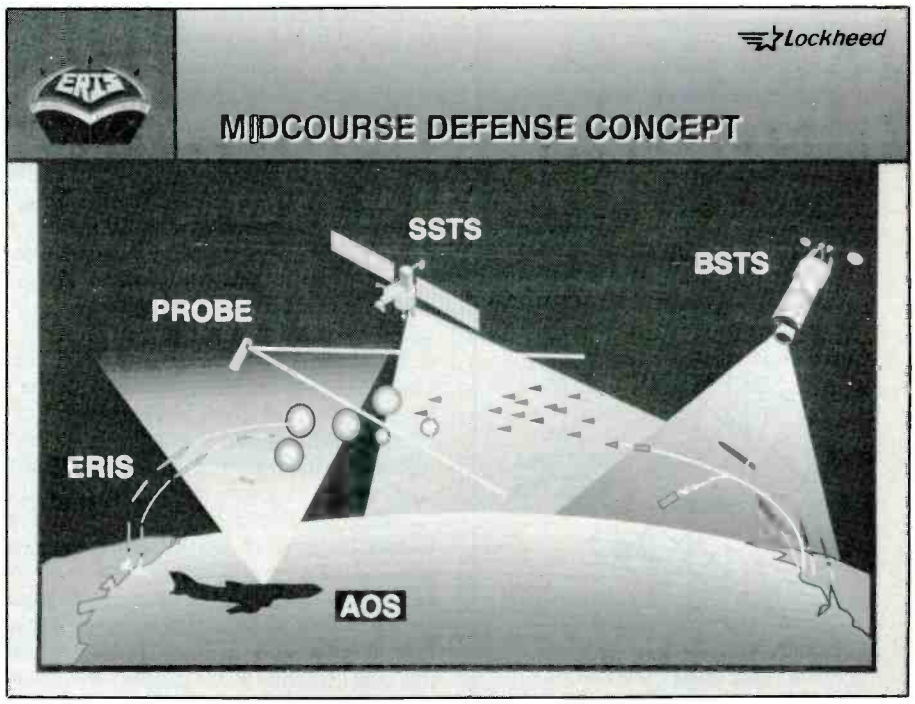


Delta 181 an early kinetic kill SAT test (1988 NASA).

It will be used in testing our low powered lasers' ability to track, identify and target ships, missiles and aircraft. Though this would be a clear violation of the 1972 ABM treaty the tests are expected to proceed as scheduled. A brief review of history would indicate that treaties are meant to be broken. It's as though mankind has a split personality. We acknowledge, on paper, that certain behavior is not in anyone's best interest. Then we seem powerless to conform to our own self-proclaimed ideals.

Though many decades down the road, the most promising SDI weapon is the chemical laser. It does, however, have a few draw-backs. With present technology, a space based chemical laser would have to be the size of a football field, weigh as much as an aircraft carrier and take more fuel than could be delivered by the turn of the century. We won't see it in our lifetimes.

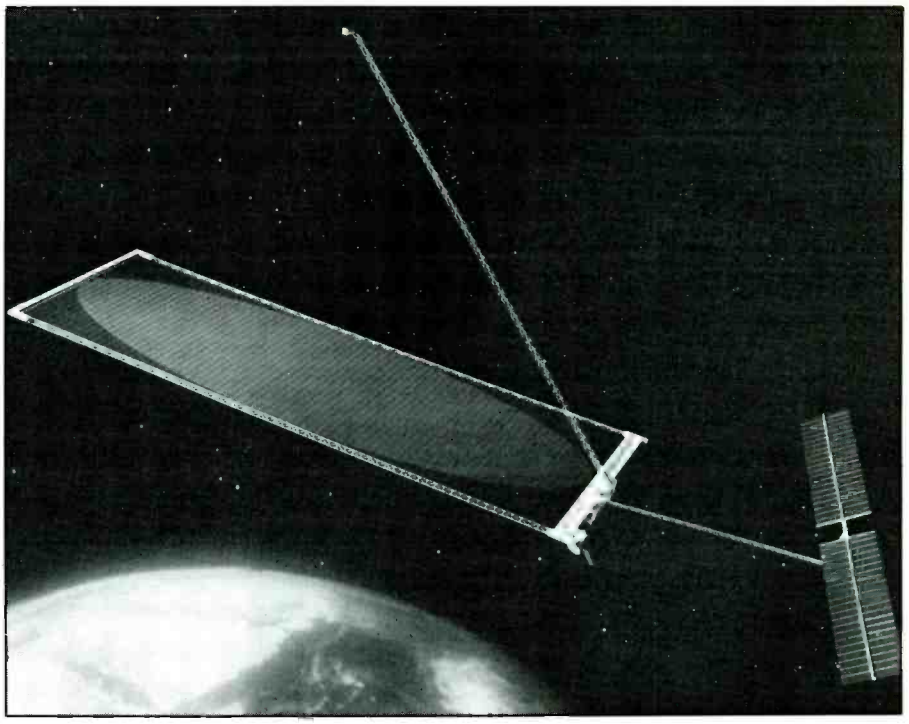
The Soviet kinetic kill ASAT system, unlike ours, is launched from the ground and therefore takes longer to reach its target. They have not tested their ASAT system since 1984. They have also done a lot of laser testing. Their ground based low power lasers have successfully targeted and blinded some of our spy satellites. It has not damaged any of our spacecraft due to the low power. It's much like having someone shine a flashlight in your eyes at night, it's quite effective. The Soviets have been testing low powered lasers from their space stations for several years. They apparently don't like the terms of the 1972 ABM treaty either.



ERIS - Exoatmospheric Reentry Intercept System.

Ike identified our targets for us. That's right, it's his military-industrial complex, literally. Many military installations, research labs and private companies are working on SDI related projects. In fact there are over 100 contractors busy doing research for the SDIO. Many of the companies you would automatically think of like TRW, Rockwell and Teledyne and others you probably would not, like Royal Dutch Petroleu, Penn Central and Arvin Industries.

Military bases will be good targets on HF, VHF and UHF. Just as there are chase planes and ships operating prior to, during



Space Based Radar dish would track ships and missiles. (DOD)

and after a shuttle launch, you will be able to hear similar activity during some of the SDI experiments. In fact several new 747 aircraft will be operating in conjunction with the space based SDI experiments and may well be operating during other phases of equipment tests. Shuttle missions carrying SDI experiments will be your best clue on when to listen. You can start by monitoring the shuttle downlink from Goddard or Johnson Space Flight Centers which is broadcast live on the amateur bands. Then tune through your list of frequencies used by SAC and other military aircraft. If you're looking for intercepts from Industrial Parks where known DOD contractors are located you will have much more of a challenge. I have included a list of frequencies which are allocated for space research. These would be a likely spot to find space research from both satellite and manned shuttle missions. For military frequencies and industrial frequencies I would suggest you get a copy of the 'Confidential Frequency List" or the "Top Secret Registry of US Government Frequencies. Be sure to check back issues of POP'COMM, too. Another excellent place to look for industrial frequencies is our 'Washington Pulse' column. It often lists all the latest stations to be granted an experimental license. Their location and frequencies are also listed. If a government contractor gets a new frequency or station, you'll find it here. As with the shuttle missions there will always be voice communications required to coordinate these experiments whether they originate from a 747, a satellite, or the Handi Talki of a security guard at an Industrial park.

NASA may be able to beat the odds in this first battle for space dominance. If it does, we can expect a more balanced space program which would engage in both manned and unmanned exploration and not just weapons tests. Perhaps the militarization of space is like Armageddon, inevitable; but trying to postpone it a few more years wouldn't hurt either.

There are a few more questions we should ask. Is SDI worth it? Even if the 'Fantasy Island" version of SDI Reagan was pushing were operational it would only protect us from the land based Soviet missiles. The cruise and Sub launched missiles, which are only 6 minutes away, would still be unchallenged. Do we want the military to load the skies with weapons, which, like satellites and space stations, have been known to malfunction and plummet to earth. Could it accidentally start WW III? Finally, can we afford it? We have tried to challenge the Soviets to a spending race and all we have accomplished is to destabilize the dollar and the western economies. Was it worth it? We may now know for some time to come . . . see you next month.

Government Space Research Facilities

(Known to use 1,990-2,120 MHz)

Corpus Christi, TX
Fairbanks, AK
Gladstone, CA
Greenbelt, MD
Guam & Mariana Islands
Kauai, HI
Merritt Island
Rosman, NC
Wallops, Island Va.

ON THE LINE

NEW AND EXCITING TELEPHONE TECHNOLOGY

BY JULIAN MACASSEY, N6ARE

The Big Phone Equipment Manufacturers Make Big Numbers

You can spend your life as a telephone subscriber and never hear the names of some of the big billion dollar corporations that build telephone equipment. These companies build switching and networking equipment, all the stuff normally found inside your local telephone exchange. Many of them do not build what is called "Subscriber Equipment"—phones and accessories. Most of them also do not make any business equipment known as "Customer Premises Equipment." Despite their apparent low profile, these companies have annual turnovers in the billions of dollars and depend for their health and continued existence upon politics and international trade.

Here are some numbers to give you an idea just how the big this trade is. In 1987 the world did $60 billion worth of business in telecommunication equipment. Of this $60 billion, the U.S. was responsible for about $20 billion. To further illustrate the size of the market consider this: In 1988 AT&T wrote off $6.2 billion of obsolete long distance network equipment.

As telecommunication becomes cheaper and involves other things than speech, such as, computer data, FAX, and control signals, the money spent on Central Office switch equipment spirals and the useful life of all the latest and greatest equipment shortens.

For the 1990s billions are now being spent to design the next generation of equipment. It is estimated that any company wanting to produce one of the next generation exchanges is going to have to spend over $1 billion on R & D alone. This helps explain why companies are joining forces (see table 1). Not only do they get to share R & D expenses, but they also get a foot in the door of another country so they can make sales and recoup their expenses.

Some companies seem to do well on their own. The Swedish manufacturer, L. M. Ericcson, is the third largest telephone equipment manufacturer in Europe. Sweden is a country with a smaller population than New York City. Ericcson has to export to survive. The Swedes sell their equipment all over Europe and also to Latin America. The exchange that has made Ericcson famous is the AXE-10.

When Cross Bar came out, it was used for expansion purposes and Strowger gear was still being installed. In fact the last Strowger exchange installed in the Southern California area was installed in 1973! The latest digital exchanges are no longer being used only to add capacity or replace worn out electromechanical equipment but some are being used to upgrade Electronic systems that are hardly a decade old.

Selling a Central Office switch (The machinery that handles the calls down at your local exchange) is a big buck deal. When large sums of money are being discussed, politicians like to get involved. Nationalism plays a part. But the old barriers are coming down as companies join forces to expand markets. The old days of government phone monopolies buying only from the local manufacturer are going. Siemens from Germany and Northern Telecom from Canada have done well selling digital exchanges in the U.S.A. Siemens now owns the switch manufacturing arm of GTE and also recently bought the switch company Rolm from IBM when they decided to bail out of the phone business. Ericcson the Swedish company has sold exchanges to British Telecom much to the chagrim of GPT the British exchange manufacturer.

The Latin countries and Europe have been a traditional market for ITT which was a U.S. company, but ITT is shrinking. They seem to have lost their way in telecoms. Maybe owning Sheraton hotels, Wonder Bread and Avis Car Rentals confused them. What used to be ITT switching equipment is now 37% of a French company called Alcatel. A sad end for what used to be a giant.

Most countries have government owned phone companies, so buying expensive equipment gains the same degree of importance as the purchase of military armaments. Cabinet ministers make statements to the press and pundits talk on television. The U.S. is one of the few countries that does not have a minister of Posts and Telephone. But, just like the weapons business, this is an international business and, like the weapons business, the high R&D costs are hopefully paid by export orders. Sometimes the telephone and military stuff comes together as it did a couple of years ago with the new U.S. battlefield control system. Then, Ronald Reagan and Margaret Thatcher had to talk to each other to defuse the situation when a French system was chosen over a British system.

It is not only the developed world that is installing the latest and greatest in switching equipment. The third world is installing it too. This can lead to some interesting situations. There are parts of the world where a manual operator connects you directly to the latest digital switch so you can dial across thousands of miles to talk to another manual operator who will ring "The party to which you wish to speak." But for most of us, it is these new digital exchanges that are providing the new custom calling features and better faster service. For business customers the new exchanges provide improved 800 service, better billing and faster and better data communications. PC

Telephone Exchange Equipment Manufacturers

Name	Country
AT&T	U.S.A.
Alcatel (CGE & ITT)	France
Bosch	Germany
Ericcson	Sweden
GPT (Plessey & GEC)	U.K.
Italtel	Italy
Matra	France
NEC	Japan
Northern Telecomm	Canada
Philips	Holland
Racal	U.K.
Siemens	Germany
STC (Northern Telecom & ITC)	U.K.
Telettra (Fiat & Telfonica)	Italy

EMERGENCY
COMMUNICATIONS FOR SURVIVAL

BY GORDON WEST, WB6NOA

Setting Up A H.F. 2-30 MHz Antenna Coupler

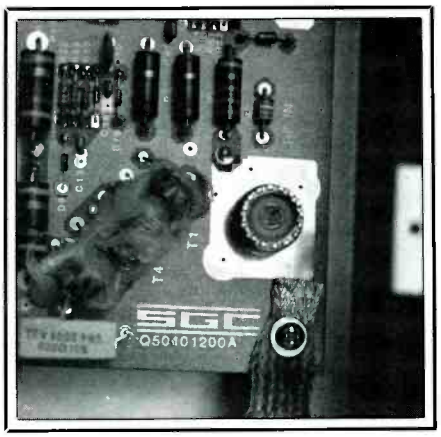
Remote-mounted antenna couplers will allow you to operate between 2 MHz to 30 MHz on almost any piece of long wire. A good ground is necessary for the coupler to perform its function of antenna tuning.

Automatic antenna couplers, such as the SGC 230, self-activate when R.F. is sensed at its input and quickly switch in the proper amounts of inductance and capacitance to transfer the input power to the output long wire antenna connection. Efficiency is usually greater than 95 percent. The automatic antenna coupler uses no resistive heating elements for its tune-up process.

A complex microprocessor-based memory circuit instantly recalls up to 100 frequency selections for instant tune-up when you may go back to that particular band.

12 VOLTS DC. The automatic antenna coupler runs on 12 volts DC. Only one amp at 12 volts DC is necessary to run the tuner's microprocessor circuitry and the tiny reed relays during tune-up. 12 volts is brought into the coupler and attached to the tiny screw-type terminal block observe polarity. The SGC Model 230 is protected against reverse polarity. Other antenna couplers may not be.

COAX INPUT. Coax from your remote-mounted transceiver runs to the antenna coupler's antenna input connector. While RG-8 could be used, it's recommended that RG-8X—a smaller type of 8U—be run into the antenna tuner box. This keeps the antenna post connection from receiving too much strain. RG-8X is easy to work with, is relatively efficient at high frequencies, and 100 feet of RG-8X has less than 1 dB loss at 30 MHz.

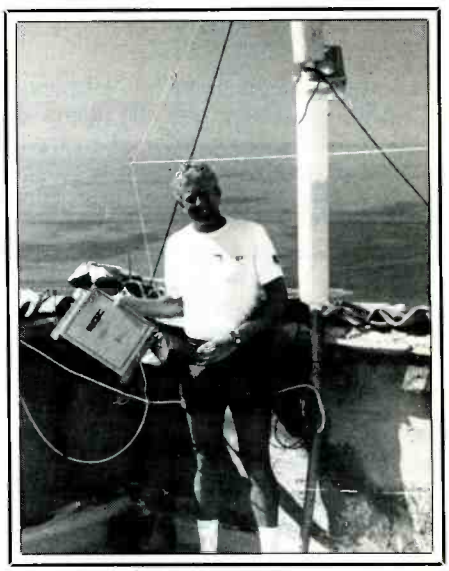


Coax input.

ANTENNA OUTPUT. The microprocessor-based H.F. antenna coupler tunes a single wire output. This is "reactance fed" for long wire antenna systems. This is not coax output. This is not merely an antenna tuner, similar to what's built into equipment, but a powerful antenna coupler capable of tuning up any length of long wire.

Affix your stranded and plastic-covered long wire to this antenna post. High voltage exists on this post during transmit, so make sure that it's well-protected from anyone touching it. The antenna coupler needs to go as far away from any other wiring as possible. This keeps R.F. from transferring over to nearby wires.

The length of the long wire could be as short as 15 feet, or as long as 200 feet. This will allow a quick and efficient tune-up between 2 MHz to 30 MHz.

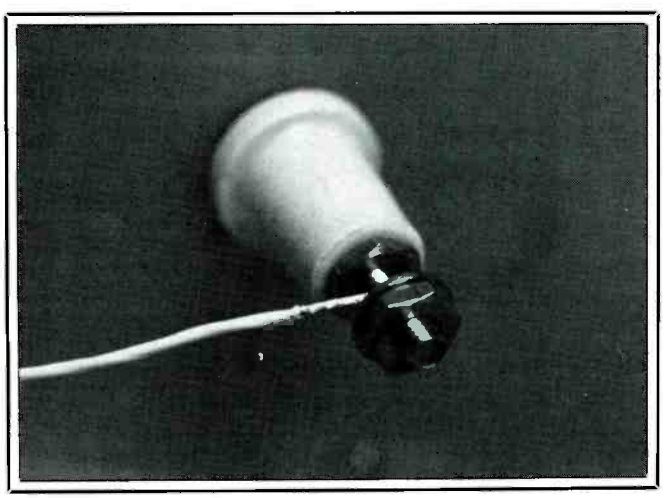


Your truly holding auto-coupler during recent XE2GOD Mexico operation.

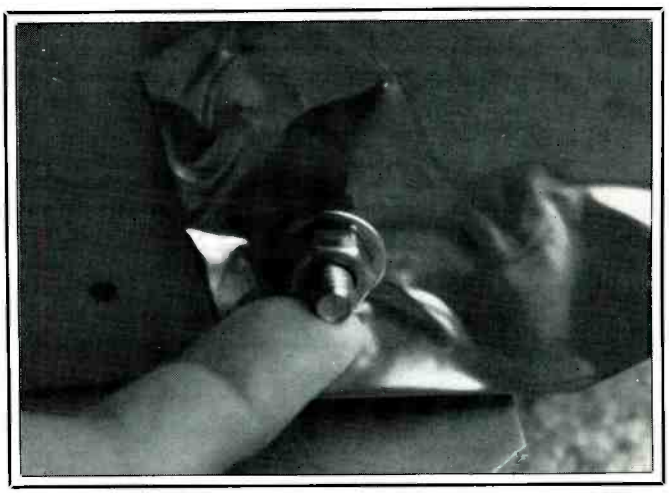
GROUND POST. It's imperative that this antenna coupler be well-grounded. A low-reactance ground is accomplished using ground foil or tinned copper braid. In vehicle installations, run the ground to the vehicle chassis. In field installations, run the ground down to the earth, a stream, or into a tree.

In aeronautical installations, run the ground post to the airframe of the airplane. For marine installations, the ground foil needs to go to the central sea water ground system.

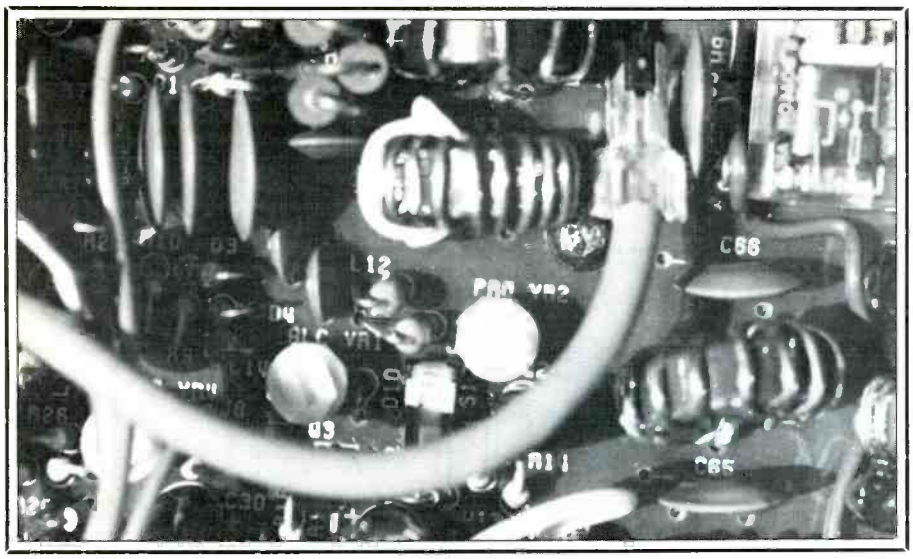
TUNE UP. Tune up takes place automat-



Longwire output.



Ground post with copper foil attached.



"PRO" VR2, located in center of photo on a Kenwood 440.

ically with no control line. 15 watts of output power energizes the relays into a quick flurry of tune up, and then the relays remain silent while you remain on that band. The relay positions are microprocessor memorized, so recalling that band leads to an almost instantaneous re-tune up.

Owners of the Kenwood TS-440 amateur radio transceiver will need to adjust output power protection circuitry potentiometer "VR-2" (PRO.) 10 degrees clockwise. This allows the Kenwood 440 to achieve 15 watts output for quick tune up into a non-resonant load during initial coupler operation. This control is located on the bottom side of the unit, in the back near the heat sink.

Long wire couplers are quite efficient. They are also expensive—about $900, but provide emergency communicators and mobile operators an effortless way to take 100 watts H.F. output and transfer it onto a random length wire with tremendous signal capabilities. PC

CB SCENE

27 MHz COMMUNICATIONS ACTIVITIES

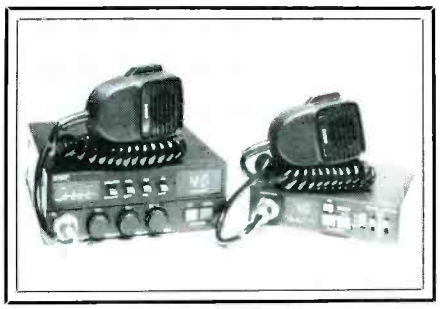
BY BILL SANDERS, SSB-295

Those of our readers who were on 27 MHz ten years ago will remember Pace Electronics and their equipment. You'll be pleased to know that this company has resumed producing CB equipment after a several year hiatus in the CB market.

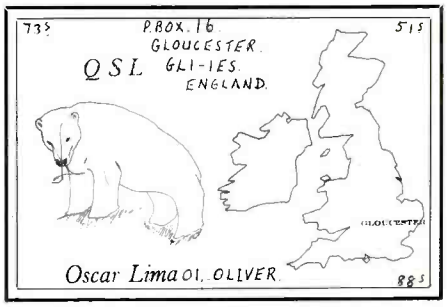
The Pace 8001 is a mini-compact 40-channel mobile rig with digital readout and advanced technology front panel controls. It's got an automatic noise limiter as well as a front-mounted detachable microphone.

The Pace 8002 is a larger, full-featured mobile unit. Both rigs offer built-in PA, push button up/down channel scanning selectors, and an ANL switch.

For more information on Pace CB equipment, contact Pace Electronics, 19840 Hamilton Ave., Torrance, CA 90502, or circle 101 on our Readers' Service.



Two CB rigs from Pace. At the left is the Model 8002. The other one is the Model 8001.



Overseas QSL of the month is from Gloucester, England.

From Our Readers

We heard from William Pittman, New Port Richey, FL about a CB'er from Plant City, FL who came to a tragic end. Willie Knighten, who was 46 years old and known on the air as *Lucky 13* and *Bumblebee*, accidentally electrocuted himself in his radio shack. Apparently he was making an internal connection in a linear amplifier when a short circuit in the unit's power supply killed him instantly. Why people make connections in equipment that is hooked to a power source has alway puzzled me.

Chris Rendenna, *Command Central*, of Rutherford, NJ wanted us to see the nifty QSL he received from station *Oscar Lima 01* of Gloucester, England. Was his first card from the U.K. Chris holds ham license KB2BBW.

In past issues we have told you something about *Station One*, operated by the Louisville Metro REACT in KY. This station, with its firetower location in the mountains overlooking Louisville, has a spectacular communications range. Thanks to R.C. Watts, who is a member of this REACT group, we have some photos of this unusual installation.

A complaint from Brian, of Flushing, NY mentions a squawk we have heard from operators in other geographic areas. Brian says that on Channel 32, for most of the daylight hours, there is a very annoying "tweeting" signal. Gets worse around mid-afternoon, sometimes being so strong that it knocks out SSB communications between local stations in his area. Does anybody know the source of or reason for the signals, which are in AM mode?

Thanks to Dick, KA1EFZ, Peabody, MA for the glowing words about our CB Scene column. Hope you'll become a regular contributor, Dick.

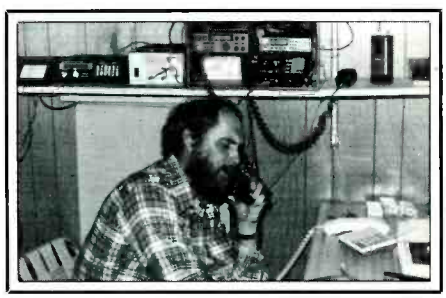
Let The Good Times Roll

This time of the year, as you roll along the highways, you're likely to chance upon roadside CB coffee breaks. I was quite surprised to learn, though, that not all CB'ers were familiar with this manifestation of the 27 MHz hobby. Thought this might be a good time to say a few words on the subject.

A coffee break is a gathering of CB'ers, often held at a diner or other convenient spot where food is served. It can be an impromptu affair, or can be a regular once-per-week or month event. It's not a formal meeting; no business is discussed. It may be no more than just a bunch of people hanging out for some small talk, or it might be for a specific purpose. Those with a specific purpose may be quite well organized, located near a major highway, and operated for one or more days by volunteers. Perhaps they're serving coffee and donuts to weary holiday weekend travelers, or maybe they're seeking funds for a charity or to help out a particular local person in need.

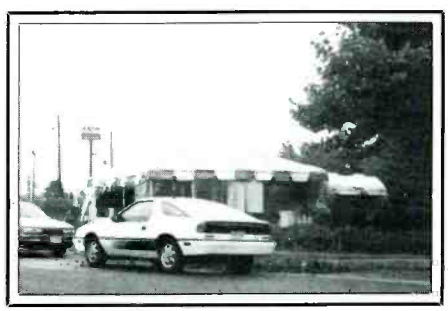
Here's the thing. Every coffee break welcomes all CB'ers. You don't have to belong to the local club, or even be from the local area. No matter who you are, or where you're from, you are always welcome at any coffee break. It's one of CB's unwritten rules of courtesy. Some roadside coffee breaks even go so far as to continually announce their presence, purpose, and exact locations over Channel 19, just so that everybody within earshot will stop by.

Naturally, if they're collecting for a cause, or simply serving coffee to keep drivers alert and let them stretch their legs for a few minutes, you're expected to feed the kitty. I don't mean an amount equaling the cost of a styrofoam cup of coffee, either, if they've got the collection can out on the table, the



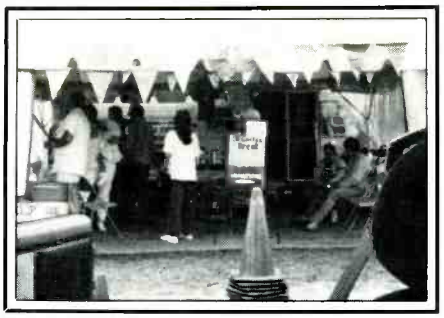
Dan Huber operating REACT's "Station One" in Louisville, KY.

Operating shack at "Station One" is at the base of the tower.



The MDF coffee break was in a small tent. A trailer at the rear housed the office and a CB station used to make announcements on Channel 19.

Holsclaw Hill fire tower makes an excellent antenna mount for "Station One."



I stopped at this roadside CB coffee break recently. They were collecting funds to help out the Muscular Dystrophy Foundation.

S-Meter	*Signal Input* (in microvolts)
S3	2.5
S4	3.5
S5	6.0
S6	12.5
S7	26.7
S8	72.
S9	180.
± 10 db	400.
± 20 db	1200.

The S-meter readings are on the left. The signal strength it took to get each reading is at the right.

hope is that you've got at least two to five bucks to contribute.

Six years ago, I was on the outskirts of an Arizona town when I chanced to see a diner surrounded by about twenty vehicles sporting CB whips. It was about 8:30 at night, I was in the mood for a cup of java and a slice of hot apple pie a la mode, so I pulled right in to the diner's lot.

Within a few minutes it became apparent that the 30 or so people all having a good time at several tables shoved together belonged to all of the antennas out front. I wandered over and introduced myself as a wayfaring CB'er and was given a friendly welcome. After two hours of laughs, stories, and discussions of CB equipment, I was on my way; I *thought* I was on my way.

When I got outside, I found that the starter in my pickup (which had been acting funny for a day or two) decided it wasn't going to do anything but sit and make a stupid whirring sound. When I went back into the diner to find out about getting a mechanic, I learned that the local mechanic and service station owner was one of my newly acquired coffee break friends. He looked at the starter and said it needed to be replaced, which he couldn't do until morning when another one could be obtained.

Good thing I had stopped to get to know these people. One couple at the coffee break invited me to stay in their spare room. The next morning they fed me a ranch breakfast that took up an extra notch on my belt, then they drove me over to the service station—becoming somewhat offended when I offered to pay them for their hospitality. By noon, the new starter had been obtained and installed, and all the mechanic would take for his trouble was his exact cost for the parts he replaced.

Six months later I drove through that town again, and timed my trip to coincide with the Monday night coffee break. That night the treat was mine. Since then, I've always made it a point to seek out any and all coffee breaks and advise everybody else to do the same. It's just that many newcomers have given me a blank stare upon hearing the term. Coffee breaks have been around since the early 1960's. Let's hope they'll always continue.

What's An S-Unit?

J.T. Valdes, of California asks if an S-8 reading on an S-meter means a signal that's twice as strong as one that gives an S-4 reading. This type of question is common and reflects a general confusion about S-meter readings.

Since so many pieces of CB equipment have S-meters, and people just love to be asked to provide such readings, it's good to have some idea what information is being provided. In J.T.'s case, the S-meter pin would scarcely move for a doubling in power. Depending upon the particular receiver, doubling the signal strength may appear as less than a single S-unit increase.

Most S-meters on CB rigs are intended to provide only an approximate or relative reference guide to incoming signals. Even the S-meter readings between sets of different brands, when they show an identical S-reading, aren't necessarily equal to one another. The reason is that a highly accurate lab quality meter circuit alone, with a standard calibration, may cost several times the price of a complete CB transceiver.

But here are some suggestions on judging your S-meter readings. Your ear, of course, detects whether an incoming signal is readable or not, but think about these points if the S-meter is used for checking equipment performance. When the meter pin varies in the lower range of the meter scale (below S-5), these changes represent small increases in signal strength.

When the needle is in the upper part of the scale, the same amount of needle travel represents a far larger power increase. In other words, the higher the reading, the more power is required to swing it a given distance.

This information in a practical application might be when attempting to check on the differences caused by changing the position of a roof antenna. Assume that the original position produces an S-4 reading when a known signal is received. The antenna is relocated and the same signal produces an S-5 reading. You now realize that an increase of one S-unit has provided a worthwhile gain in received signal strength. Now, repeat the test on a known signal of S-7 with the antenna in its original mounting position. When the antenna is moved to the new location, the pin may rise only a fraction of an S-unit, although the power increase is exactly the same as before.

For these reasons, signal checks of this type are best run with signals producing low S-meter readings, where any improvements will be more apparent and easier to view. Also, there's a tendency in some CB rigs to produce an increasing error on their S-meters as the signal hits S-9 level and above.

The accompanying chart provides the basic idea. It was compiled by taking a reasonably high-quality CB transceiver and feeding into it increasing signal levels from an extremely accurate lab signal generator. S-meter readings are shown in the left column, the signal level it took to produce them are shown in the right column. As you can see, it took a disproportionate number of microvolts to cause the meter to rise from one S-unit to the next. The chart begins at S-3 since the noise level in the receiver produced the readings below that figure.

Looking forward to hearing from our readers. Whey not send in a photo of your CB shack? What about your QSL card, or one sent to you from an overseas station? You can send good quality copies of foreign QSL's instead of the originals. PC

SCANNING VHF-UHF

MONITORING THE 30 TO 900 MHz "ACTION" BANDS

BY CHUCK GYSI, N2DUP

When it's hot it's hot and the scanning gets even hotter. The summertime usually brings about a lot more action on the airwaves. In fact, some frequencies are active only during the summer months. The rest of the year, the same frequencies may be deads-ville. So, now's the time to do the scanning—before everything's put in mothballs after Labor Day. And while you're at it, let us know at Scanner Scene what you're hearing.

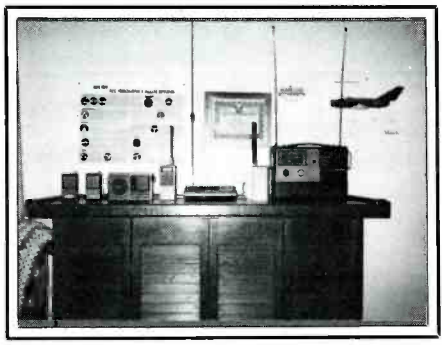
Leading off this month's reports is Michel de Lannoy of Curacao, Dutch Carribean. Michel said he purchased a Uniden Bearcat 70XLT scanner from an American retailer and received it two days before his island's carnival. Using a quarter-wavelength antenna he built, he was able to monitor police and other services in connection with the event. Transmissions are in the local language, Papiamentu (pronounced pah peeah mentool).

While Michel was scanning, he quickly learned some of the low-band activity he was hearing was coming from the United States down on his island off the coast of Venezuela. One station he identified was the Ocean County Sheriff's Department, which dispatches police departments in that New Jersey county, on 37.24. That frequency is Ocean County's F-2 and is used as an information channel for motor vehicle lookups. Another interesting frequency heard by Michel was 36.50, on which he heard Spanish communications pertaining to military detachments and their movements. Thanks for the interesting report. Now, how about some of those local frequencies? We do hear your area of the world here in the United States on occasion, like you hear ours!

Bryan Smith, KPA3LB of Schuylkill Haven, Pennsylvania, says that he is hearing skip signals in the 39-40 MHz band. He says that it seems to be coming from the nation's Southwest and that street names often are Spanish. He was wondering what he is listening to. Well, it's a favorite of scanner listeners all across the country—the Los Angeles County Sheriffs Department.

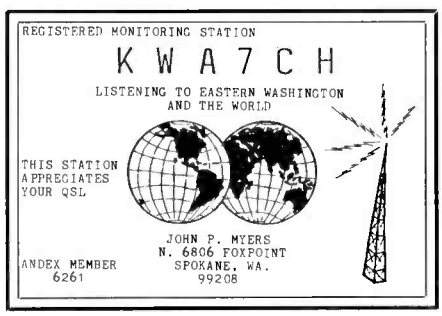
On many afternoons and early evenings, the LA Sheriff's comes in loud and clear in many areas of the country on their 39 MHz frequencies. Unfortunately, the thrill of hearing their transmissions may not be around too much longer, as the agency is planning to switch their communications to the 482-485 MHz band that recently was opened up for land mobile use in the Los Angeles area.

Most LA Sheriffs' communications on 39 MHz are a semi-duplex system in that the base station transmits on one frequency while the mobiles transmit on another frequency. When you hear those distinctive "beeps" between base station transmissions from LA dispatchers, that means the mobile units are transmitting and it lets other mobile units know that a mobile unit already is transmitting on the mobile channel. This prevents the other units from stepping on top of the unit already transmitting. In fact, during chases, you often will hear the sheriff's dispatcher relay the mobile unit's traffic reports over the base transmitter frequency so other mobile units can hear the pursuing patrol car's location.



Here's the listening post of George E. Speck, Registered Monitor Station KTX5FT, of Fort Worth, Texas. George's scanning gear includes a handheld crystal scanner, a Cobra SR900, a Bearcat 70XLT, as well as other radios to tune around with.

The LA Sherriffs come in so good in the Philadelphia area many afternoons, that several police departments that were using 39 MHz channels for dispatch have given up their low-band channels for UHF frequencies. The LA Sheriffs use the CTCSS tone of 162.2 Hertz, the same tone the departments in eastern Montgomery County, PA used. Those departments there that didn't move off 39 MHz have switched to other frequencies that aren't plagued by the constant "beep-beep" on LA's frequencies. No. I hear them on my pocket scanner or my scanner in the car with relative ease (and without trying). Those signals you may spin past while tuning may be skip!



The attractive station card of John Myers, Registered Monitor Station KWA7CH, of Spokane, WA. Why not send us yours?

Lance Hillbrecht of Nanaimo, British Columbia, checks in with some Canadian frequencies for southern Vancouver Island: 121.500, Vancouver Airport emergency; 123.650, Sprout Lake water bombers; 164.190, Sprout Lake water bombers; 155.265, University of British Columbia security; 154.860, Sheriff's Department, all British Columbia; 155.910, ferry operations, all B.C.; 458.6375, ferry traffic directions, all B.C.; 156.090, Department of Corrections prison security and operations, all B.C.; 160.035, Canadian Pacific Rail dispatch for Vancouver Island; and 164.455, British Columbia Hydro, Nanaimo, B.C. Thanks for the report, Lance.

Richard L. Johnson, K4GZC, of Roanoke, Virginia, says that he has been trying to reach Electra Co., which made Bearcat scanners at one time, for repairs and parts. Electra Co. sold out the Bearcat line several years ago to Uniden, which now handles all repairs and parts for Bearcat, as well as Regency, which line it bought out last year. Uniden's service center can be written to at: 9900 Westpoint Drive, Indianapolis, Indiana 46256, or call (317) 841-8618. This is a new address and telephone number for Uniden's customer service center.

Stephen E. Guffy, vice president of Good Will Hose Co. in Milton, Pennsylvania, says that the firefighters at "Station 15-2" want to know what frequencies are used by the Pennsylvania Emergency Management Agency as well as its operations center. Well, here's what we could find: Apparently PEMA has licensed repeaters around the state on 453.525. This agency is not heard using this system much, but if something big is going down, you'll probably hear it on that frequency. In a major emergency, you also might hear PEMA activity on 158.835, which is licensed for temporary mobile and base stations anywhere in Pennsylvania. As far as PEMA's emergency operations center, they probably can use any frequency for the immediate area around them, as well as amateur frequencies that would be used by hams affiliated with PEMA. If PEMA becomes involved in an emergency in your community, chances are they'll show up on your own frequency (either with their own radio or one loaned to them) or their own channel.

Ben Burton of Dedham, Iowa, says that he heard that there was a trick to erase the memory on the Uniden Bearcat 200XLT and was wondering what it was. We have heard about it and apparently it will work on most late model Uniden Bearcat scanners. On the Bearcat 200/205XLT, the procedure will zero out all frequencies except the first 25, which will be loaded with test frequencies. Some of the test frequencies will be out of band and reception on these frequencies normally will not be possible. If you have the need to wipe your memory (don't forget to write down a list if you have reprogram a 200-channel scanner!), follow this procedure: First, press and hold the 2, 9 and Manual keys simultaneously and turn on the power. Return the power switch to the off position. Again, press three keys, this time 2, 9 and SCAN simultaneously while turning on the power. This should wipe your memory and load the test frequencies, such as 66.45. This procedure also may work on some Cobra scanners. Let us know if it works for you, that is if you feel like reprogramming those 200 channels!

What are you hearing on your scanner? What are your favorite frequencies? What kind of equipment do you have in your monitoring station? How about a photograph of your station? Write to: Chuck Gysi, Scanner Scene, Popular Communications, 76 North Broadway, Hicksville, NY 11801-2909. PC

BETTER SIGNALS

ANTENNAS AND SIGNAL IMPROVING ACCESSORIES

BY ED NOLL W3FQJ

Simple Antennas For The Daytime DX Bands

One of the favorable attributes of shortwave broadcast (SWB) reception is that good DX listening can be obtained with a really short antenna. The high frequency bands are at their best during the day and a short antenna can be resonated and peaked on these short wavelength frequencies. Such antennas can be mounted indoors or outdoors and require little space. The bands of concern are 16, 19, 21, and 25 meters. The longer wavelength group of these bands, 19, 21 and 25, also carry strong nighttime signals much of the year, especially at dawn and dusk and well into the hours before midnight. Results are also good on 31 meters especially with antenna cut for the 25 meter band.

The short antenna also offers reasonable results on some of the lower wavelength bands below 25 M because the signals on these bands are usually at high level beginning at dusk and continuing well past midnight. Before dawn signals are also good on these bands, too. Consequently you need not throw out the shortwave listening idea as a hobby when you must mount your anenna in a small space.

Lets take a look at some of these short antennas beginning withe the quarter wavelength, single wire. One cut for the 25M band, Table 1, for use outdoors or indoors is only 20 foot long. This distance would be measured from the antenna terminal of the receiver, out the window and, onto a nearby tree, washpole or garage roof. It doesn't take much of a backyard for this one. It is an easy starter antenna. Use insulated #14 or even #16 hook-up wire and, above all, *keep clear of electrical wires*.

If you wish something a bit better and your receiver is on the ground floor and near the window, try a quarter wavelength vertical antenna. One such antenna could be a 19M vertical mounted on an appropriate length of plastic piping, Fig. 2. Attach three radials that are several inches longer than the vertical and connect a short length of coaxial cable from the antenna and ground terminals to your set. I've listened the world-over on such a simple antenna and pulled in lot of rare DX. It was used consistently as a comparison antenna for testing various other types.

Lets go indoors with two quarter-wavelength pieces of wire, one for 25M and the other for 19M, Fig. 3. Position them as best you can using some of the tips given in previous columns. We had space to lay out

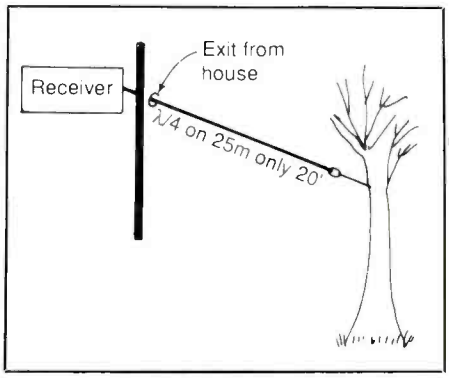


Fig. 1 Simple high-frequency SWB bands antenna for daytime DX listening.

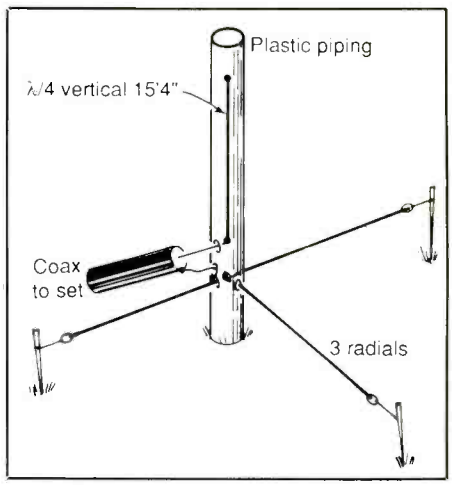


Fig. 2 λ/4 vertical cut for 19M.

ours in a V position with ends folded under a bed and a sofa. The opposite ends of the wires were connected to banana plugs and connected to the input terminals of a two-position coaxial switch. In general, the longer wire favored 21, 25 and 31 meters, while the 19 meter wire topped on 19, 16 and 13 meters. Of course, there were some exceptions because of the angles of signal arrival and the influence of metallic surfaces.

The Small Loop

Loops do well and, even a small one is surprising. You may wish to operate such an antenna indoors that does well on the DX bands and provides improvement on the lower wavelength shortwave bands as well as the medium wave broadcat band. Try a 60 foot horizontal loop. It only requires an additional 25 foot length of wire and it may be possible to join the ends of the previous V antenna to the additional 25-foot length of wire, Fig. 4. Such a length is approximately a full wavelength on 19 meters. It improves the lower wavelength bands significantly, but most surprising of all is the jump in the strength of the medium wave broadcast signals. Although it does improve these lower wavelengths, a better signal is often picked up by one of the two single wires in some situations when operating on the higher-frequency DX bands. Thus, I made it convenient to go back to this configuration by making it easy to break connection with the two connection points where the 30-foot length was added on to the two V ends. Notice this arrangement in Fig. 4.

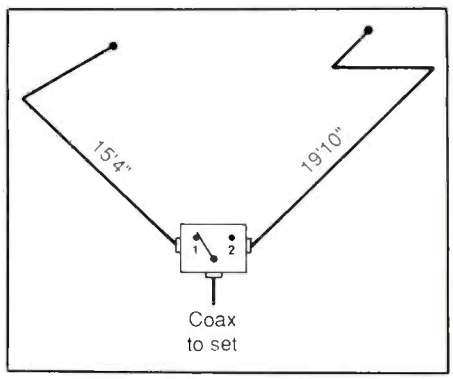


Fig. 3 Two switchable single-wire antennas for indoor use.

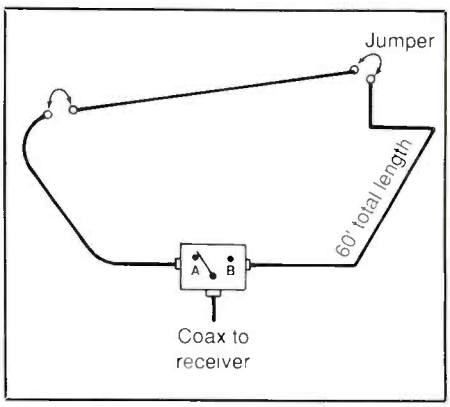


Fig. 4 Short indoor loop.

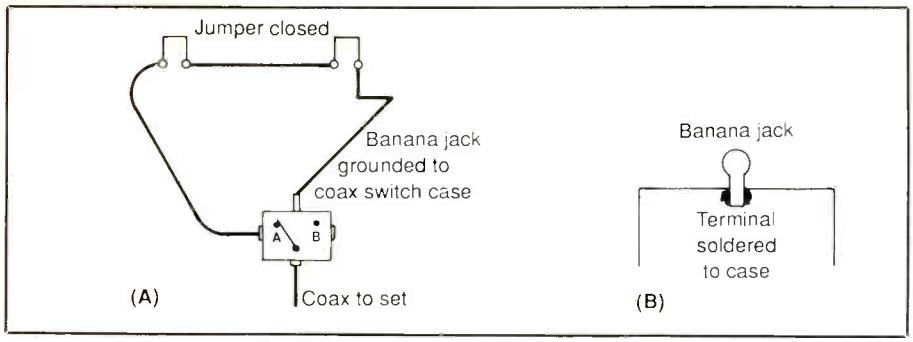


Fig. 5 Indoor loop switching arrangement.

To operate the antenna as a true loop it is necessary to modify the input arrangment as shown in Fig. 5. A banana jack (RS274-725) is used as the ground for the loop. Its solder terminal is soldered somewhere to the frame of the coaxial switch where it is convenient to insert either antenna banana plug. Thus either end of the loop can serve as ground. Often in doing so you will find one setting better in terms of signal or signal-to-noise ratio. Many are the idiosyncrasies of shortwave listening with an indoor antenna. The arrangement provides you with four separate operating settings of the coaxial switch to choose the one of them that will give you the best signal on a given band and, sometimes, on a given signal.

You can do the same with short outdoor antennas as well, Fig. 6, using twin lead line to bring signals in from a regular dipole, sloper, loop or even with individual wires of differing lengths going out in differing directions. Bring the two lines to a junction with the twin lead at the entering window. A pseudo windom antenna can be operated with twin lead. Dimensions of the windom are given for the 25 meter band. The overall length of the windom is a half wavelength and is twice the length of the quarter-wave types described previously.

I hope by now some good letters will be coming in with some helpful ideas about operating your all-band receiver with indoor antennas. PC

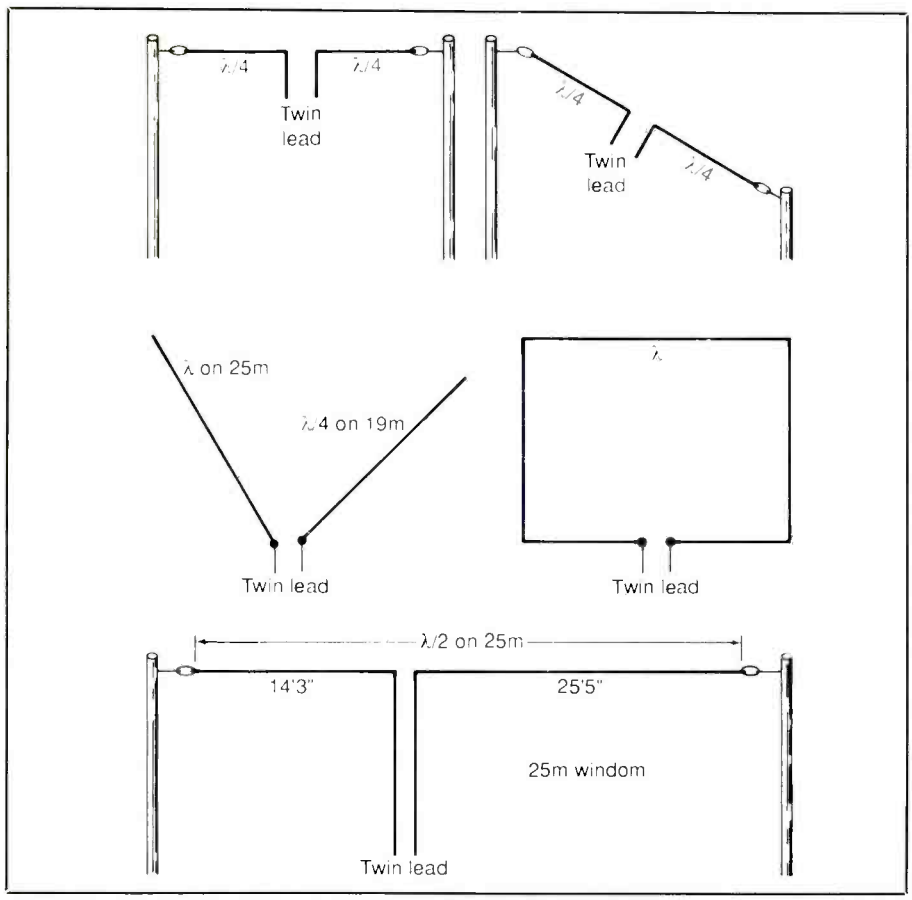
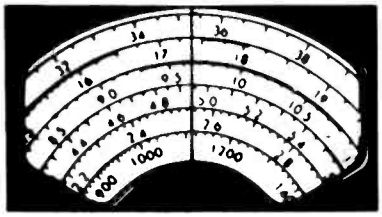


Fig. 6 DX band small antennas for outdoors.



COMMUNICATIONS CONFIDENTIAL

BY DON SCHIMMEL

YOUR GUIDE TO SHORTWAVE "UTILITY" STATIONS

The query regarding the installation photographed by Jeff Hollis, WV resulted in a terrific response from readers. Those answering were commercial airline or private pilots, some ex-FAA ATC's/Technicians/Engineers, and others interested in aero communications. All letters were appreciated.

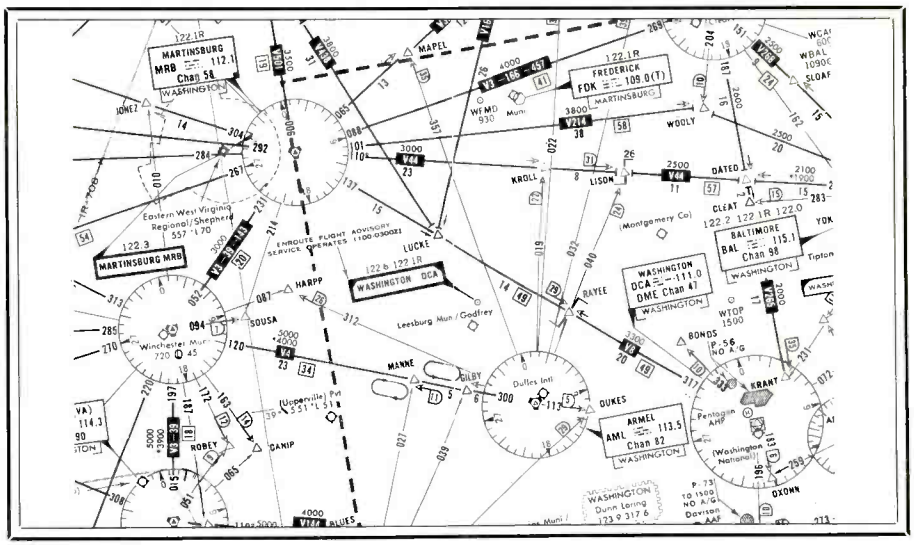
It is not possible to present the total volume of received material, but here is a summary of the basic details for those readers who wondered what type of signals were being transmitted from the site.

The station is an FAA radio aid to air-navigation and this particular one is the Martinsburg, WV VORTAC. The VOR stands for VHF omnidirectional range with TAC being the abbreviation of TACAN which is the contraction of Tactical Air Navigation.

The VOR portion gives bearing information on 112.1 MHz plus station identity in Morse code (1020 Hz tone), in this case "MRB."

The TACAN portion has range information transmitted on channel 58 (1019 MHz) giving bearing and distance information transmitted on channel 58 (1019 MHz) giving bearing and distance information to military aircraft and distance only information to civil aircraft. Two related signals are radiated on the same frequency. One set is for course determination and the second set of signals represents the Distance Measuring Equipment (DME) function.

This unattended site also acts as a voice relay system for the Martinsburg Flight Service Station (FSS) utilizing antennas (mounted on the towers at the side of the building) with operating frequencies of 122.2 and 122.3 MHz. Another antenna receives on 122.1 MHz and the FSS reply would be in voice over the navigation pulses on 112.1 MHz. Weather information is also transmitted on this latter frequency occasionally as is other pilot information.



Here is the Martinsburg VORTAC in relation to other such installations. (Fig. 2 has a partial legend for map)

A huge thanks to all who sent in remarks concerning the VORTAC station. In particular I want to thank the following for the detailed data they supplied: Kevin Breen, LA; Sheldon Daitch, NC; Gary Wilson, NJ; Milton Nodacker, ID; Walter Treftz, FL; Michael Scofield, CA; and Ralph Craig, OH. If I overlooked anyone please forgive me. I only listed those received first.

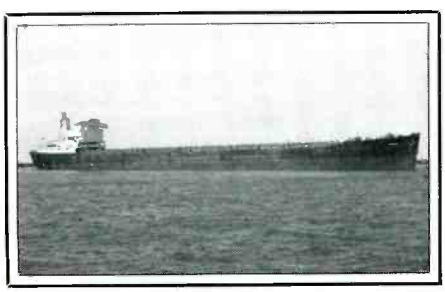
Among those responding on the VORTAC matter were numerous first time contributors who also furnished some loggings while some others indicated loggings would be forthcoming in the near future.

Here is a rundown on those newcomers who described their monitoring equipment:

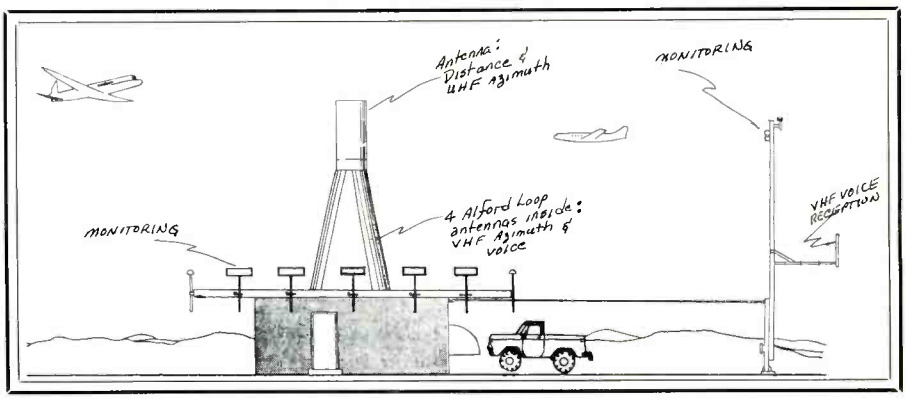
Brian Pruner, CA - SONY ICF PRO-80 w/stock whip antenna.

Ralph Craig, OH - ICOM R-71A, YAESU FR-101R, Halicrafters S-40B, Hallicrafters S-38 plus several VHF sets. Has been an active ham for 40 years.

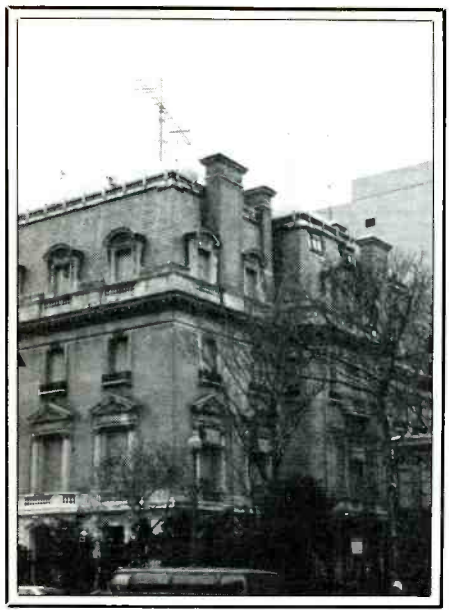
David Wolfe, MA - ICOM R71, MFJ1024 antenna.

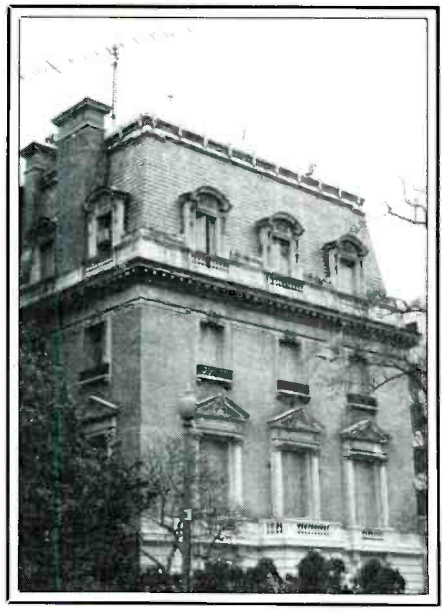


Walter Treftz, Radio Officer assigned to the M/V Inger (KCSA) took this picture of his ship in Hilo, Hawaii where they were waiting to load 25,000 tons of raw sugar for New Orleans.

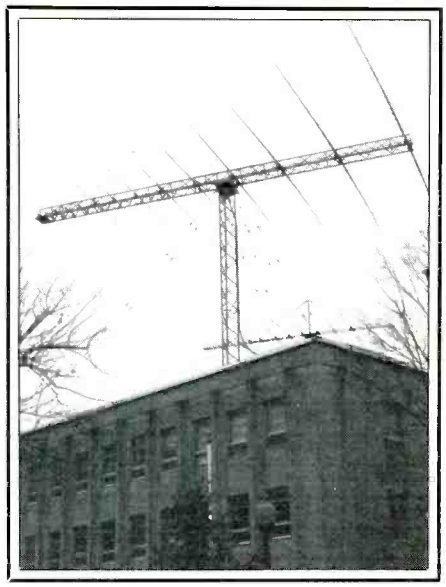


Typical Integral VORTAC Facility (Drawing courtesy of Cam LeBlanc, MA)





On a recent trip to Washington, DC, Mark Foster, MA took some photos of antenna installations on Embassy roofs. Here are two views of the Soviet Embassy. There's a small surveillance camera at the edge of the roof.



And here is a view of the Yugoslavian Embassy roof. Mark said that the Yugoslavian log-periodic was the largest beam he saw on any embassy in the Washington area.

B. Parkes, NC - Currently in Panama using Radio Shack DX400 w/lead from antenna terminal to window frame.

Jim McDonald, MO - Kenwood R-2000 w/home-made loop directed N-S.

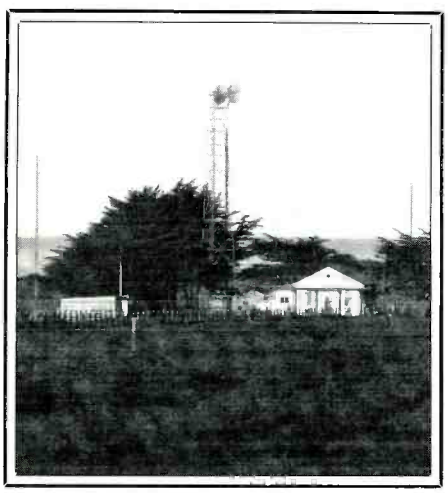
Dave Weir, IL - Kenwood TS140S for HF, TS780 for VHF/UHF, two Cushcraft antennas plus home brew 16 element beam. Serves as AF MARS Station AFA3RS.

Scott Golladay, WA - ICOM R-71A, 30′ longwire. DX'ing since 1963.

Bruce Bouley, CT - Radio Shack DX-440. New to SWL scene.

Martin Giglio, PA - SONY ICF-2010 w/ AN-1 antenna.

Nick G., FL - Panasonic RF-4800 for HF,



This photo shows the receiving site of AT&T's High Seas Radiotelephone Station KMI, Point Reyes, CA. The transitting site is at Dixon, CA. (Courtesy Tom Kneitel, NY)

Bearcat 220 for VHF/UHF, converters for 200-400 and 800-900 MHz. Antenna is a commercial ground plane cut for 33 MHz at 50′. During dlay it is used for Business Band 2-way radios. In evening it usually hooked up to one of the monitoring radios.

Paul Hirose, CA - SONY ICF-2010 using built-in whip antenna.

Edwin Berrios, PR - Radio Shack DX-400. Wants to upgrade to Kenwood or ICOM receiver.

Gary Hamlin, NY - SONY ICF-2010 & GE World Monitor for receivers. SWL'ing for over 5 years, finds Utilities fascinating.

In addition we heard from Randall Reese, Thailand who stated he made his intercepts about 500 kilometers NE of Bangkok, Thailand with a YAESU FRG-8800 and his antenna was a 75′ inverted "L". He reported that the Oil & Gas Commission of India uses the following frequencies for their offshore work out of Bombay, India: 4142, 4120, 4151, 4160, and 6404.9 kHz, all USB mode. Those in main use are 4141 and 4120 kHz.

Paul Zecchino, RI corrected the location given for the 11288 kHz logging in the April column. The Georgetown mentioned is located in Great Exuma, about two hundred miles southeast of Nassau. US Customs has from time to time had an aerostat tethered there, and uses the airstrip for ops support. Another cryptic reference is 'Provo'. That is Prodivenciales field, located near Blue Hills in the Caicos Islands, also another support area.

From Andy Gordon, CT we learn that there is an Arabic language AM station (possibly pirate) using 14470 kHz causing severe QRM to USN MARS activity and rendering the frequency unuseable. Andy also advised that 8719 kHz is used by various units working Commander, Combat Support Squadron Eight located at the Naval Amphibious Base at Little Creek, Norfolk, VA. Net check-in appears to be daily at 1100 UTC. Andy says his latest count shows 356 different USN ships logged and 235 QSL responses received.

Simon Mason, England sends word that a Czech spy in England was caught in the act of receiving "a secret coded message." Simon forwarded an article from the Daily Mail newspaper which described Special Branch officers bursting into the home of art dealer Erwin Van Haarlem and catching him while he was copying a message in 5-figure groups which was being transmitted in Morse code from Prague. In addition to the partially transcribed message, tradecraft items were found such as six one-time pads (three of them concealed in a bar of soap), chemicals & equipment for sending invisible ink messages plus magazines addressed to Czechoslovakia containing clandestine messages. The British Government had information revealing Van Haarlem had been receiving secret messages from Prague since 1975 with a total of some 200 messages sent in the 13 years.

Also found was a list of places (dead letter drops) where messages could be left and contact made with other agents.

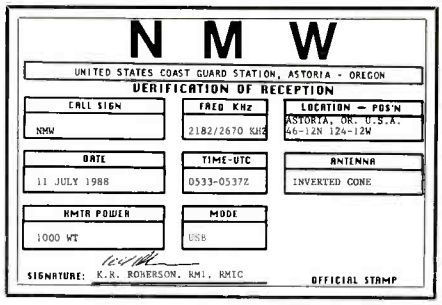
We look forward to Simon providing additional news as further revelations come to light during the trial of this Czech spy.

Here are four QSL addresses furnished by Steve McDonald, BC, Canada:

NDB OR, Ohura, New Zealand - Airways Corporation of New Zealand Limited, Private Bag, New Plymouth, NZ; Cruise Ship SS Norway (C6CM7), c/o Norwegian-Ca-

ribbean Lines, One Biscayne Tower, Miami, FL 33131; Tanker Mt. Fujikaze (3EGP3) - Setsuyo Shipping Co. Ltd., 448-3, Ohama-Tei, Imabari, Ehime, Japan; Container Ship MS Tower Bridge (3ELD4) - Kobe Kisen Kaisha Ltd., 2-1-1, Uchisaiwai-cho, Chiyoda-ku, Tokyo 100, Japan.

And now let's get to our giant list of ute intercepts, thanks to the logging furnished by many readers:


N M W

UNITED STATES COAST GUARD STATION, ASTORIA - OREGON

VERIFICATION OF RECEPTION

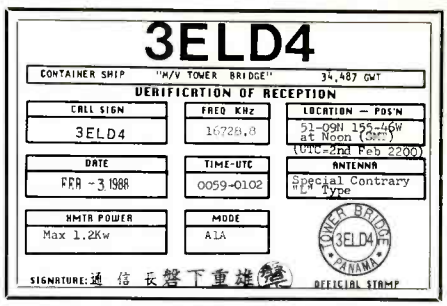
CALL SIGN	FREQ KHz	LOCATION — POS'N
NMW	2182/2670 KHz	ASTORIA, OR. U.S.A. 46-12N 124-12W

DATE	TIME-UTC	ANTENNA
11 JULY 1988	0533-0537Z	INVERTED CONE

XMTR POWER	MODE
1000 WT	USB

SIGNATURE: K.R. ROBERSON. RM1. RMIC

OFFICIAL STAMP


3ELD4

CONTAINER SHIP "M/V TOWER BRIDGE" 34,487 GWT

VERIFICATION OF RECEPTION

CALL SIGN	FREQ KHz	LOCATION — POS'N
3ELD4	16728.8	51-09N 155-46W at Noon (GMT) (UTC-2nd Feb 2200)

DATE	TIME-UTC	ANTENNA
FEB - 3 1988	0059-0102	Special Contrary Type

XMTR POWER	MODE
Max 1.2Kw	A1A

TOWER BRIDGE 3ELD4 PANAMA

SIGNATURE: 通 信 長 磐下重雄

OFFICIAL STAMP

Steve McDonald, Canada shows us two more of his PFCs.

"Ute" Intercepts
All Times Are UTC

153: Possible GWEN sta at 0258, un-ID loc (Ed.).

159.3: Poss GWEN sta at Gettysburg, PA at 0042 (Ed.).

168: Pulses in LSB at 1450 w/hiss or roaring sound. At nite, other stas here, too. Prob GWEN (Hirose, CA).

170.6: Prob GWEN sta at Lappans, MD at 0051 (Ed.).

232: Beacon GP, Gaspe, PQ at 0434 (O'Connor, NH).

239: Beacon FE, Forestville, PQ at 0443 (O'Connor, NH).

248: Beacon UL, Montreal, PQ at 0451 (Osier, NY).

300: Beacon 3B, Brockville, ONT at 0456 (Osier).

356: Beacon PW, W. Palm Bch., FL at 0426 (O'Connor, NH).

365: Beacon CKK, Miami, FL at 0453 (O'Connor, NH).

371: Beacon TS, Memphis, TN at 0442 (O'Connor).

480: 3FAQ2, tanker **Fujikaze No.** 3 in CW at 0546 w/KFS (McDonald, BC).

500: 3EG5, bulk carrier **Star Mallard** (exHoegh Mallard) w/KFS in CW at 0540 (McDonald, BC).

2409: Alpha Charlie wkg Hotel in USB at 0516 (Sabo, CA).

2410: Foxtrot, Foxtrot Tango & others in USB net w/tactical comms. Sounded like radar tracking activity. Hrd at 0245 (Fernandez, MA).

2707: YL/GG in AM-mode sending 3/2F grps, w/Ende...Achtung... then more (same?) text for 2 mins, w/whole thing rptng over & over. AM mode at 0608 (Fernandez, MA).

2716: NLKC, **USS Crommelin (FFG-37)** in USB at 0218 wkg Long Beach Control relaying tfc from another ship (Symington, OH); NCAS, **USS Clifton Sprague (FFG-16)** wkg NavSta Philadelphia at 1120; NGXQ, **USS Frank Cable (AS-40)** clg Canaveral Control at 1100, the ship was using tactical ID of 9IU; USN Research Vessel **Deer Island (YAG-62)** wkg Autec Ops at 1105, also wkg Tango & Snapper Base, Ops advised ship that 2 units moving into weapons range; NIDC, **USS Valdez (FFG-1096)** wkg Newport Port Cntrl Secondary at 1000, ship told Newport unable to make 0830 ETA as were 100 miles out & encountering very rough seas; Fareclose 12 (a sub in the Autec ops range) clg Autec Ops at 0940; NTSG, **USS Thomas S. Gates (CG-51)** wkg Canaveral Cntrl at 0950, ship used ID of 5CK, shoresta was ID'ing as J2H; NJZK, **USS Josephus Daniels (CG-27)** wkg NAS Bermuda Tug Cntrl at 1045, ship asked about overhead time for helo departing Bermuda at 0745 local, helo maintaining watch on 320.6 MHz air control freq; NRIZ, **USS Baton Rouge (SSN-689)** ID'ing as 2DN clg 4US, Port Canaveral Cntrl at 1110; "4PF," **USS Tennessee (SSBN-734)** clg H1V, Canaveral Cntrl Dockmaster at 1000, 2 wks later the sub hrd at 1120 ID'ing as 5EU; NHYC, **USS Monongahela (AO--178)** clg Roosevelt Roads Tug Cntrl at 1035 (Andy Gordon, CT).

2873: YQI, un-ID sta w/CW marker at 0529 (Tom Kneitel, NY).

3088: XAL3, un-ID sta w/CW marker at 0229 (Kneitel, NY).

3130: 4YH5, AA, 4YK, & HF in comms using code words & phonetic spelling. Discussed eqpt & reception of data. Was USB at 0408 (Rome, LA).

3151: 3SN wkg Halifax Military in USB at 0726 w/coded data then into RTTY (Fernandez, MA).

3372: 2 OM/EE in USB at 0315 w/XXX lang re fishing ops. One sounded intox (Fernandez, MA).

3378: Auto CW at 0306 w/3 char alphanumeric grps, sent 18 grps then repeated (Ed.).

3810: HD210A, Ecuadoran time sig sta at 1050 (Watts, KY).

3883: YL/EE in AM-mode at 2100 to 2105 repeating 897 (X3), 156 (X2), 45 (X2) then into 5F grps, ended w/0000 (Mason, England).

4003.5: NNN0TUD & others in USN MARS net, USB at 0414 (Sabo, CA).

4066.1: ELFT8, cruise ship **M/V Celebration** in USB at 0219 wkg ELFK6, cruise ship **Jubilee** (O'Connor, NH). NHKG, **USS Ranger (CV-61)** wkg San Diego CSS-1 at 0230, the shoresta holding tfc for vessel's Air Commander from COMNAVAIRPAC, NAS North Island; NWRF, the **Monob One (YAG-61)** clg WOM at 0140 (Gordon, CT). Monob stands for Mobile Noise Barge. Orig desig as YW-67, a water barge converted in '69 for acoustic research purposes at Port Canaveral (Ed.).

4087.8: WJG, Memphis, TN in USB at 1359 wkg a vessel (Watts, KY).

4120: Oil & Natural Gas Commission of India clg offshore oil rigs for reports such as fuel, water, depth & 24-hr ops. USB at 0130 (Reese, Thailand).

4125: NOJ, USCG Kodiak Cammsta, AK & VAE, Tofino CG Radio wkg Navy a/c RC-400 in USB at 0523. A/c on scene of unspec emerg involving vessel **Port Star.** By 0606 the emerg had passed. A/c was in contact w/vessel only via VHF-FM handheld marine transceiver (Sabo, CA).

4134.3: NRPN, **USCGC Ironwood,** a seagoing buoy tender) to NOJ w/tfc. QSX 4428.7. Was USB at 0554 (Sabo, CA).

4141: Commission 3 (Oil & Nat. Gas Cmsn. of India) sending ops orders to offshore rig **Uxmal** in USB at 0500 (Reese, Thailand).

4143.6: Vessel **Lady Celeste**(?) to Native Echo w/advisory re securing ops due to bad wx, USB at 0406 (Sabo, CA).

4195: VCRJ, tanker **Irving Eskimo** wkg VCS w/wx obs (McDonald, BC).

4357: WAH, St. Thomas, VI in USB at 0208 w/tfc list (Symington, OH).

4373: P7 wkg Giant Killer (USN, Virginia Capes) at 0150 in USB. Giant Killer passing ID's of 5 "alligator players" for the "playground" Papo 7 was setting up (Willmer, MI).

4416.3: Parchesee to Pedigree, USB at 2305. Asked re Strength's Autovon phone #. Few min later hrd Strength & Pedigree wkg on 13211 kHz (SAC's BW channel) (Sabo, CA).

4424: YL in Serbo-Croat in AM at 1950 (Charret, FRG).

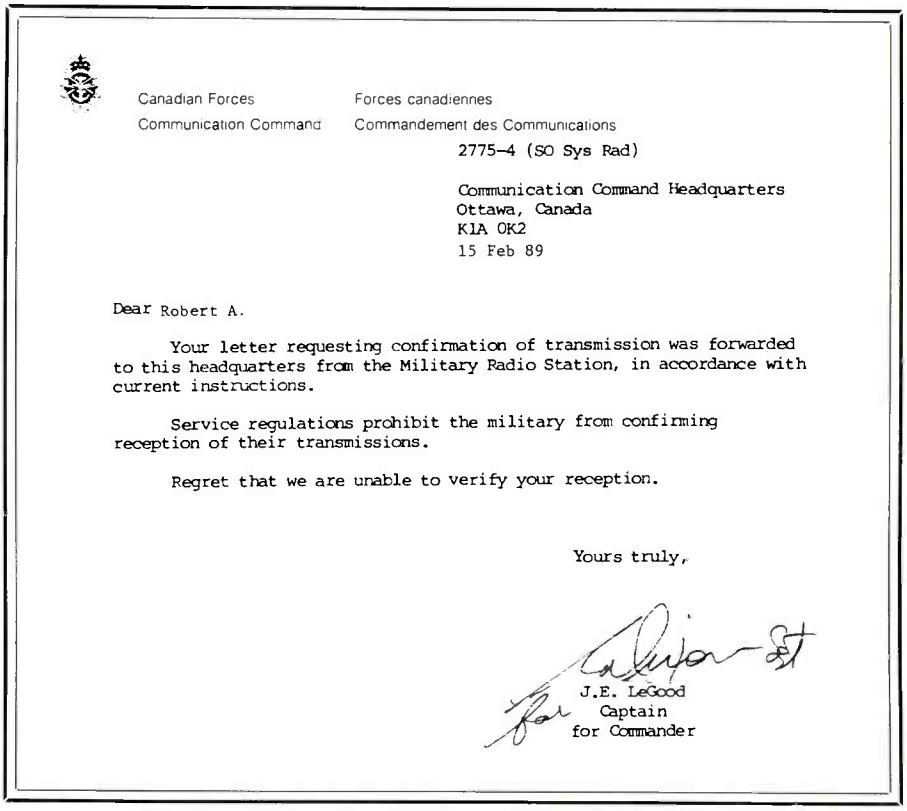
4425.6: Cruise ship **Holiday** w/hi seas telephone calls via Miami, USB at 0130. Ship near Jamaico (Giglio, PA).

4450: AFF5NS, AA5GL (in WA) & others in USAF MARS net, USB at 0345 (Sabo, CA).

4484: Air Rescue clg Alpine 22, USB at 0851 (N.G., FL).

4504.5: 2 OM/EE talking re directional bearings near Burlington or near Mt. Pleasant (near IA/MO line). Regular CAP training exercises. USB from 0130-0630 (Fernandez, MA).

4627: CAP's US-100 & US-1752 wanting to go RTTY but couldn't break thry #'s xmsn on **4630** kHz. Shifted to 7635 kHz but sigs too weak. Went back to primary 4627 kHz & shut down ops. Hrd at 0324 (Willmer, MI).


Canadian Forces
Communication Command

Forces canadiennes
Commandement des Communications

2775-4 (SO Sys Rad)

Communication Command Headquarters
Ottawa, Canada
K1A 0K2
15 Feb 89

Dear Robert A.

Your letter requesting confirmation of transmission was forwarded to this headquarters from the Military Radio Station, in accordance with current instructions.

Service regulations prohibit the military from confirming reception of their transmissions.

Regret that we are unable to verify your reception.

Yours truly,

J.E. LeGood
Captain
for Commander

Robert A., CO received this letter in response to his request for a QSL of a Canadian Forces transmission.

Abbreviations Used For Intercepts

AM	**Amplitude Modulation mode**
BC	**Broadcast**
CW	**Morse Code mode**
EE	**English**
GG	**German**
ID	**Identifier/Iedication**
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)**

4630: YL/EE in USB w/callup of 584 rptd till 0319. Grp count 113 (X2) then into 4F (X2) tfc at 0300 (Willmer, MI).

4637.8: KSD699820 (fishing vessels?) in USB at 0405 w/checks from units 14 thru 17 (no joy) & 19 (still loading). Off at 0410 (J.M.S., MO). There's a KSD699 on 4637.5 kHz that belongs to Coastal Towing Inc., Houston, TX (Ed.).

4642: YL/FF in AM-mode at 2100 (Charret, FRG).

4728: YL/SS in AM-mode at 0407 w/5F grps while YL/SS in background talking to unheard party (Fernandez, MA).

4741: VEL clg 4T00 in LSB at 0246 for radio check. Tried call a few times then off. No idea what this was (Bouley, CT).

4778//3378: Auto CW at 0314 (Ed.).

4927.2: C18M telling C18 that he'll be out of band in 20 miles. USB at 0425 (J.M.S., MO).

4883.5: YL/AA(?) in AM-mode at 0500 w/4L grps. Couldn't ID the lang. Some words were segum, siri (McDonald, MO).

5046.1: YL/EE in USB had 3/2F grps. Repeated at 232402337 (J.M.S., MO).

5189.5: Un-ID sta hand sending 5F grps in CW (sloppy fist). Other end on this freq too but weaker than above sta (Ed.).

5286.4: Auto CW (un-ID sta) at 0028 w/5 char alphanumeric grps, all 26L & 10F used. Dropped out 0043 (Ed.).

5400: OM/RR repeating 713 713 713 1 from 2200 to 2205, then 537 123 & into 5F grps. AM mode (Mason, England).

5435: YL/EE in SSB at 2000. A Mossaf freq (Charret, FRG).

5484: Un-ID sta at 0021 in auto CW, 5L grps w/pauses at end of 10 grps then contin w/another 10 grps (Ed.).

5598: British Airways Speedbird 258 to Santa Maria Aeradio w/pos rpt, USB at 0650 (Sabo, CA).

5616: Fairfax 232 to Santa Maria w/pos rpt at 0911; Navy LE-01 at 0939 to NY w/pos rpt. All USB (Symington, OH).

5680: Air Rescue clg Alpine 22 & 23, USB (N.G., FL). Time not given-- Ed.

5696: Z512 to USCG Miami CommSta w/patch to Miami Ops re not finding boat reported capsized, but will keep looking; Cape Cod Helo Avionics & CommSta Boston w/radio checks in USB foll by Cape Cod Air Rescue in contact w/G2A w/report of a/c down in ocean 2 miles off NH coast, foll by Rescue 1472 & 1475 + G2A not finding anything after a 1 hr search; A/c P214 on patch w/drug ops control re 200' freighter starting to be towed by a 100' vessel-- larger vessel was under surveillance for suspicious activities. CG surface vessel underway to check it out at 2320; A/c NOAA 48 wkg Cape Cod Air in USB at 1425 to report oil spill 150 mi SE Boston. NOAA 48 also noted using ID of Gull 48 (Fernandez, MA).

5700: Bass 59 wkg Lajes in USB at 0407 w/short count & DF check (Symington, OH).

5785: 4N to 5D w/tfc then called 1H, LSB at 0357 (Sabo, CA).

5800: WAR46 & other stas in comms in USB (Atlantic Undersea Test/Evaluation) while USAF OTH radar was on/off (5789-5809 kHz) about every 30 sec at about 0630 (Fernandez, MA).

6212.4: WBK, St. Louis, MO in USB at 0100 w/patch to **M/V Yazoo City** (Watts, KY).

6308: ELAK7, bulk carrier **Venture Star** wkg WLO in CW at 0110. Carring lumber enroute Wilmington (McDonald, BC).

6577.2: EAL 940 in USB at 0131 clg NY Aeradio; AAL 1165 clg NY in USB at 0148 (J.M.S., MO).

6603: NY Radio at 0615 w/aviation wx for areas between Miami & Montreal, USB, off at 0620 (Berrios, PR).

6604: Un-ID a/c (OM w/British accent) enroute Nassau/Miami asking for wx info (McDonald, NC).

6696: Several a/c in USB at 0225 wkg St. John's Military & Halifax Military w/patches (Bouley, CT).

6705: A/c 316 to Edmonton S&R at 0231 advising that all airfields were checked but missing a/c not located. Initiating ELT search, wanted to confirm no joy w/SARSAT. Edmanton acknowledged (Willmer, MI).

6728: TacComm 01 w/patch thru Andrews to CAM CP w/tfc re mechanical writeups. A/c enroute Andrews AFB. LSB at 0733 (Sabo, CA).

6730: Tech Control, 27000 & 974 in LSB at 1751 troubleshooting data link problem. At 1800, 27000 began ID'ing as Air Force 1 & ran patches to Crown (WHCA) via Andy (Andrews AFB) (Hirose, CA).

6731: Andrews w/USB patches at 0053 between US Secty of State to Australian Ambassador re forthcoming meeting in Vienna. Was sent in the clear (Wolfe, MA).

6736: CW letter X repeating 1 per second at 0537 then into text (Fernandez, MA).

6746: Pedigree wkg Fine Lady at 0223 in USB. Called the channel Sierra Alpha; Halifax Military w/immediate do-not-answer tfc to J54T from X3Q at 0402 (//5684), USB (Sabo, CA).

6750: Bass 59 in USB at 0352 wkg Lajes checking HF DF, switched to 5700 kHz & noted there at 0407 (Symington, OH).

6756: Andrews AFB in USB at 2346 to SAM 26000 re ramp closure for arrival of Marine 2; Air Force 1 to Crown req for AF Ops Center re final approach & touchdown at 2324 (Willmer, MI).

6761: Tuned in during Mayday call from Kiska 83 reporting at 0632 to ground sta (via patch) that outer windshield destroyed & inner one badly damaged, but cabin pressure holding. A/c near un-ID AFB for emerg landing there. Mailman then annod end of channel being secured for Mayday tfc (Fernandez, MA); Guppy 23, Eggwhite, Riuengate, Pig Iron w/callups but neg contact. Freq was referred to as "391." USB at 0210 (Rome, LA).

6775: AFA6DF, AFA6LM & other USAF MARS stas in USB net at 0135 (Sabo, CA).

6820: OM/RR repeating 159 (X3) 1 fram 2000 to 2005, then 38, 92 & into 5F grps, AM-mode (Mason, England).

6824: OM in un-ID lang w/5F grps, USB at 0516. Numbers included noah, zero, patro, uno, chinch, drei, shate, sent X3. At 0519 sent Terminat & closed. Romanian? (Kneitel, NY).

6826: Frantic violin & Terminat in AM-mode at 2100. Romanian sta (Charret, FRG).

6840: YL/EE in AM-mode at 2300 w/088, long count (Charret, FRG).

7413: YL/un-ID Slavic lang, USB at 0448 repeating 967. Same sta at 0404 in USB on 10178 (Hamlin, NY).

7606//4670: Unusual Mossad activity over 2 days. At 2000 YL/EE repeating VLB 625 Zulu 11 8825. Next day at 1730 rptng VLB 96 Zulu 32 Zulu 2? Zuly 78. Usual VLB2 on 3rd day (Mason, England).

7635: CAP Nat'l. Communicators' Net w/Empire 166 as NCS & 70 stas around USA checking in, 0313 on USB (Willmer, MI). Also reportedly a US roll call daily at 2230 on 7635/USB & 14905/LSB-- Ed.

7652: CW sta at 0825 w/cut #'s AUV456BDNT= 1-0 (Charret, FRG).

7904.5: Beacon K at 0214 (Kneitel, NY).

8030: LOL3, Buenos Aires, Argentina w/CW tfc at 0407 (Osier, NY).

8055: YL/SS in AM-mode at 0530 w/5F grps (McDonald, MO).

8101: Crackerbox w/alpha tfc, USB at 0135 on SAC's AP channel (Sabo, CA).

8285: Rainbow Radio, YL/EE wkg un-ID a/c in USB at 0148 (Hamlin, NY).

8384: 3FJB2, bulk carrier **M/S Westwood Merit** in CW at 0127 wkg WCC. Steaming Cristobal to Balboa (McDonald, BC).

8465: YL/EE repeating Sierra Yankee November Test 5 from 1800-2100, AM-mode (Mason, England)

8660.1: OM/SS opns in USB at 0110, flight control, air/ground. Mentioned Guyana & Argentine Flight 140, also wx for S America (McDonald, MO).

8718.8: NXSF, USS **Edenton (ATS-1)** wkg COMPHIBRON-8 at 1212; NCFR, USS **Adroit (MSO-509)** also making checks w/Combat Support Sqdn 8 at 1140; NTWX, USS **Hoist (ARS-40)** clg COMSUPRON 8 at 1215, was 200 Hz high af center slot (Gordon, CT).

8735: Wellington R., New Zealand in USB 0500-0530 w/patches to ships (Watts, KY).

8759.2: Cruise liner **M/V Celebration** in USB at 2235 w/patches to ships (Giglio, PA).

8765: USCG CommSta, Portsmouth, VA w/wx bc for N Atlantic at 0415 (Berrios, PR).

8828: YL in USB w/digitized voice w/wx at 0741 fm Tokyo for PAC; Hawaii VOLMET at 0755. This is good E/W propogation test for listeners along Eastern USA during Winter months (Fernandez, MA).

8856: Kampala ATC wkg PanAm Clipper 204X, USB (N.G., FL).

8891: NY Aeradio at 1450 in USB wkg Speedbird 287; Cambridge Bay Aeradio (NWT) in USB at 1558 wkg Scandanavian 937 (Lesnick, Canada).

8917.1: OM/EE's in USB at 0420 ID'ing as BCGL & AMHK in air/ground comms. Referred to Dakka (McDonald, MO).

8951: SS #'s sta at 0416, heavy Cuban accent (Berrios, PR).

8964: Hickam AFB, HI in USB at 1515 w/patch for an a/c (Golladay, WA).

8967: Navy KV-698 to Yokata AB (Japan) w/USB tfc at 0727. Excelent sigs both ends (Sabo, CA).

8972: NOR/Birddag in USB at 1652 giving test count to 60 & back to 0 (Fernandez, MA).

8989: McClellan AFB in USB at 1631 to Cognizant w/all-freq test. No contact, foll by "request you contact my stn on published freqs." (Golladay).

8993: Navy 50607 clg Albrook (Panama). Made contact w/Ascension Isl & req Autovan patch, then lost contact. USB at 0235. Centa 60 to MacDill re patch to Little Rock CP w/coded tfc then discussion af a/c's problems. USB at 0237 (Rome, LA).

9010: Halifax Military in USB at 0800 w/coded tfc to J54T; Q2L in USB at 0604 wkg Halifax Military. Acknowledged D1B (Symington, OH).

9023: NORAD/Canadian Military exercises: Sombrero, Immortal, Mudguard, Royalist (F-16 a/c) & Outweigh 25 (F-16 a/c) tracking 2 a/c from Manitoba/Sask border at 27K ft heading SSW at 310 kts. The 2 F-16's were 9 mi behind & tracked a/c for 90 min while targets moved S to US border & crossed it in NE Montana at 0620. Chase broke off at 0632 & F-16's ordered to RTB (return to base) in Goose Bay after in-flt refueling by Hanover. Gnd stos contin to track intruders well inside Montana till they landed. At 0652 the F-16 completed refueling & after discussion of wx at poss RTB sites, Goose Bay selected by 1 fighter/gnd sta. Addl comms were re quartering fighter crews at end of mission. Seems to be action this freq every couple of nites. Check other NORAD freqs for similar. USB 0508-0657 (Fernandez, MA).

9027: Sky King bc in USB at 2117 (Hamlin, NY). This is a USAF SAC freq-- Ed.

9050: YL/EE from 2325-2335 sent 3/2F grps (Porkes, Panama).

9128: At 1500 a CW sta rptng 555 till 1505 then NIL NIL SK SK & off (Mason, England).

9153: YL/SS in AM-mode at 0717 w/5F grps (Fernandez, MA).

9222: YL/SS in AM-mode at 0015 w/4F grps (Watts, KY).

9325: Series of rapid X's in CW at var times of day w/5F grps at H+10, i.e. at 1700 X's being sent over R. Pyongyang in EE (Mason, England).

10004: RID, Irkutsk time sta, USSR in CW at 0752 (Fernandez, MA).

10048: Lufthansa 700 in USB at 0410 wkg Tokyo from position NIPI; FL330, Boeing 747 enroute Frankfort-Anchorage-Tokyo (McDonald, BC).

10057: Navy T3 enroute Barbour Pt, HI from Moffett Fld wkg San Francisco, USB at 0630. Annod 6673 kHz as secondary (Golladay, WA).

11005: PP comms, SSB w/encrypted tfc among units of Brazilian Navy & Marine Corps during Dragoon mil exercise in S ATL off Santa Catarina State. ID's included Pintassilgo, Aroponga, Gaivota, Pardal, Bentevi, & Carcara. Mail address re these stas: Ministerio da Marinha, Esplanada dos Ministerios, Bloco N, 70055 Brasilia DF, Brazil (Benevolo, Brazil).

11080: F4E clg V4A in USB at 2325, but no reply. Other ID's hrd: C4U, W2N, & E4B (Pruner, CA). Poss USN ops-- Ed.

11110: YL/GG at 0000 w/5F grps (Parkes, Panama).

11176: Spar 84 (Mil Air Wing VIP flite) w/patch Albrook. Mil bross aboard. USB at 0021 (Willmer)

11205: A Learjet in USB at 0400 while over Mexico asking for 500 lbs fuel & to pick up ambulance patient (Pruner, CA).

11239: Airborne Command Post to McClellan AFB in USB at 1644 req wx for Travis AFB. ID'd as MAC 60149 (Golladay, WA).

11240: A/c X315 in USB at 0100 to McClellan AFB for patch. Shifted 8989 kHz for better comms (Pruner, CA).

11243: Reville at 0000, & Farm Boy at 0200 w/SAC phonetics in USB. SAC's A channel (Suire, MS).

11246: Fermer 13 in USB at 2136 wkg MacDill w/patch to Pope CP; Yankee 01 at 1958 wkg MacDill for patch to Yankee Base (Symington, OH).

11255: G20 the NCS at 0814 wkg LFL stas w/radio checks & other USB tactical comms. This is a USN ATL FLT freq (Fernandez, MA).

11267: F3W to 7JI in USB at 0633 re pulling out of an area & query re checking all equip (Golladay, WA). Poss USN freq-- Ed.

11305: Lima ATC, Peru wkg a/c in USB at 0620 (N.G., FL).

11395: NY ATC Center wkg var a/c, USB at 0020 (Moser, GA).

11465: SS comms between Argentinian Gov't stas at Catamarca, Santa Cruz, Santa Fe & Rio Negro

Depts, USB 0100-0130. ID'd by loc names (Benevolo, Brazil).

11494: Hommer wkg Omaha 85 at 1944, USB; another day Hammer wkg Omaha 50 at 0127 in anti-smuggler ops net (Sabo, CA).

12151: Beacon K at 0440 (Osier, NY).

12154: Z9B in CW at 1618 w/5L grps (J.M., KY).

12329: Beacon U in CW at 0403 (Osier, NY).

12340: GQCA, **HMS Hecate (A137)**, an ocean survey ship in CW at 2041 wkg Portishead. Shoresta had problems w/this contact, had moved GQCA here from 16463.2 kHz. Portishead tried xmtng on 17436, 13191.5, 13160.5 & finally 13116.3 kHz (O'Connor)

12386: CA6 in USB at 1215 clg Singapore Radio for hi seas call to Norway. A busy freq (Reese, Thailand).

12541.8: 4XMX, container ship **M/V Zim Haifa** in CW at 2258 wkg WCC (McDonald, BC).

12690: Various ops in USB: F1D, Q0U, Z7S, & T7XA clg for radio checks, foll by Z7S "going green" (scrambler mode) at 0443 (Hamlin, NY).

12750: CWA, Cerrito R., Uruguay in CW at 0442 w/marker (Osier, NY).

12889.5: NMO, USCG CommSta Honalulu, HI in CW at 0516 w/marker (Osier, NY).

13103.9: Vessel **Sloop du Jour** (ouch!) clg KMI & assigned #4 in line of stas trying to place patches, USB at 0255; C6CB2, vessel **Windsong** near Bora Bora w/patch via KMI at 0259 (J.M.S., MO).

13128: Un-ID Cuban ship wkg Havana at 0300 reporting engine trouble & asking shoresta to tell Central Control. Ship said if problem not resolved soon would enter port at Canary Islands (Berrios).

13185: PP comms in USB from coastal sta PPJ, Juncao R. located at Rio Grande City, Rio Grande do sul State. Op by Empresa Brasileira de Telecomunicacoes S.A. (EMBRATEL), Avenida Presidente Vurgas 1012, 20021 Rio de Janeiro RJ, Brazil. PPJ hrd wkg PPBT, research vessel **Barao de Tefe** loc near Antarctica op on 13185 kHz (not hrd). Due to QRM, PPJ shifted to 8790 at 0030 but soon went back to 13185 (Benevolo, Brazil).

13201: Navy RY515-C9 in USB at 1942 wkg McClellan w/patch to Navy North Isl (Symington).

13247: MAC 00456 in USB at 2122 wkg Andrews. Told ramps closed 0000-0200 due to AF-1 arrival (Willmet, MI).

13378: ADL(?) (MFA Addis Ababa, Ethiopia) in CW at 1412 w/hond sent 5L grps. Also hrd WSL & NDL (Ed.).

13420.2: CUL, Lisbon Naviod, Portugal in CW at 1831 w/PP plaintext tfc at 1831 (Ed.).

13890: YL/GG in SSB at 1300 clg BU (Charret).

13925: YL/EE in AM-mode repeating C1O-X 7250800 Z 4255 from 1500-1800, then C1O-X2 (Mason, England).

13996: AIR, Andrews AFB MARS sta wkg AGA4KS in USB at 2037 (Symington, OH).

14441: USN 404, a helo from USS Lexington calling NNN0CYE aboard the Lex at 0050 (Gordon)

14441.5: USN MARS ops, USB at 0451: NNN0KHO tried to run patch for NNN0CWA, **USS Prairie (AD-15)** then QSY 14467 kHz. Commissioned in 1940, the **Prairie** is the 2nd oldest ship in commission the USN (Sabo, CA). NN0CQW, USN MARS abd **USS White Plains (AFS-4)** at 1530 wkg NNN0CPL, USS **Kiska (AE-35)**; NN0CPW, **USS John Young (DD-973)**; NNN0CSN, USS **Moosbrugger (DD-980)**; & NNN0CXG, **USS O'Bannon (DD987)** at 0015 discussing woodpecker QRM & inability to raise any shorestas for good quality patches. These ships in Persian Gulf area (Gordon, CT).

14467: NNN0NZQ, MARS abd **USS Coral Sea (CV-43)** wkg NNN0NIF in USB at 1954 w/patch; NNN0CUZ, **USS Puget Sound (AD-38)** wkg NNN0ZTI at 2220 w/attempted patch (Symington, OH).

14480: SS ops from Bolivian naval stas, one of which is located at Puerto Quijarro (near Puerto Suarez, Brazil-- at the border) (Benevolo, Brazil).

14529.5: AFB3LF (in MO), AFB2KB (in FL) in USAF MARS net, USB at 2318 (Sabo, CA).

14686: Shork 02 in USB at 1907 wkg Markin 395. Said that Master on board is positive hit & was involved in oir smuggling 3 years ago. Anti-smuggling net opns (Lesnick, ONT).

15004: RID, Irkutsk, USSR time sigs in CW at 1124 (Kneitel, NY).

15015: A USN a/c wkg un-ID sta & discussing contact they had lost. Gnd sta said to call back in 45 mins as they might have more contacts to investigate. USB at 0239 (Rome, LA).

15031: Trenton Military in USB at 1736 wkg a/c 5679 w/wx for LSE & MSP via patch to Metro (Lesnick, ONT).

16450.6: YL/SS w/callup 552, long count, 10 tones, group count 57 & into 4F grps. Rptd msg, s/off w/Fin at 1620 (Ed.).

16463.1: Un-ID ship, USB at 1545 w/patch re cracks in the bulkheads of several holds, some already welded in Montreal, but more needed at nect port of call (Fernandez, MA).

16496: GDXM, **F/V English Star** in USB at 1844 wkg GKT62 (O'Connor, NH).

16512.8: ZCAA2, tanker **Chevron South America** in USB at 2012 wkg GKU68 (O'Connor, NH).

16556.1: GXDE, **HMS Scylla (F-72)**, a frigate, in USB at 1938 wkg GKW62 (O'Connor, NH).

16947: VIP5, Perth R., Australia clg CQ in CW at 0143 (Kneitel, NY).

16975: VWM, Madras R., India clg CQ in CW at 1157 (Kneitel, NY).

17004: HKB, Barranquilla R., Colombia clg CQ in CW at 2026 (Kneitel, NY).

17201: CBV, Valparaiso R., Chile w/CW marker & data bursts at 2324 (Kneitel, NY).

17232.8: WOM, Ft. Lauderdale, FL in USB at 1500 w/tfc list (Watts, KY).

17242: Halifax Radio, N S in USB at 0135 (Hamlin, NY).

17250: PP comms from coastal sta PPO, Olinda, Pernambuco State, op by EMBRATEL. Wkg PPGP, tanker **Cairu**, operated by Petrobras, the largest corporation in Brazil & important shipowner (Benevolo, Brazil).

17330.5: F7A & B0Y in training mission re medevac flites. Talk of casualties & ETA. USB at 2022 (Willmer, MI).

18023: SAM 26000 in USB at 1923 to Andrews checking on flite from Elmendorf (Willmer, MI).

18666: Atlas in USB at 1823 w/departure msg, enroute Tropic. Anti-smuggling net (Symington, OH).

19936.2: LZC3 w/VVV QSY 24316 in CW. Few min later changed QSY request to 18040 kHz, then to 15008, then 16016, then 12295 kHz. Prob Bulgarian diplo in Sofia (Ed.).

19954.6: Salyut 7 USSR space sta at 1649 beeping & warbling at 1649. Doppler shift evident as it passed over (Hirose, CA); Same w/telemetry sigs at 2354 (Kneitel, NY).

20198: Houston (NASA) in LSB at 1630 wkg Discovery at 1630 & discussing power problems w/hydrogen supply, also film remaining for IMAX camera (Fuller, CT).

20720: PPR, Rio de Janeiro R., Brazil wkg PPHT, tanker **Quixada** loc at Galveston, TX. USB at 0210-0245 (Benevolo, Brazil).

20860.2: French Telecomm Network sta w/YL announcing on a voice mirror, USB at 1515 (Willmer)

22124: Vessel **Ohio** in USB at 1952 w/patch to shore party (a physician) re taking care of crew member's burned foot (Fernandez, MA).

22288: BODG, cargo vessel **Jion De** in CW at 0135 wkg XSG (McDonald, BC).

23287: Z8Y w/alpha tfc, USB at 2358. This is USN ATL/CARIB FLT HICOM freq (Sabo, CA).

22386: JCT, Chosi R., Japan clg CQ in CW at 0118 (Kneitel, NY).

22605.3: LPL21, General Pacheco R., Argentina in USB at 2247 with YL/SS on a voice mirror (Kneitel, NY).

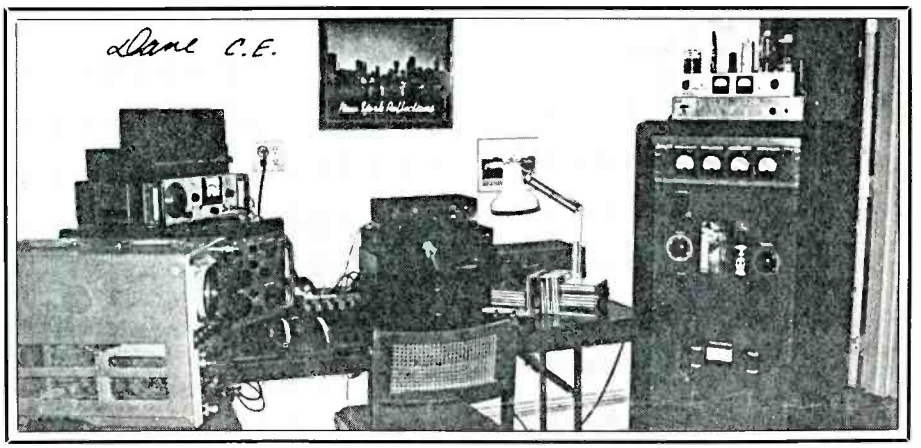
29358: RS-10 beacon w/ID & telemetry. USSR ham satellite at 1827 *Hirose, CA). PC

PIRATES DEN

FOCUS ON FREE RADIO BROADCASTING

BY EDWARD TEACH

Long silent pirate **The Voice Of Communism** made a rare shortwave appearance and found its way into the log of Tim Tromp in Michigan. He heard them on 6276 at 0333. The broadcast contained sharp satires on communism, democracy, governments, and the Russians. In the style of a typical Soviet broadcast, both a man and a woman shared announcing duties and each did an imitation of a Russian accent. At one point, the announcers dropped the accents when they wondered what it would be like to go through life without their "communist echo accent." I assume the latter was a reference to the odd echo usually found on Radio Moscow and other Soviet shortwave broadcasts. Is there a QSL address for this station? Anyone have any information on that?



Here's what the facilities at WJDI, 1620 kHz look like. Thanks to Stan Mayo in Maine for sending a copy of the photo he received from the station.

Several reporters also noted another of the occasional appearances by the radical half-pirate, half-clandestine **Voice Of Tomorrow**. Tromp heard the station at 2243-2230 on 7410 with the usual racist pitch. Someone who, due to the line of work he's in, wishes to be identified only as a "northern New Jersey SWL" heard the station on 6240 at 0125-0157 during which they requested manuscripts (apparently to be read on the air; and I assume on subjects which would appeal to this station's quack and hate ideology) and donations. Don Spooner in Massachusetts also heard them on 6240 at 0138 mentioning "we are here, we are growing, we are waiting" and giving the usual P.O. Box 314, Clackamas, OR 97015 which Don notes is a suburb of Portland. Few DX'ers have had replies from this station since its return to the air several months ago. One who has, though, is Tim Tromp who received a card depicting a forest and river scene. The back of the card notes the 2 kW transmitter is in Baltimore and studios in Providence, Rhode Island.

Several reporters have taken logs on **WKND**, which also ID's as **Weekend Music Radio**. Tromp had them on 6241 at 0306 to 0324 and on 6242 at 0249-0400 using such slogans as "commercial free pirate radio." Don Spooner had the station on 6240 on two different occasions at 0240 and again at 0427. He also found them on 1620 kHz at 0404 and 7415 at 0515. **WKND** is becoming quite active and 6240 a popular pirate frequency. Jim Kalach in Connecticut had them at 0332-0524 with an announcer who referred to himself as "The Radio Animal." Promotional ID's such as "WKND the new 62, commercial free pirate radio" and "WKND, making other pirates walk the plank" were noted. The frequency was given as 6240.2. A varied musical format covering everything from blues to big band, new wave to classical and rock to poetry was featured. The announcer said they were working on a backlog of QSL requests, but Jim notes he hasn't seen an address for this station. Neither have I, Jim. If there is an address for this station, I hope someone can pass it along.

Steven Rogovich in Virginia picked up **Falling Star Radio** from 0457 to 0527 sign-off. This particular broadcast was built around the theme of planetary overpopulation. The station also read a lot of listener mail (reports to P.O. Box 1659, Gracie Station, New York, NY 10028) and played Beatles selections. Steve notes that the audio "sounds muffled" but that the signal was good and about 95% readable. There was some drift in frequency, though. Don Spooner also had them as 0424 with pop music, talks on population control and QSL address.

Spooner also reports he received a letter from "Curtis," the station manager of **WRFT (Radio Free Texas)** saying his station was busted and he was fined $750 by the FCC. Maryanne Kehoe in Georgia complains about not having received an answer to her reception report on this station. WRFT has replied to at least *some* of the reports it's received so you might want to have another try, Maryanne.

Don Spooner got **WJDI** on 1620 at 0404 with pop music and humorous commercials. The address was given as WJDI, P.O. Box 142, Cottekill, NY 12419.

KFBA was spotted by Tim Tromp at 0023-0131 on 8001 with mostly rock music and comments by "The Archer." Tim says there were many mentions of POP'COMM and this column, though the announcer went out of his way to stress that the magazine was *not* a maildrop, but rather, was intended as a means of letting the station know who was hearing them.

Tim also notes a strange unidentified station which may, or may not, have been a pirate. This was from 0204-0224 on 6963. The station played authentic down home backyard southern gospel and blues. Many songs were aired, with a pause between each, but there was no station ID or any other announcements. Anyone have any ideas on this?

United World Radio was logged by Don Spooner at 0350 on 1620 with pop music and spoof commercials for "Soldier of Misfortune" and others. Address is c/o Tagar, Room 258, Union Building, Stony Brook, NY 11795 which, Don notes, is the same address for **Radio Free Long Island**. Ontario's Robert Ross reports a full data globe card received from Harrison Gergeron, Program Director, who notes the station uses "50 watts to a vertical."

Robert also got two QSL cards from the Scottish pirate **Weekend Music Radio**, along with a QSL sheet, personal letter, window stickers, station and tourist info for his reception of their test broadcasts on 6317. Weekend Music Radio runs 100 watts.

Thanks to all of you who checked in with your loggings and other information this month. Your letters were, are, and will be, very useful and welcome. Send in your loggings, copies of pirate QSL's and other information you receive from stations as well as any press clippings you may run across on the subject. I'd also like to hear from station operators since readers are anxious to know about station programming, equipment, future plans and so on.

Meantime, keeping tuning those pirate bands because the stations are active and are there to be logged if you are persistent in your attempts. PC

LISTENING POST

BY GERRY L. DEXTER

WHAT'S HAPPENING: INTERNATIONAL SHORTWAVE BROADCASTING BANDS

A sobering dose of reality has fallen upon last month's celebration over the arrival of Tonga to the ranks of shortwave broadcasters. In the bright of morning it's dawned on many that "this ain't gonna be easy!" So far you can count on one hand the number of North American DX'ers who've managed to snare this one, and even those have been touch and go. In California, where one would expect the best shots to be had, one expert DX'er reports reception that's barely audible. Another problem is the amount of time Costa Rica's Radio Impacto spends on the 5030 frequency. Even when they are into their late night break in activity the carrier is often left on for long periods. Still, summer normally brings the best reception from the Pacific area so it's much too early to throw in the Tonga Towel. The determined DX'er will bag this one yet.

More news from the Pacific: The German publication *Kurier* reports (via *Australian DX News*) that the Western Samoa Broadcasting Department will put a broadcast station on the 60 meter band sometime next year. We're going to try to get more information on this exciting prospect and we'll keep you advised. Western Samoa had a shortwave station for a couple of years following World War Two.

WSHB, the third station of the Christian Science Monitor's shortwave network became fully operational at the end of March. The current schedule is: 0000 on 11980 and 13760, 0200 on 9455 and 13760, 0400 on 9455 and 13760, 0600 on 9455 and 11980, 0800 on 9455 only, 1000 on 9455 and 9495, 1200 on 9495 and 11930, 1400 on 13670 and 17555, silent from 1600-2000, 2000 on 17555 and 21640 and 2200 on 15205 and 17555. Reports to P.O. Box 960, Boston, MA 02123.

There's some news on a couple of seldom heard Africans. Zaire's Radio Bukavu has been putting in some pretty good signals lately around 4846 (up from nominal 4839) from 0300 sign on in French and local languages. Incidentally there's also a report that the main government station in Kinshasha is getting a new 100 kilowatt transmitter. Apparently construction has not even begun yet so an appearance by this one is a long way off.

Several degrees rarer than Bukavu is Radio Hargeisa in the Somali Republic. Some DX'er country lists count this as the former Italian Somililand and thus a separate radio country. The station is active again on 7120 and listed for broadcasts between 1000 and 1800. This remeians one of the toughest African stations to hear in North America.

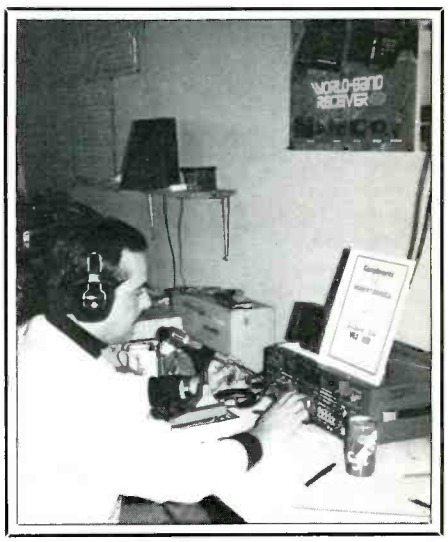
The still fairly new religious broadcaster KJES in Vado, New Mexico has progressed from running test broadcasts on no set schedule to running tests on a schedule: 1500-2100 and 0000-0800 on 11730. But—they may use one of these alternate frequencies instead: 6070, 6095, 9665, 15140 and 17840. Of course none of these will create any interference to such stations as CFRX, SRI, Radio Beijing, RBI, Radio Nacional Chile, Radio Norway or any others.

Wacky shortwave conditions over the past few months have given us reception conditions varying from virtually blacked out to stunning levels on DX signals in the 17 and 21 MHz well into the nighttime hours, even over the past winter months. If you are not feasting on this propagational smorgasboard you're missing some top notch shortwave cuisine.

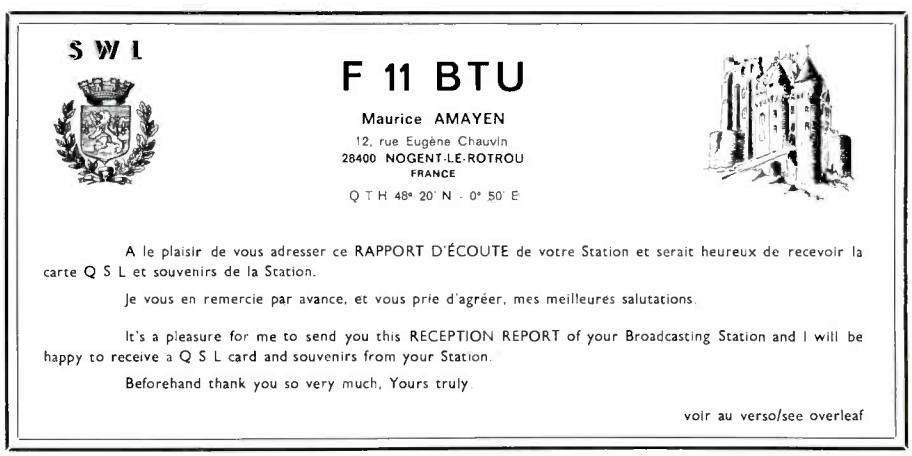
A quick dip into the mail: Tim Johnson in Galesburg, Illinois finds one of his logs a puzzler. He heard AFRTS broadcasts in sideband on 9930 around 0600. These come from a USAF base in Great Britain, Tim and it's our understanding they are

WWV's sister station in Hawaii, WWVH, sends this nice QSL card. (Thanks to Gerard Van Dobben, TN)

Ten year old Kristi, daughter of Errol Urbelis of Kings Park, NY does a little listening in Dad's shack.



VE3SRE (Shortwave Radio Enthusiasts) is the club station of the Ontario DX Association. VE3SRE was active during the club's 14th anniversary get together in February.


S W L

F 11 BTU

Maurice AMAYEN
12, rue Eugène Chauvin
28400 NOGENT-LE-ROTROU
FRANCE

Q T H 48° 20' N - 0° 50' E

A le plaisir de vous adresser ce RAPPORT D'ÉCOUTE de votre Station et serait heureux de recevoir la carte Q S L et souvenirs de la Station.

Je vous en remercie par avance, et vous prie d'agréer, mes meilleures salutations.

It's a pleasure for me to send you this RECEPTION REPORT of your Broadcasting Station and I will be happy to receive a Q S L card and souvenirs from your Station.

Beforehand thank you so very much, Yours truly

voir au verso/see overleaf

This SWL card from a French listener belongs to a friend of J. Patrick Burke of Ft. Wayne, Indiana.

feeds to Lajes in the Azores for rebroadcast by an AFRTS station there.

Speaking of AFRTS and shortwave, Douglas H. Stingley in Salem, Oregon got some information regarding the move of AFRTS to satellite. It was done because of budget restraints relative to the federal deficit and the increased cost of VOA transmitter time. Also, there were complaints from Naval personnel that shipboard reception was poor. AFRTS saw advantages to satellite in that it permits 24 hour broadcasting and a wider service area. Apparently they mean 24 hour service to a particular area since nothing about shortwave prevented 24 hour operation unless VOA transmitters were not available around the clock. The satellite feeds are via the International Maritime Satellite Service.

Dave Santos of Leamington, Ontario has been away from shortwave for a few years and can't locate the Radio Earth program any more. Check this month's loggings, Dave, and you'll see one for Radio Earth. It's still aired via WHRI at 0300. Different people host the show now than when you were listening back in the early 80's.

If you are DX'ing from the area around South Bend, Indiana, John Burzynski (17424 Ponsha St., South Bend, IND 46635) would like to hear from you. After five years in the hobby John says he's tired of "flying solo" and would like to meet fellow listeners to exchange notes.

Jim Ross in Vancouver, Washington passes along a receiver trick for owners of the Sony 2010. He says that if you are listening to a particular frequency and want to check another frequency without losing the one you're on just press the "skip" button and hold it down while you press any one of the 32 memory keys. When you want to go back to the original frequency just let go of the skip button and the receiver will return to the original frequency.

Randy Stewart in Springfield, Missouri wonders about the "no-data" cards sent by WCSN. The cards contain the phrase "your report is confirmed. . ." so there is little question that they are QSL's. But information received with his reply indicates that the WCSN folks are considering changing the KYOI replies to the same sort of thing and Randy wonders if that means that what KYOI is now sending isn't a QSL. Nah. They're acceptable now and would be under the proposed change. We can expect the same treatment with WSHB.

If you live in the Lebanon, Pennsylvania area get hold of Eric R. Wolfe, WB3IHQ (1525 Washington St., Lebanon, 17042). He'd like to meet some other local shortwave listeners.

Please let us have your shortwave broadcast loggings as often as you can! Just list them by country with space in between each so we can cut them up for sorting. Please add your last name and state abbreviation after each one. Copies of QSL cards (or originals you don't need returned), other info such as schedules, station literature, news clipings are always useful. We need photos of you in your shack, too, so get those cameras out and don't be shy!

Shortwave Broadcast Loggings
All Times UTC
English Except As Noted

Alaska: KNLS, 6065 at 0800 w/IS, ID (Moser, PA).

Albania: R. Tirana, 9760 at 2345 w/features, mx (Moser, PA).

Algeria: R. Algiers, 15215 at 1920-2000 w/mx, nx to 1959 when ID w/freqs, sked, oddress (Mierzwinski, PA).

Antigua: BBC relay, 6175 at 2344 (Moser, PA).

DW relay, 9700 at 0258 under hvy QRM (Moser, PA); 1710 at 2130-2155 in GG w/site ID at close (Tuchscherer, WI).

Armenian SSR: R. Yerevan, 15180 at 0352 in EE & Armenian (Johnson, IL).

Ascension Is.: BBC relay, 11820 at 2015 to Africa (Johnson, IL); 15260 at 2315 (Moser, PA); 21470 to 1744 close (Tuchscherer, WI).

Australia: R. Australia, 6060//9580 at 1100 (Pannone, CT); 9505 at 0854 (Moser, PA); 1153 (Burzynski, IN); 11945 at 0651, & 17795 at 0402 (Ross, WA); 21740 at 0006 (Brytus, NY).

Austria: R. Austria Int'l., 6015 at 0445 (Ross, WA); 6155//11780 at 2252 (Pannone, CT); 9875 at 0045 (Moser, PA); 13730 at 0040 (Fakkema, CA); 1730 (Brytus, NY).

Bangladesh: R. Bangladesh, 11510 at 1943 w/external svc in Bengali & regional folk mx (Meece, OH).

Belgium: BRT, 9925 at 2200 to 2225 close (Zamora, ND); 0032 (Reynolds, MO); 11695 at 0801 (Moser, PA); 1832 (Brytus, NY).

Bolivia: R. Nueva America, 4795 in SS at 0317 w/mx, ID (Pannone, CT).

LaCruz del Sur, 4875 at 0955 to 1030, rx pgms in SS (Urbelis, NY).

Botswana: R. Botswana, 7255 at 0352 w/IS (Moser, PA).

Brazil: R. Inconfidencia, 6010 in PP at 1000 w/mx, several ID's (Mierzwinski, PA).

R. Brazil Central, 4985 at 0405-0430 in PP (Urbelis, NY).

R. Cultura, Sao Paulo, 17815 in PP at 0003 w/talk, Brazilian pops. No actual ID but several mentions of "Cultura" (Stewart, MO).

Radiobras, 11745 at 0210 (Schafron, RI).

Swiss R. Int'l. relay, 17730 at 0200 (Moser, PA).

Bulgaria: R. Sofia, 7115 at 0442 (Meece, OH); 9700//11720 at 0000-0100 (Pannone, CT).

Burkina Faso: R. Burkina, 4815 from 0530 s/on w/anthem, ID, into FF & mx (Johnson, IL).

Canada: DW's Sackville relay, 6085 at 0300 opening (Moser, PA).

R. Japan (via Sackville), 6120 at 1130 (Reynolds, MO).

CFRX Toronto, 6070 at 1244 w/wx (Zamora)

RCI, 5960 at 0100 (Reynolds, MO); 11945 at 2215 (Johnson, IL); 15325 at 1547 (Brytus, NY); 17820 at 1450 (Zamora, ND).

Chad: Rdf. Nat. Tchodienne, 4950 at 0430 w/ID in FF, national mx (Johnson, IL).

Chile: R. Nacional, 15140 in SS at 0037 w/ID (Moser, PA).

China: R. Beijing, 9770 (vio Mali) & 11715 at 0017 (Pannone, CT); 11695 at 0411 (Ross, WA); 11715 (via Mali) at 0045 (Edwards, PA); 11720 at 0300 (Fakkema, CA); 11800 in CC at 0230 (Schafron, RI).

CFBS-1, 7440 at 1315 in CC (Meece, OH); 7504 (tentative logging) at 1130 in CC (Johnsan, IL).

Colombia: R. Super, Bogota, 6065 in SS at 1030 (Mierzwinski, PA).

Caracol, Bogota, 4755 in SS w/ID 0605 (Johnson)

Caracol, Neiva, 4945 at 0744 w/mx & commercials in SS (Callura, FL).

R. Nacional, 17850 at 0156 in SS w/bells, ID, educational pgms (Robertson, MS).

Ondas del Orteguеza, 4975 at 1105-1130 in SS (Urbelis, NY).

La V. del Cinaruco, Arauca, 4865 at 0525 in SS w/mx, ID (Collura, FL).

Costa Rica: R. Impacto, 5030//5150 at 0210 w/mx & many Impacto ID's (Stewart, MO).

Cote d'Ivoire: Rdf. TV Ivoirienne, 4940 at 2235-0000, classical mx, annct in FF, off 0000 (Mierzwinski, PA).

Cuba: R. Rebelde, 5025 at 1242 in SS (Meece)

RHC, 6140 at 0406 (Ross, WA); 9655 at 0200 (Santos, ONT; Schafron, RI); 2300 s/on on 11725//-11760//11800//11910//11970. S/on 0000 on 11820 (Fakkema, CA; 11950 at 2018 (Pannone, CT).

Czechoslovakia: R. Prague, 9530 at 0100 (Schafron, RI); 0300 here & 6055; 9540 to 0357 (Santas, ONT); 11990 at 0123 (Ross, WA).

Denmark: R. Denmark, 11845 at 2230 very strong in Danish to S America, w/EE/Danish s/off w/anthem 2253, carrier off for 2 sec then back even stronger w/a R. Norway IS & s/on in Norwegian to NA. Has relay via Norway begun? (Haven't hrd for sure, but sounds like it-- Ed.); 15165 at 1728, IS, ID in EE/Danish (Johnson, IL).

Dominican Rep.: R. Clarin, 11710 at 1200 w/SS ID (Johnson, IL); 2205 w/pgm **Vivencias Musicales** (Collura, FL).

E. Germany: RBI, 9620//11785 at 0245-0300 (Fakkema, CA); 9730 at 2215 (Pannone, CT); 11650 at 0257 (Schafron, RI); 11785 at 0448 (Ross, WA); 13610//15145 at 1844 (Tuchscherer, WI).

Ecuador: HCJB, 9720 at 0648 (Ross, WA); 9720//11775//15155 at 0030 s/on; 15155 off at 0500 then switch to 6230 (Fakkema, CA); 11853 at 0745 (Johnson, IL).

R. Zaracay, Santo Domingo, 3395 at 1055 in SS w/Andes mx (Urbelis, NY).

La V. de Napa, 3280 at 1015-1110 in SS (Urbelis)

R. Federacion, 3360 in SS at 1120 w/ID (Johnson, IL).

R. Quito, 4920 at 0500 w/ID & talk in SS (Johnson, IL).

Egypt: R. Cairo, 9475 at 0213 (Pannone, CT); 9900 at 2120 (Moser, PA); 15210 at 2000-2200 in Hausa & Yoruba (Mierzwinski, PA).

England: BBC, 9575 w/nx at 0505 (Collura, FL); 9915 at 0305 (Brytus, NY); 15260 at 2011 (Pannone, CT); 15260//15400 at 2144 (Buszkynski, IN); 17885 at 2045 (Fakkema, CA).

Ethiopia: 9560 in AA at 1425 mentions Ethiopia & Addis Ababa, into EE at 1500 w/nx, but sig is nearly useless by 1515 (Stewart, MO).

Finland: R. Finland Int'l., 9530 at 1917 (Ross, WA); 11755 at 0339 (Brytus, NY); 11945//15400 at 1356 (Moser, PA).

France: RFI, 15360//17620 w/**Focus On France** at 1623 (Pannone, CT); 17715 at 1300 (Zamora, ND).

French Guiana: RFI relay, 9800 at 0327 w/nx (Ross, WA).

Gabon: Africa #1, 4830 at 0515 w/ID in FF (Johnson, IL); 15475 at 1901 in FF (Ross, WA).

RFI relay, 4890 at 0505 w/nx in FF (Johnsan)

Greece: V. of Greece, 7430 in Greek at 0539 (Meece, OH); 9420 w/nx 0338 (Brytus, NY); 9425 at 1916 w/nx (Ross, WA); 11645 at 0115 in Greek, closed w/ID & freqs at 0150 (Collura, FL).

Guam: KSDA/AWR, 11980 w/ID's between rx pgms in Asian langs (Stewart, MO); 11980 at 1600; 13720 at 1000; 15125 at 2300 & 0000 (Fakkema)

Guinea: Rdf. Natianal, 7125 at 0657 in FF w/ID's, African mx (Robertson, MS).

Guatemala: TGNA R. Cultural, 3300 at 0130 end of **Words of Hope** pgm (Collura, FL).

R. K'ekchi', 4845 at 1100-1227, Indian lang, ranchera mx (Urbelis, NY).

La V. de Nahuala, 3360 at 1102-1130 in SS (Urbelis, NY).

R. Maya, 3325 at 1102-1130 rx pgm (Urbelis)

Honduras: La V. de la Mosquita, Puerto Lempira, 4910 at 0202 w/rx mx, SS annct, pgm in EE 0226 (Robertson, MO).

HRVC, 4820 at 0300 in SS (Santos, ONT).

R. Luz y Vida, 3250 at 0300 in SS (Pannone)

Hong Kong: BBC relay, 17875 listed this site, fluttery but in clear at 0000 w/BBC ID, nx (Stewart)

Hungary: R. Budapest, 11910 at 0135 w/DX pgm, nx (Schafron, RI).

India: AIR, 11620 at 2200, YL w/ID **This is the General Overseas Service of AIR** (Miller, GA & others); 15360 at 1857 (Ross, WA).

Indonesia: V. of Indonesia, 11790 at 0017 & 0815; 15150 at 2015 (Pannone, CT).

Abbreviations Used in Listening Post

AA	Arabic
BC	Broadcast/ing
CC	Chinese
EE	English
FF	French
GG	German
ID	Identification
IS	Interval Signal
JJ	Japanese
mx	Music
NA	North America/n
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

Iran: VOIRI, 9022 at 0501 in Turkish w/IS & anncr (Meece, OH); 15084 at 2147 in Farsi (Burzynski, NY); 0310 (Schafron, RI).

Iraq: R. Baghdad, 9515 at 0252 (Brytus, NY); 9770 at 2135 (Collura, FL); 15110 at 1833 (ID 1859) (Tuchscherer, WI).

Israel: Kol Israel, 9010 at 0504 in presumed Hebrew (Meece, OH); 9435 at 0209 (Ross, WA); 9435 at 0002 (Reynolds, MO); 11605//15615//15640 at 0000 & 0100; 11605//12077//16615 at 0200; 12077/-15640 at 0500 (Fakkema, CA).

Italy: RAI, 9575 at 0109 w/YL anncr & nx (Moser, PA); 21690 at 1338 w/bird chirp IS, ID in II (Reynolds, MO).

Japan: R. Japan, 5960 (via Canada) at 0300, & 6120 (via Canada) at 1107 (Pannone, CT); 9505 at 1905, & 17845 at 0119 (Ross, WA); 9505//11705//-11850 at 1800 (Fakkema, CA).

Jordan: R. Jordan, 9560 at 2130 w/ID memtioning full stereo as if they were FM simulcasting (they are-- Ed.) & US paps. No s/off ID at 2200, just dead air (Stewart, MO); 1904 w/fairy tales (Brytus, NY); 2113 w/60's mx (Meece, OH).

Kuwait: R. Kuwait, 11665 w/rock, the **Studies of Early Islam Literature** (Zamora, ND); 14595//15505 in AA at 2200 (Johnson, IL).

Lesotho: BBC relay, 3255 at 0400 to 0429 close (Urbelis, NY).

Liberia: VOA relay, 15600 at 1803 (Moser, PA); 2100 (Meece, OH).

ELWA, 4760 at 0620 w/features, mx, rx pgms & ID from 0620 (Johnson, IL).

Lithuanian SSR: R. Vilnius, 7400 at 2316 w/**Events & Views** (Moser, PA); News & DX pgm on 15455 (Brytus, NY); 9765//9860//15240//17665 at 2300-2330 (Fakkema, CA).

Luxembourg: R. Luxembourg, 6090 at 2333 in GG, into EE 0000 (Moser, PA); 0033 (Brytus, NY).

Madagascar: R. Netherlands relay, 15560 at 2045 (Johnson, IL).

Malaysia: V. of Malaysia overseas svc, 15295 at 1029 w/IS, 1030 s/on in CC, pops (Robertson, MS).

Mali: Rdf. TV Malienne, 4835 at 0700, ID & poss nx in FF (tentative log) (Johnson, IL).

R. Beijing relay, 9770 at 0000 (Meece, OH); 11715 at 0000 (Reynolds, MO).

Malta: DW relay, 9605 at 0255 w/IS & ID (Moser, PA).

R. Mediterranean, 6110 at 2311 w/nx & mx (Brytus, NY).

Monserrat: DW relay, 9545 at 0303 w/nx (Moser)

Morocco: VOA relay, Tangier, 9760 at 1808 w/nx (Moser, PA).

Netherlands: R. Netherlands, 6020 (Bonaire) & at 0244 (Moser, PA); 9330 at 0130 (Schafron, RI).

Neth. Antilles: R. Netherlands relay, 6165 at 0300 (Johnson, IL); 9590 at 0249 (Ross, WA); 21685 at 1815 in Dutch (Collura, FL).

TWR, 9535 at 0300 (Santos, ONT); 0315 (Miller, GA); 11930 at 0411 (Meece, IL).

New Zealand: R. New Zealand, 11780 at 0955 (Johnson, IL); 15150 at 0547 (Moser, PA); 17705 at 0330 (Santos, ONT); 0435 (Zamora, ND).

Nigeria: V. of Nigeria, 7255 at 0501 w/pgm anncts (Moser, PA); at 0555 w/strong carrier & poor audio (Reynolds, MO); 15120 at 1550 w/rx (Meece)

N. Korea: R. Pyongyang, 11735 at 1140, mx & ID (Burzynski, IN); 13650 at 2314 (Pannone, CT); 15115 at 0015 (Brytus, NY).

Northern Marianas: KFBS Saipan, 11650 at 0857 w/IS, EE ID & into RR rx pgm (Robertson, MS).

KYOI, 11900 at 1500, ID as **All-hit kee-YOY KYOI Saipan,** & into CSM commercial (Stewart, MO)

Norway: R. Norway Int'l., 11850 at 2300 in Norwegian (Meece, OH); 15310 at 1600 w/nx (Brytus, NY); 21705 at 1401 (Reynolds, MO).

Oman: R. Oman, 17770 in AA at 0347 (Ross, WA)

Pakistan: R. Pakistan, 11570//15545 w/YL in EE, ID, local, mx (Tuchscherer, WI); 21735 at 1257 mx, ID in AA at 1259 (Robertson, MS).

Papua New Guinea: R. North Solomons, Kieta, 3325 at 0714 w/mx, some EE (Pannone, CT).

R. Central, 3290 at 0730 w/some EE (Pannone, CT). Pretty early for reception on east coast-- Ed.

Paraguay: R. Nacional, 9735 at 0904 mx, SS (Robertson, MS).

Peru: R. Altura, Cerro de Pasco, 3340 in SS 1010-1025 (Urbelis, NY).

R. Ancash, Huaraz, 4990 at 0940-1050, SS w/Andes mx (Urbelis, NY).

R. Andina, Huancayo, 4996 at 0915-1020, Andes mx (Urbelis, NY).

Philippines: R. Veritas Asia, 15210 at 0938 in Korean (Robertson, MS).

VOA relay, 11715 at 1200 w/nx (Moser, PA).

Poland: R. Polonia, 7270 at 2236 (Brytus, NY); 2336 (Pannone, CT).

Portugal: R. Portugal, 9600 at 0233 (Reynolds, MO); 9680 at 2153 w/IS, EE/PP ID's (Burzynski, IN); 0212 (Moser, PA); here & 9705 at 2200 w/ID & PP pgm (Steager, MI); 15250 at 1907 (Ross, WA).

Romania: R. Buchorest, 6155//9570 at 0422 (Moser, PA).

Singapore: BBC relay, 11750 closing at 1616 w/o mention of site (Stewart, MO).

Solomon Is.: SIBC, 9545 at 0729 w/mx, commercials, OM w/national nx, ID, maritime report, pgm sked. QRM from Australia at 0755 (Robertson, MS).

S. Africa, Rep. of: Radio 5, 4880 at 0345 w/rock (Stewart, MO); 11880 at 0535 w/cigarette & battery commercials (Miller, GA).

R. RSA, 9580 at 0250 (Moser, PA); 9615 at 0200 (Reynolds, MO); 11900 at 0404; 15365 at 1914 (Ross, WA); 17755 at 2000 in SS, 21670 at 1552 w/brief nx in EE & s/off (Pannone, CT).

S. Korea: R. Korea, 9750//15575 at 1400 (Johnson, IL); 2332 w/nx & mx (Brytus, NY).

Spain: Spanish Nat'l. R. External Svc, 9630 at 0000 (Johnson, IL); 0250 w/EE/SS instr (Schafran, RI); 9730//15110 at 0000 (Jahnson, IL); 11880 at 2157 in SS (Burzynski, IN); 0043 (Reynolds, MO); 15100 at 0105, & 15395 at 1913 (Ross, WA); 17890 at 2030 in SS (Fakkema, CA).

Sri Lanka: VOA relay, 15250 at 0150 w/**VOA Morning** (Johnson, IL).

Swaziland: TWR, 11740, clear ID & handbell(?) IS at 1559 but very weak (Stewart, MO).

Sweden: R. Sweden, 11705 at 0230 (Johnson, IL); 15345 at 1359 w/IS, ID, s/on, nx, mx (Moser, PA); 17815 at 1238 w/nx & ID (Robertson, MS).

Switzerland: Swiss R. Int'l., 3965 in Euro svc at 0600 w/IS, s/on in FF (Stewart, MO); 6095//6135 at 0213, end of nx, mx, listener letters (Pannone, CT); 6135//9725//9885//12035 at 0357 ending SS & into EE (Moser, PA); 9885 at 0207 (Ross, WA); 13635 at 2109 w/commentary, DX pgm (Brytus, NY).

Syria: R. Damascus, 12085 at 2110 s/on in EE w/nx, AA nx (Stewart, MO; Pannone, CT); 2203 (Brytus, NY).

Taiwan: VOFC, 5985 (via WYFR) in CC at 0418 (Ross, WA).

Tunisia: R-TV Tunisienne may be the sta on 7475 at 0538, vy strong in AA (Stewart, MO); 0448 w/ID 0500 (Robertson, MS).

Turkey: V. of Turkey, 9445 at 2309 w/nx, ID & pgm on Turkish food (Pannone, CT); 0400 (Johnson)

Ukranian SSR: R. Kiev, 7165 at 0259 w/IS, s/on, nx (Moser, PA); 7400 at 0042 (Reynolds, MO); 9750 at 0200 to 0230 close (Pannone, CT); 1685 at 0400 (Robertson, MS).

U A E: UAE R., Dubai, 9595//11965 at 2200 alternating EE & AA type mx, the //6170 not hrd. According to sked fram sta, runs 2200-0200 (Edwards, PA); 15300 at 2000 in AA (Steager, MI); 15435 at 0330 (Brytus, NY); 17685 at 1600 w/time, ID, images of Arabia pgm, nx 1630 (Zamora, ND).

V. of the UAE, Abu Dhabi, 11940 at 0351 in AA (Ross, WA).

U S A: WSHB, Cypress Creek, SC, 17555 at 2126-2154 w/SS rx pgm. Use the CSM Boston address (anncd at 2145) (Tuchscherer, WI).

R. Marti, (via VOA Greenville), 11930 in SS at 1900 (Meece, OH).

WMLK, 9465 w/rx pgm, no ID on the hour (Stewart, MO).

WINB, 15145 at 0100 (Fakkema, CA).

WYFR, 9455 at 2029 (Pannone, CT); 9500 at 0300 (Schafron, RI); 11830//13695 at 1402 (Moser, PA); 15170 at 1615 in SS (Meece, OH).

WCSN, 9870 at 0440 (Ross, WA); 11680 at 2151 (Burzynski, IN), 21640 at 1811 (Meece, OH).

KUSW, 6130 at 1255 w/rock (Meece, OH); 9815 at 0300; 11695 at 0100; 15580 at 2200; 15650 at 1600 (Fakkema, CA).

VOA, 15580 at 1929 (Burzynski, IN).

WHRI, 6100 at 0559 s/on (Moser, PA); 9580 at 0245 (Schafron, RI).

R. Earth (via WHRI) at 0330 on 7520//9495 (Miller, GA).

KVOH, 13695 at 0100 in SS, 17775 at 2345 (Fakkema, CA).

U S S R: R. Moscow, 7270 at 0654 w/DX pgm (Ross, WA); 9720 at 0121 w/mailbag (Pannone, CT); 11665 (via Khabarovsk) at 1902 in RR riding over Kuwait (Tuchscherer, WI); 11710 at 0403 (Moser, PA); 11840 (via Cuba) at 1330 (Reynolds, MO); 15350 at 1218 in World Svc (Johnson, IL).

Peace & Progress, 7360 at 2204 w/nx, mx at 2204 (Brytus, NY); 17645 at 1400 (Miller, GA).

Uzbek SSR: R. Tashkent, 11785//15455//15470 + anncd but silent 5945/7325/9540/9600 at 1200-1230 (Pannone, CT); 15470 w/IS & s/on 1329 (Robertson)

Vanuatu: R. Vanuatu, 3945 at 0800. No ID but mx to 0815 when QRM not too bad, also 1032 w/anncr in Bislama, 1034 drums & poss ID, pop mx in EE (Robertson, MS).

Vatican: Vatican R., 9605 at 0057 (Reynolds, MO); 9645 at 0615 (Ross, WA); 15120 at 2040 in FF, 2045 in EE (Staeger, MI).

Venezuela: R. Maturin, 5040 at 0330 in SS talk, chime tones, ID's (Mierzwinski, PA).

R. Tachira, 4880 in SS at 1025 w/lively Latin mx (Zamora, ND); 0300 (Santos, ONT).

Ecos del Torbes, 4980 in SS at 1017 (Meece, OH); 0340 to 0400 s/off (Mierzwinski, PA).

R. Rumbos, 4970 at 0947 in SS (Pannone, CT).

R. Nacional, 5020 at 0315 in SS w/some EE (Pannone, CT).

Vietnam: V. of Vietnam, 9840//15010 at 2320 (Pannone, CT); 15010 w/FF s/an at 1200 (Burzynski, IN); 1000 & 1330 s/ons in EE (Johnson, IL).

W. Germany: DW, 5960 at 0547 w/sked, IS & into GG (Meece, OH); 6040 (via Antigua) at 0100 (Schafron, RI); 6085 (via Canada) at 0300 (Pannone, CT), 6185 at 0303 (Moser, PA); 9735 at 0232 in GG (Ross, WA); 15275 (via Antigua) at 1205 in GG (Burzynski, IN).

RFE, 15275 at 0700 w/nx, mx pgm **Music by Request** in Romanian (Collura, FL).

Yugoslavia: R. Yugoslavia, 9620 at 0102 w/nx & comment (Brytus, NY); 9660 at 2200 s/on w/IS, anthem, ID, freqs, nx (Burzynski, IN; 5980//9620 but better on 5980 (Meece, OH).

That's the lot and thanks a lot to the following who did their bit this month: John Tuchscherer, Neenah, WI; Mark Schafron, Providence, RI; John E. Miller, Thomasville, GA; Cliff Reynolds, Hazelwood, MO; Mark Meece, West Chester, OH; Randy Stewart, Springfield, MO; Tim E. Johnson, Galesburg, IL; James Ross, Vancouver, WA; Jim Substad, Santa Clara, CA; John Burzynski, South Bend, IN; Jim Fakkema, Angwin, CA; Vincent P. Collura, Tampa, FL; William Moser, New Cumberland, PA; Dave Santos, Leamington, ONT; Anthony Pannone, East Haven, CT; Tom Robertson, New Albany, MS; Vince Brytus, Mahopac, NY; Frank Mierzwinski, Mt. Penn, PA; Mrs. Leslie Edwards, Doylestown, PA and Larry R. Zamora, Grand Forks, ND.

Until next month—good listening! **PC**

CLANDESTINE COMMUNIQUÉ

WHAT'S NEW WITH THE CLANDESTINES

BY GERRY L. DEXTER

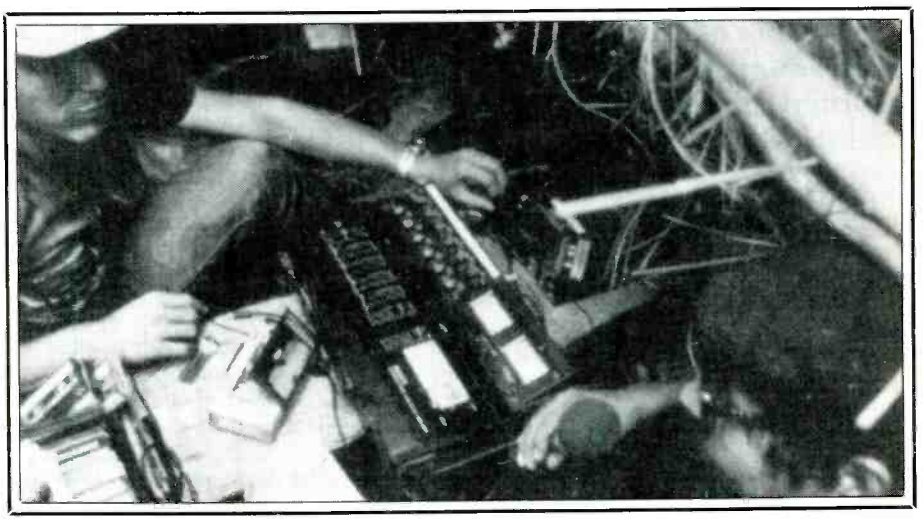
A good deal of new information has come out regarding the FMLN's *Radio Farabundo Marti* recently. We recently had the opportunity to meet Jaime Suriano who has actually worked at the station in El Salvador and is now out on the talk circuit seeking funds for the station. His talk, and information in an interview with Larry Wilkner published in the DX South Florida bulletin, brought to light a number of interesting points.

In the talk we heard, Suriano said the station runs 1 kilowatt (though the published interview said 50 to 400 which sounds more likely). The frequency jumping which occurs during transmissions is not done at the whim of the transmitter operator as we've assumed but, rather, is pre-determined. According to Suriano the public is informed of these jumps via leaflets so they can keep up with the frequency changes. This is done to avoid jamming, but no satisfactory answer could be obtained from Suriano as to what prevented government jammers from simply following along if the information is publicly available. Although we do not notice much jamming on the station's signal, it is quite a problem for the station within El Salvador, according to Suriano. In addition to government jamming, he claims the U.S. government also jams transmissions from a base at Palmerola in Honduras. He also notes that the El Salvador government operates "decoy" stations near Radio Farabundo Marti's frequencies in an attempt to draw listeners away. Apparently, then, there is a fake Radio Farabundo Marti in operation, as well as a fake Radio Venceremos.

Radio Farabundo Marti airs three one hour transmissions each day—morning, noon and evening. The transmitter and associated equipment is moved after each broadcast in order to avoid being found and raided by the military. Since there are relatively few shortwave radios in El Salvador people listen in groups in actories and businesses. That's the main reason why the station is out hustling funds—to set up an FM network so that it can be more widely heard.

The station began broadcasting on 22 January, 1982 and has been on the air almost continually since then. An English language program is planned for later this year. Reception reports are welcome at 584 Castro Street (kind of a nice touch!) Suite 310, San Francisco, CA 94114-2588.

If you haven't heard the station yet, try around 0100 in the area between 6620-6640, but, be careful of the ID since Radio Venceremos also makes frequent mention of Farabundo Marti and there are those fakes to watch out for, too.



A view of Radio Farabundo Marti on the air from a secret location in El Salvador.

Although not a clandestine the U.S. Government's *Radio Marti* has a strong political/clandestine flavor and thus is often included in this category. This column is no exception and so we'll tell you that Radio Marti has gone to a 24 hour a day service, according to a FAX we received from its parent Voice of America. That's an expansion from the former 17½ hours per day and comes in response to "the continuing need in Cuba for reliable, objective news and programming." Additions to the schedule (entirely in Spanish) are an original comedy series reflecting daily life in Cuba, human rights programs, an overnight music program and a young people's music program on weekends.

Clandestine hunter Robert Ross of London, Ontario has been busy hearing and QSL'ing clandestines recently. He reports logs on *Radio Iran* at 0315-0325 in Farsi on 15650 with abrupt sign off at 0323, then open carrier and tone to 0325. He heard *La Voix du Sahara Libre* (the Polisario Front's program) at 0157 on 15215 via Radio Algiers. Bob heard the IS, ID in French and instrumental anthem. The *Voice of Free China* signed on at 0200 and KO'd the signal. Bob notes that he's not heard this feature in this time slot before. Believe this is the first report of it Bob. If this was a sign on, that would put the Sahara Libre program on the same time as the La Voz de la Resistencia Chilena on Radio Algiers.

Bob also heard *Radio Free Afghanistan* via RFE/RL from 0246-0305 in Pashto and Dari on 9555/11825 and, tentatively, the *Voice of the Khmer* at 1225 to 1233 fade on 6325. Another logging was the anti-Zimbabwe *Radio Truth* on 5015 in English at 0443.

QSL's were received from the *Voice of the National Army of Democratic Kampuchea* and *Voice of Democratic Kampuchea*, both were prepared cards received from the Permanent Mission of Democratic Kampuchea to the United Nations, 747 3rd Ave., 8th Floor, New York, NY 10017 and signed by Song Theng, Third Secretary. Nice work!

The Sudanese station, *National Unity Radio*, which was thought to be a clandestine turns out to be an operation of the Sudanese military instead. Incidently, the English segment at 1445 (on 9435) seems to be aired only irregularly.

Bizim Radio (Our Radio), run by the Turkish Communist Party is currently on the air from transmitters in East Germany and Romania. The East German transmitter is on the air with 50 minute transmissions at 0300, 0400, 0700 and 2000 on 6200 and at 0800, 1100, 1200, 1500, 1600 and 1900 on 7335. The transmitter in Romania carries half hour broadcasts at 1015-1045 and 1445-1515 on 9500 and uses 5915 at 2000-2100. All programs are in Turkish.

Confirming an earlier assumption, the anti-Angolan *Voz de Verdade* has changed its name to *Radio Paz e Progresso* (Peace and Progress).

Your loggings of clandestine stations, copies of QSL's you may receive, copies of material received from the station, such as schedules, information about the stations, "position papers" and news clippings on groups which operate clandestines are always needed and welcome. Observations you may be able to make from actual monitoring, such as content, schedules, the slant the broadcasts take and so on would also be of great interest. PC

WASHINGTON PULSE

FCC ACTIONS AFFECTING COMMUNICATIONS

FCC Adopts 60-day Period For Resubmission Of Returned Applications

The Commission adopted a uniform 60-day period for resubmitting returned applications in the private radio services.

Existing rules provide that an application returned for correction retains its original processing position if it is resubmitted in corrected form within the prescribed time. Private Land Mobile applications for frequencies below 470 MHz must be resubmitted in corrected form within 60 days of the return date, whereas applications for frequencies above 470 MHz must be resubmitted within 30 days of the return date. The 30-day period also applies to Private Microwave Services. Applications not submitted within the prescribed time, are treated as new applications for processing purposes.

The Commission found that the 30-day time period was burdensome on many applicants because it did not give them sufficient time to make the corrections and submit their applications. The FCC said an expansion of time to 60 days to resubmit returned applications for frequencies above 470 MHz, including microwave applications, would correct such difficulties.

Consumer Safeguards Imposed On Alternative Operator Services

The Commission's Common Carrier Bureau ruled on a complaint ordering five Alternative Operator Services (AOS) providers to cease certain practices immediately. The complaint was filed by the Telecommunications Research and Action Center (TRAC) and Consumer Action (CA) against Central Corporation, International Telecharge, Inc., National Telephone Services, Inc., Payline Systems, Inc., and Telesphere Network., Inc.

The AOS industry is a relatively new segment of the telecommunications marketplace. AOS providers contract with hotels, hospitals, universities, airports and other so-called "call aggregators" to sell standard long distance telephone services, as well as more innovative services such as multilingual operators, voice messaging, voice mail, and billing to bank credit cards.

First, the Bureau ruled that AOS providers must ensure that callers receive adequate notice of the services, service provider and rates applicable to their call. The Bureau ordered the defendants to comply with a variety of notice requirements including: 1) a notice identifying the service provider to be placed on or near the telephone; 2) provision of a number to call for further information regarding the service; 3) provision of rate information upon request; and 4) "branding" AOS calls, that is, notification to customers on a call-by-call basis of the company providing service prior to completion of the call.

The Bureau also found call blocking—the practice of preventing consumers from reaching a carrier other than that selected by the call aggregator—to be an unlawful practice and ordered the defendants to terminate such practices immediately.

Finally, the Bureau ordered the companies to terminate, to the extent technically feasible, all call "splashing." Call splashing occurs when the AOS provider transfers a call to another carrier at a point distant from that in which the caller's bill reflects handling from that distant point. Insofar as call splashing cannot be prevented due to technical problems in the network, the parties were required to raise the question before the Carrier Liaison Committee of the Exchange Carrier Standards Association and report back to the Bureau's Enforcement Division.

The Bureau agreed with TRAC that a number of the practices complained of are unjust and unreasonable under Section 201(b) of the Communications Act. The Bureau also stated that compliance by an operator service provider with the corrective measures in the Order would constitute a defense to similar complaints.

The Bureau stated that the remedies required by the Order should assure that consumers should have sufficient information and options to make informed decisions about their communications services.

Nationwide Two-Way Mobile Data Communications Network

The Commission granted American Mobile Data Communications, Inc. an extended construction period to build a nationwide two-way digital communications network using frequencies in the 900 Mhz band allocated to the Specialized Mobile Radio Service (SMR). This network will make nationwide mobile data service for the first time to a wide and diverse customer base.

The Commission granted AMDC a waiver of the one year construction period that normally applies to SMR systems to implement this highly innovative and technically advanced system. Specifically, it will give AMDC three years to construct its network and four years from the proposed construction date to load each system.

The Commission stated that AMDC's proposed network will bring the benefits and efficiencies of digital technology to businesses, public agencies and other users lacking the financial resources and technical expertise to construct and operate individual systems. Digital signals are less susceptible to interference than are analog signals, and are capable of carrying ten times the volume of traffic.

AMDC's proposed network will permit a mobile unit in one city to communicate with and obtain information from a database in another city across the country as easily as it can communicate with mobiles and control stations in its own city. The Commission said that the proposed Mobile Data Communications system will provide a range of services on a local, regional, or nationwide basis. For example, it will enable field sales personnel and service technicians to verify immediately inventory availability, customer records and credit histories. Police and other public safety personnel will have access to criminal, stolen property, and other national law enforcement databases. Freight companies and couriers could use the service to trace packages as they travel through the country and to reroute deliveries in transit where necessary.

AMDC's plan is to include SMR systems in the 50 largest metropolitan areas of the country. Within each metropolitan area, AMDC plans to use a spectrally efficient system design calling for multiple base stations, in most cases arranged in a grid pattern, with channels allocated among several base stations.

Equipment For Rural Telephone Service Eligible For High Cost Assistance

Citing the goal of promoting universal telephone service to rural areas, the Commission's Common Carrier Bureau ruled that Basic Exchange Telecommunications Radio Service (BETRS) radio and antenna equipment is regulated network equipment.

The Bureau, ruling on a petition filed by the Colorado consulting firm of Tallon, Cheeseman & Associates (TCA), held that the antenna and radio equipment located on or near the premises of BETRS users should be treated as regulated network equipment and is eligible for federal and state programs designed to assist telephone companies used to provide service in high-cost areas. TCA estimated the cost of this equipment to be $2,200-2,400 per unit.

By classifying this equipment as network equipment owned by the telephone company, the Bureau increased the assistance available to rural telephone companies and

their customers to install BETRS systems. Such assistance is available through the national Universal Service Fund, financing by the Rural Electrification Administration, and the state subsidy programs available for basic local exchange service. The Bureau stated that assistance from these federal and state sources will permit greater deployment of BETRS, and more economical telephone service, to rural areas. The Bureau also ruled that the electrical outlet used to power this equipment should be treated as network equipment when it is on property that the telephone company owns or leases, or for which it has an easement or right-of-way.

BETRS systems, which the FCC authorized in January, 1988, provide telephone service through radio connections or "loops" between subscribers and telephone company central offices that, for many rural areas, are cheaper to install and maintain than conventional wire or cable loops. The antennas and radio equipment on which the Bureau ruled are on the remote or subscriber end of the radio connection.

The goal of universal service advanced by this ruling is fundamentally important to both the FCC and the states. In discussing the action taken, Gerald Brock, Chief of the Common Carrier Bureau cited Commissioner Ronald L. Lehr of the Colorado Public Utilities Commission as having provided valuable leadership in formulating the issues raised in TCA's petition and in resolving those issues. PC

RTTY

BY ROBERT MARGOLIS

THE EXCITING WORLD OF RADIOTELETYPE MONITORING

An informative letter was received from James Hubbard, who lives on Guam, that clarifies the *Controle de Voie* messages often copies in TDM mode, and further explains how stations logged in TDM may not always be what they at first may seem, based upon the ID you copy.

As an example, Hubbard notes Tom Kneitel's logging of RFQP (French military, D'jibouti, 13844 kHz) that appeared in the January RTTY loggings. Although the station was logged with the RFQP routing identification, the station intercepted was actually located on the island of Reunion. Here's why.

Hubbard reminds us that few things in the world cause more consternation in the military than a message that has become lost. An efficient watch commander will regularly run tests and checks on his message routing facilities just to make certain that they are functioning properly and no messages are about to go astray. So, lots of *Controle de Voies* go back and fourth, maybe at the rate of two per hour. La Captaine on D'jibouti wishes to confirm that the Reunion circuit is open and operating properly, so he addresses a *Controle de Voie* to himself (00 RFQP DE RFQP) and sends it out on the "DJI" channel. The switch at Reunion Island reads the routing indicator (RFQP), stamps the message with a new channel designator (in this case "RUN"), a new consecutive serial number, and routes it right back to D'jibouti from whence it began its journey. La Captaine will have then learned that the circuit to and from Reunion is viable, and also that all message serial numbers are accounted for.

No matter where on the circuit a monitor might intercept this message (whether it be on the "DJI" leg or the "RUN" leg), the exact same message will be noted (00 RFQP DE RFQP). Only the channel designator and serial number will change. But in the TDM mode, there are two transmitters involved. Which one have you intercepted? Using the "DE RFQP" as the determining factor can easily become a misleading distraction. Only the channel designator confirms the true location of the transmitter intercepted.

RTTY Intercepts
All Times Are UTC
Settings= Shift/Baud/Polarity

3172.5: IMB31, Rome Meteo, Italy w/RYRY at 2323, 850/50N (Fred Hetherington, FL).

4005.5: LRO2, TELAM Buenos Aires, Argentina w/nx in SS at 0203, 775/50R (Richard Gleitz, PA).

4178.4: Y4CP, **M/V Eversgagen**, a GDR fish carrier w/telegrams to Y5M, 170/50R at 2344 (Michael Ricks, PA).

4343: WLO, Mobile R., AL w/wx in FEC at 1050 (Hetherington, FL).

4813: LZA8, Sofia Meteo, Bulgaria w/coded wx for FRG at 0011, 425/50N (Harold Monthey, NY).

5020: RWW74, Moscow Meteo, USSR w/coded wx at 0218, 1000/50R (Gleitz, PA).

5335: RDM78, Tbilisi Meteo, USSR w/coded wx at 0121, 500/50N (Hetherington, FL).

5742: HZN, Jeddah Meteo, Saudi Arabia w/coded wx data for Kuwait at 0030, 850/50N (Manthey, NY).

5887.5: IMB32, Rome Meteo, Italy w/RYRY, 850/50N at 2320 (Hetherington, FL).

6264.5: UYIG, **M/V Vasiliy Surikov**, a Soviet fish carrier w/telegrams & kriptograms to Murmansk at 2350, 170/50N. Located off Nova Scotia (Ricks, PA).

6268: UVAU, Soviet spaceflight tracking ship **Borovichi** w/tfc for Science One in Moscow, via CLJ at 0314, 170/50N. Located near Puerto Rico enroute Suriname for fuel (Ricks, PA).

6795: LZM7, Sofia Meteo, Bulgaria w/coded wx at 0530, 425/50R (Ed.).

6805: Un-ID w/coded wx at 0411 & 0519, 425/50R (Eds).

6810.5: "Shell" Oil Co., Lagos, Nigeria w/telexes in ARQ at 0423 to past 0630 (Ed.).

6824: GHH, Jamestown Meteo, St. Helena w/RYRY at 0204, 425/50N (Harold Manthey, NY).

6844.4: FDY, French AF, Orleans, France w/RYRY at 0135, 425/50R (Manthey, NY).

6983.5: 7XA97, Algiers Meteo, Algeria w/coded wx at 0200, 850/50R (Hetherington, FL).

7490.3: MKD, RAF Akrotiri, Cyprus w/RYI's & foxes at 0504, FDM 325/50R (Williams, CO).

7615.5: NBTC, **USCGC Aquidneck,** in contact with NMG at 0421, 170/75R (Tom Kneitel, NY).

7624: HZN47, Jeddah Meteo, Saudi Arabia w/coded wx at 0032, 1000/75N (Manthey, NY).

7645: RGE36, TASS Moscow, USSR w/nx in EE at 1516, 425/50R (Art Blair, CA).

7733: CUW, USAF Lajes AB, Azores w/foxes at 0404, FDM 75N on channels 2, 4, 8 & 10 (Dr. Gary Zaid, WI).

7755.4: SUA34, MENA Cairo, Egypt w/nx in AA at 0730, 325/50N (Williams, CO).

7760: RGH77, Arkhangelsk Meteo, USSR w/CQ at 0608, 1000/50N. At 0615 w/coded wx & msg in RR re "sinoptiki" (Ed.).

7845: SOH284, PAP Warsaw, Poland w/RYRY at 0025, 425/50R (Manthey, NY).

7998: FDY, French AF, Orleans, France w/RYRY & le brick at 0825, 425/50R (Williams)

8030: RRQ27, TASS Moscow, USSR w/nx in EE at 1329, 425/50R (Ed.).

8070: ZRH, Cape Town Navrad, RSA w/RYRY & foxes to NMN 0001-0030, 850/75R (Blair, CA; Ricks, PA; Ronald Seymour, MO); w/AMVER's at 0117 (Gleitz, PA).

8183.3: Un-ID sta w/ARQ tfc in SS at 0135 & 0224 (Ed.).

8299: UNSH, Soviet cargo ship **Vatutino** w/pos & ops report to URD, 170/50N at 0033. Was west of Azores (Ricks, PA).

8349.9: UPAR, Soviet cargo ship **Akademik Shukov** enroute Cuba carrying sulphur sending telegram in EE to URD via Havana, 150/50N at 0130 (Ricks, PA).

9210: CLN251, PTT Havana, Cubo w/tfc in SS at 0230, 425/50N ("Bunky," IL).

9287: TLO, ASECNA Bangui, Central African Rep., w/RYRY at 0200, 425/50R ("Bunky," IL).

9958: Un-ID sta w/coded wx at 0413, FDM 75N (Zaid, WI).

10104.5: RKA79, TASS Moscow, USSR w/nx in AA at 0751, 425/50R (Williams, CO). Same sta on 10105 at 2325 w/nx in EE (Manthey, NY).

10120: Un-ID USN commsta w/very quick brown foxes at 1020, 850/75R (Hetherington, FL).

10169.3: HSW63, Bangkok Meteo, Thailand w/coded wx at 1025, 626/50N (Hetherington, FL).

10215: HZN48, Jeddah Meteo, Saudi Arabia w/wx synopsis in EE + coded wx at 0200, 850/100N (Zaid)

10220.5: MKK, RAF London, England w/RYI's & foxes at 2238, FDM 170/50R (Williams, CO).

10264: Un-ID w/5L grps ending w/"JVN nil" then

The woman in the picture's center appears to be telling her son, "Voyez le brick geant que j'examine pres du wharf." In Spanish, of course. Picture is from LQZ67, Buenos Aires, Argentina, and was 60/288 at 2030 UTC on 17672. (Submitted by Arnold Carmody, NY).

Abbreviations Used In The RTTY Column

AA	Arabic
ARQ	SITOR mode
BC	Broadcast
EE	English
FEC	Forward Error Correction
FF	French
foxes	"Quick brown fox. . ." test tape
GG	German
ID	Identification/led
MFA	Ministry of Foreign Affairs
nx	news
PP	Portuguese
RYRY	"RYRY. . ." test tape
SS	Spanish
tfc	traffic
w/	with
wx	weather

off 2133, 505/75R (Hetherington, FL).

10298.4: HSW62, Bangkok Meteo, Thailand w/coded wx at 1050, 170/50N (Hetherington, FL).

10415: SNN299, MFA Warsaw, Poland w/CQ & nx in Polish at 0659, 170/75N (J.M., KY); same w/text in EE at 0731, 250/50N (Williams, CO).

10633: SUC, Cairo Meteo, Egypt w/RYRY at 0138, 425/50N (Gleitz, PA).

10641: Un-ID w/5F grps at 1935, 425/75N (J.M.)

10905: BBA45, PTT Shanghai, PRC w/RYRY at 1136 (Williams, CO). Setting not given-- Ed.

10911: HGH29, MTI Budapest, Hungary w/nx in FF at 1607, 350/50N (Blair, CA).

10972: VOA Tangier, Morocco w/nx in EE at 0430, 75N (Seymour, MO).

11004: NBA, USN Balboa, Panama w/RYRY at 1700, 850/75R (Hetherington, FL).

11013: DyN Buenos Aires, Argentina w/nx in SS at 0100, 850/75N ("Bunky," IL).

11092: RFFIC, French mil., Paris, France w/tfc to all marine personnel at 0220, ARQ-E 850/96 (Hetherington, FL).

11111: FUM, French Navrad, Papeete, Tahiti w/tfc in FF at 1010, TDM 850/86A (Hetherington).

11180: Possibly a N. Korean diplo sta w/5F grps at 0712, 100/50N (Williams, CO).

11453.5: IMB33, Rome Meteo, Italy w/coded wx at 2136, 850/50N (Tom Sundstrom, NJ).

11746//13580: HMF52/36, KCNA Pyongyang, N. Korea w/nx in EE at 2240, 250/50R (Hetherington).

11494.5: 5AF, Tripoli Meteo, Libya w/coded wx at 0120, 425/50R (Hetherington, FL).

11591.7: Japanese Embassy in Mexico w/5L tfc relayed from "Nikaragua" by "Taishi Mexico" (Ambassador Mexico). Was ARQ at 0238 (Ed.).

11600: CLN327, PTT Havana, Cuba w/telegrams to USA at 0236, 425/50R (Ed.).

12166.7: Japanese Embassy, Costa Rica w/RYRY & foxes in ARQ + ID at 2240, then text in JJ & s/off 2247. At 2255 the Japanese Embassy in Colombia appeared w/RYRY & ID in ARQ, but sent no tfc. Off 2258 (Ed.).

12170.7: Several U.S. Army stas wkg one another 2116-2144, 170/75R. Calls were AAC20, AAC20/D, AAC46, AAD32, AAE80, & AAJ. Tried w/no joy to raise AAW010 (Ed.). Same net noted at 1445 another day. Some locs are: AAD20, Ft. Benning, GA; AAD32, Ft. Rucker, AL; & AAJ, Ft. Leavenworth, KS (J.M., KY).

12186: 5AQ62, JANA Tripoli, Libya w/nx in EE at 1756, 350/50R (Blair, CA).

12192: CLP1, MFA Havana, Cuba w/RYRY w/o ID at 0300, 45R. At 0313 w/crypto after ZZZZZ & ID as "Jaguar." Off w/o s/off 0325 (Ed.).

12229: Un-ID w/RYRY at 1540, 170/75N (J.M.).

12325.5: CSY, Santa Maria Aero, Azores w/RYRY at 0323, 850/50N (Steven Sachs, IL).

12523.4: UNLY, Soviet replentishment tanker **Mys Khrustalniy** w/pos & ops report (near Iceland) to Sevastopol R. (Ricks, PA).

12525: UWFC, Soviet passenger liner **Mariya Ermolova** w/tfc for UMV at 2309, 170/50N. Enroute Murmansk via Stockholm & Helsinki (Ricks, PA).

12525.4: UKTP, Soviet container ship **Rovno** w/telegrams to UFB, 170/50N at 0039. Ship was enroute the GDR from Cuba (Ricks, PA).

12891: UFN, Novorossisk R., w/tfc list in Cyrillic at 0040, 170/50N (Ricks, PA).

13510: CFH, Canadian Forces, Halifax, NS w/wx forecast at 2036, 615/75 (J.C.B., England).

13541.5: SON254, PAP Warsaw, Poland w/nx in Polish, FEC at 1805 (Sundstrom, NJ).

13563.5: SON256, PAP Warsaw, Poland w/RYRY at 0553, then nx in EE at 1601, 425/50R (Williams)

13580: HMF36, KCNA Pyongyang, N. Korea w/nx in EE at 0403, 250/50R (Gleitz, PA).

13626: KNY37, GDR Embassy, Washington, DC w/RYRY & QRA + msg in GG at 1330, 425/50R (Hetherington, FL).

13735: 5YD, Nairobi Aera, Kenya w/RYRY at 2149, 425/50 (J.C.B., England).

13756: 9RB, AZAP Bukavu, Zaire w/nx in FF at 1210, 425/50N (Hetherington, FL).

13770: VOA Tangiers w/nx in FF at 1105, 425/75N (Kneitel, NY).

13780: HMF35, KCNA Pyongyang, N. Korea w/nx in EE at 1503, 250/50N (Ed.).

13856: "PYG de Hanoi" & RYRY at 0303, thel "This is Hanoi testing with HMZ23." Was 500/50R & ended xmsn 0314. PYG is abbrev for Pyongyang (Williams, CO).

14355: KNY37, GDR Embassy, Washington, DC w/RYRY at 1530, then 5L tfc to Berlin until 1605, 425/50R (Hetherington, FL).

14356: GFL24, Bracknell Meteo, England, had coded wx at 1317, 425/50R (Kneitel, NY).

14361: Un-ID w/foxes w/fox, 1945-2045, 850/75N (Sundstrom, NJ).

14367: BZP54, XINHUA Beijing, PRC w/nx in EE at 1200, 425/75R (Hetherington, FL).

14370: SAM, MFA Stockholm, Sweden w/circulars at 1555, FEC-425 (J.M., KY).

14419: Un-id U.S. mil sta w/UPI nx at 1500, FDM 75N channel 4 (Zaid, WI).

14435: FJY4, Martin de Vives Meteo, Amsterdam & St Paul Is., w/CQ & coded wx at 0310, 425/75R (Williams, CO).

14460: Y7A56, MFA Berlin, GDR w/nx in GG at 0636, 425/100N (J.M., KY).

14508: D4B, Sal Aero, Cape Verde w/aero tfc in EE at 0019, 850/50N (Blair, CA).

14542.6: MKK, RAF London, England w/RYI's & foxes at 0537, 325/50R (Williams, CO).

14546.5: MFA Rome, Italy w/5L tfc at 1025, ARQ (Sundstrom, NJ).

14600: CAK, Santiago Aero, Chile w/RYRY at 0142, 850/50N (Manthey, NY).

14611.5: PWZ33, Rio de Janeiro Navrad, Brazil w/RYRY & SGSG + foxes at 0109, 850/50N (Manthey, NY).

14668.5: RFTJD, French mil., Libreville, Gabon w/"controle de voie" at 0103, ARQ-E/72 (Ed.).

14698: Un-ID w/5L gps in blocs of 50 at 1448, 850/75R. Msg slugged "musterek" & going to Tel Aviv + other QTH's (Williams, CO). It's TAD, MFA in Ankara, Turkey-- Ed.

14700: REB24, TASS Moscow, USSR w/nx in EE at 1159, 425/50R (J.M., KY).

14722.5: TNL, ASECNA Brazzaville, Congo w/RYRY at 0354, 50R (Ed.).

14760: BAT93, XINHUA Beijing, PRC w/nx in EE at 1317, 425/50R (Kneitel, NY).

14786.5: Kinshasa Aero, Zaire w/RYRY at 0354, 50R (Ed.).

14800: Y2V24A, ADN Berlin, GDR w/nx in FF at 1815, 425/50R (Sundstrom, NJ).

14880: JMG4, Tokyo Meteo, Japan, w/coded wx at 0423, 50R (Ed.).

14901: CLN451, PL Havana, Cuba w/nx in EE at 2012, 425/50 (J.C.B., England).

14912: MFA Belgrade, Yugoslavia w/nx in Serbo-Croat at 1602, 425/75N (Ed.).

14932: APS Algiers, Algeria w/nx in EE & FF at 1150, 50N (Sundstrom, NJ).

14975: CLP1, MFA Havana, Cuba w/tfc for Panama & Nicaragua at 1430, 425/75N. Moderately strong harmonic of this on 29950 kHz (Ed.).

15694: ISX56, ANSA Rome, Italy w/RYRY at 1535, 425/50 (J.C.B., England).

15752.7: CNM66X2, MAP Rabat, Morocco w/nx in FF at 1129, 425/50R (Kneitel, NY).

15870: Un-ID meteo sta w/coded wx at 0421 (Seymour, MO). Printout submitted reveals it to be "EGWR," USAF at Wolvey, England-- Ed.

15940: ELE25, USLRC (Goodyear Rubber), Harbel, Liberia w/ARQ tfc in EE to Goodyear at Akron, at 1930 (Hetherington, FL).

16020: RCF, MFA Moscow, USSR w/RYRY & CQ, 0642-0644, 500/75N (Williams, CO).

16127: Un-ID sta w/5F tfc, 1339-1346, 650/50N (Ed.).

16140: Un-ID U.S. mil sta w/UPI nx at 1500, FDM 75N on channel 4 (Zaid, WI).

16158: Un-ID U.S. mil sta w/AP nx, wx bc for some U.S. cities at 1728, was FDM 75N on channel 8 (Zaid, WI).

16210.5: RPJ78, Tashkent R., USSR w/RYRY at 0220, 500/50R (Joe Palovic, FL, via Hetherington)

16243: Y7A64, MFA Berlin, GDR w/RYRY at 1525, 350/50N (Blair, CA).

16265: SDK3, STA Stockholm, Sweden w/ARQ tfc at 1703, but bad QRM from a U.S. mil sta w/75 baud crypto tfc on same freq (Ed.).

16288.5: 5KM, Bogota Navrad, Colombia w/RYRY to CXR at 1137, 425/75R (Palovic, FL via Hetherington, FL).

16302: TANJUG Belgrade, Yugoslavia w/nx in EE at 1606, 425/75N (Ed.).

16343: YZI4, TANJUG Belgrade, Yugoslavia

w/RYRY at 1255, 500/50R. Freq was drifting (Kneitel, NY).

16383: VNA30, VNA Hanoi, Vietnam w/nx in FF at 1212, 500/50R (Kneitel, NY).

16397.5: FTQ39, DIPLO Paris, France w/nx in FF at 1651, 50N (Ed.).

16416: Y2V26, ADN Berlin, GDR w/nx in EE at 1130, 425/50 (J.C.B., England).

16420.3: CLP1, MFA Havana w/tfc for Managua at 1646, 75N (Ed.).

16666: UPUI, Soviet research vessel **Professor Vize** with telegrams to Leningrad at 1910, 170/50N. This is a 408 ft. ship. (Kneitel, NY).

16687: C6BJ8, Bahaman vessel **Finrose** in ARQ at 1212 sending coded wx in ARQ to Washington, DC via WLO (Kneitel, NY).

16695.9: UPEW, Soviet stern trawler factory ship **30 Letiye Pobedy** w/blind tfc to UPB at 0045. Ship was off Vancouver enroute Vladivostok via Unimak, Attu, & the Kurils (Ricks, PA).

16696.4: LYHJ, Soviet fish carrier **Bereg Yunosti** w/pos & ops report to UJY at 0012, 170/50N. Off Colombia enroute Curacao (Ricks, PA).

16697: USNG, Soviet tanker **Neftekamsk** w/telegrams & meteo obs at 1312, 170/50N (Kneitel)

16699.5: ESFG, Soviet stn. trawling factory ship **Khibiny** at 1225 w/telegrams to Murmansk, 170/50N (Kneitel, NY).

17400: BBE52, PTT Shanghai, PRC w/RYRY at 2232, 425/50R (Manthey, NY).

17421.5: MFA Madrid, Spain, w/ID then to standby in ARQ at 1515 (Hetherington, FL).

17434.5: Y2V37, ADN Berlin, GDR w/nx in FF at 1539, 350/50N. Also w/nx in EE same time on 17435.5 (Ed.).

17472: RPFN, Monsanto Navrad, Portugal w/RYRY, foxes & counting at 1530, 850/75R (Hetherington, FL).

17502: RFLI, French Navrad, Ft. de France, Martinique w/AFP sports nx in FF at 1829, ARQ-E/72 (Ed.).

17545: Y2007, MFA Berlin, GDR w/RYRY 1615-1645, then off, 425/50R (Manthey, NY).

17589.7: HZN49, Jeddah Meteo, Saudi Arabia w/coded wx at 1858, 170/100N (Ed.).

17592.4: ZPK, Asuncion, Paraguay w/RYRY to NBA at 1920, 600/75R (Hetherington, FL).

18002.5: Crypto tfc looked like long strings of random letters, however comprised several msgs, each having header of YFASR FAN. Was ARQ at 2043 (Kneitel, NY).

18193.5: CLN603, PL Havana, Cuba w/RYRY & foxes at 2209, 425/50R (Manthey, NY).

18210: LZP, PTT Sofia, Bulgaria w/RYRY to Beijing, PRC at 1400, 425/50R ("Bunky," IL).

18231.8: NMO, USCG Honolulu, HI in contact w/NODG, USCGC **Basswood** at 0156, 170/75R (Williams, CO).

18251: CLP1, MFA Havana w/RYRY at 1540, 500/75R (Hetherington, FL).

18295: SDU9, STA Stockhol,, Sweden w.tfc to Ho Chi Minh Ville at 1725, TDM/96-A (Ed.).

18320.5: OMZ, MFA Prague, Czechoslovakia w/5F tfc to "Zamini Washington" & "Zaminidele New York" + telexes in Czech. Was 425/75N at 1425 (Ed.).

18455: RWN71, APN Moscow, USSR w/nx in PP at 0650, 425/75R (J.M., KY).

18502: RFFA, Defense Ministry, Paris, France w/nx in FF at 1500, TDM/96-B (Ed.).

18520: RRG28, APN Moscow, USSR w/nx in RR at 0634, 425/75R (J.M., KY).

18542.5: WFK48, USIA New York, NY w/nx in SS at 2136, 425/75N (Kneitel, NY).

18860.5: ZAT, ATA Tirana, Albania w/nx in EE at 1710, 850/50N (Manthey, NY).

18965: Un-ID French Navrad w/non-protege msg at 0000, TSM 850/96 (Zaid, WI).

19013.5: OST, Oostende R., Belgium w/tfc list at 1630 in ARQ (Blair, CA).

19105: RPT34, TASS Moscow, USSR w/nx in FF at 1335, 425/50R (Ed.).

19117.5: MFA Jakarta, Indonesia w/ARQ tfc in Indonesian to Addis Ababa at 1405 (Ed.).

19237.8: Y7L36, GDR Embassy in Havana w/5L tfc at 1454, 350/50N; RYRY & ID at 1417 at 350/100N; then a speech in GG at 1500 (Ed.).

19319: Un-ID sta w/diplo circulars & sports scores in possible Czech at 1324, 425/75N (Kneitel)

19324.5: KAWN, Carswell AFB, TX w/coded wx at 1711, 850/75N (Ed.).

19382.5: PANA nx in FF from Dakar, Senegal at 1633, 425/50R (Ed.).

19390: Y7A76, MFA Berlin, GDR w/tfc in FF re Mali, was 350/50R at 1610 (Ed.).

19497.5: 9RL394, PTT Kinshasa, Zaire w/tfc in FF to Brussels at 1330, TDM 340/96-A&B (Hetherington, FL).

19723: Y2V39, MFA Berlin, GDR w/nx briefs in EE at 0702, 425/50N (J.M., KY).

20115: FDY, French AF, Orleans, France w/RYRY at 1550, 425/50R (Manthey, NY).

20400: CLP1, MFA Havana w/Prensamintex nx at 1950, 425/50N (J.M., KY).

20834.5: CLP1, MFA Havana w/5F grps to Embacuba Congo at 1614, 500/75N (Williams, CO).

20960: Swedish Embassy, Lima, Peru w/telexes in EE at 1607, 425/75R (Williams, CO).

22570: OXZ, Lyngby R., Denmark w/nx in Danish, FEC at 1630-1636 (Sundstrom, NJ).

22573.5: UJY, Kaliningrad R., USSR w/RYRY at 1558, 170/70N (Manthey, NY).

22809.2: MBA (un-ID sta) clg CCF at 2033, 850/75R (Kneitel, NY).

22955: Y7A87, MFA Berlin, GDR w/nx in GG at 1300, 335/50N (Hetherington, FL); ISX22, ANSA Rome, Italy w/nx in GG at 1420, 425/50N (J.M.)

22969: HBD68, un-ID Swiss Embassy w/5L gps in ARQ at 1655 (J.M., KY). This one is Guatemala City-- Ed.

23405: SOY240B, PAP Warsaw, Poland w/FEC nx bc in Polish at 1425 (Hetherington, FL).

23561.7: PCW1, MFA The Hague, Holland on standby in ARQ at 1412 (Ed.).

24870: RFHJ, French Navrad, Papeete, Tahiti w/tfc to RFLI at 0130, TDM 835/96 (Hetherington)

25223: HBD20, MFA Berne, Switzerland w/nx in FF & GG, ARQ at 1500-1526 (Hetherington, FL).

25437: OXZ, Lyngby R., Denmark w/telexes in ARQ at 1600 (Hetherington, FL).

FAX Intercepts

8646: WWD, LaJolla, CA w/wx charts at 1700, 120/576 (Terry Godley, CA).

9396: NOM, USN Pearl Harbor, HI w/wx charts at 0330, 120/576 (Godley, CA).

10220: RDW76, Khabarovsk Meteo, USSR w/wx charts at 0530, 90/576 (Godley, CA).

11086.5: GFA24, Bracknell Meteo, England w/wx charts at 2300, 120/576 (John Gerstner, NY).

11478: Un-ID sta w/nx pix at 2316, 60/288 (Kneitel, NY).

13855: OXT, Copenhagen Meteo, Denmark w/wx charts at 1310, 120/576 (Gerstner, NY).

14610: RCR79, Khabarovsk Meteo, USSR w/wx charts at 2315, 120/576 (Gerstner, NY).

16270: 9VF207, KYODO Singapore w/nx pix at 1625, 60/288 (Ed.).

17069.5: JJC, Tokyo R., Japan w/wx charts at 0140, 120/576 (Tom Sundstrom, NJ).

18093: LRO84, Buenos Aires Meteo, Argentina w/wx charts at 2143, 120/576 (Sundstrom, NJ).

20736: LSA600, AP Buenos Aires, Argentina starts xmsn of press pix at 1804, 60/288 (Sundstrom)

Beaming In

(from page 6)

members of the family. In general, it was fun, but there were some problems.

A family story that gets retold at every gathering of the clan recalls how, at age four, I was warned that I'd have to behave because a famous movie star was coming to dinner with my grandfather. The star showed up and when it came time for my introduction, I was enraged to learn that it wasn't a talking mouse, dog, duck, or at least Popeye. Led away in tears of anger and disappointment, I had succeeded in becoming one of the few people ever to refuse to shake hands with, or say hello to Charlie Chaplin.

Y'know, Alice's writings bring in lots of mail. Sometimes she receives collections of QSL's dating back several decades and sent in by those who had originally acquired them. Occasionally, they're sent by the family of DX'ers who have passed on. All such material is placed in the magazine's archives.

About six or seven months ago, UPS showed up with a box of QSL's representing someone's SWL'ing efforts throughout the 1930's. This collection was sent to us by the son of a gentlemen who had monitored those stations fifty or more years ago, and who had passed away last year.

Alice was sorting and cataloging the material. A few days later she called to say that mixed in with the QSL's were four Valentine's day cards in opened envelopes, all postmarked from the mid-1930's. Thinking that they might be of interest to the person who sent in the QSL's, she mailed back the Valentine cards.

Two weeks later, Alice received a very pleasant note from the widow of the DX'er explaining that those were the cards she and her husband had exchanged during their courtship. She hadn't been aware that he had kept the cards all of these years and learning this, and receiving the cards again, she wrote, was an extremely happy and touching moment.

Well, all of our mail isn't quite *that* heartwarming. Some of it is entertaining, though mystifying. Yesterday, we received a FAX marked "Urgent" from a listener in San Jose, CA. It demanded, "Please rush me the name of a good book on DX propagation. I think I've got it."

It's epistles such as that one that make me feel reasonably justified in sneaking out of the office to relax on a beautiful warm afternoon. I enthusiastically endorse this policy for all POP'COMM readers. Just tell your boss I said it's OK.

Big Broadcast of 1989

Just as we were packing the issue off to the printer, we heard from Ray Briem telling us about his forthcoming panel discussion and call-in show on the subject of shortwave broadcasting. I think that this is one you'll want to be tuned in on. It begins at 0706 UTC (3 a.m. Eastern or Midnight Pacific time) over the *ABC TalkRadio* network on Saturday morning, August 12th. Mark it on your calendar.

Ray's guests will include George Jacobs, Tom Meijer, Kaz Matsuda, Art Cushen, and several others with whom arrangements were still awaiting confirmation at our press time. Ray knows how to blend the right mix of guests to produce informative and worthwhile programs. The network call-in number is 1-(213)-879-8255; let it ring until someone answers. If you're in the Los Angeles area, use the local numbers announced over KABC/790.

Some of the stations carrying this program include WABC/770 New York; WSB/750 Atlanta; KABC/790 Los Angeles; KTAR/620 Phoenix, KPRC/950 Houston, WJBO/1150 Baton Rouge, WIOD/610 Miami, KS1P/1500 St. Paul, WISN/1130 Milwaukee, WKOX/1200 Boston, KOH/630 Reno, WERC/960 Birmingham, KXIA/101.7 FM Albuquerque, WNIR/100.1 FM Akron, and WHYN/560 Springfield, MA. There are many others, too. Find out the *ABC TalkRadio* station nearest you carrying Ray's program and give a listen.

Ray's efforts in promoting SWL'ing have done a lot for the hobby. Please listen to Ray's show and let's swamp the network's switchboard with calls for Ray and his guests!

Sad News

We were, indeed, saddened to learn of the passing of SCAN's Managing Director, Bob Hanson, W9AIF. Bob somehow managed to pick up one of those persistent and difficult-to-treat liver viruses last year. Despite a considerable amount of medical expertise and treatment, culminating in a liver transplant, plus the terrific fight that Bob himself put up, he passed away in May. He was 47 years old.

Those of us who had a professional relationship with Bob, and were also fortunate enough to know him as a friend and fellow communications hobbyist, will miss him on many levels. Certainly, Bob will be well remembered as a person who was a passionate activist for the rights of hobby communications. Friendly, and with a quick sense of humor, Bob was one of those rare people who was equally respeced by scanner owners, hams, and SWL's.

The Scanner Association of North America (SCAN) was one of the activities that brought Bob into close contact with scanner owners. It was Bob's interest in two-way emergency communications that led him to create the national Neighborhood Watch program which does such a splendid job of letting citizens be extra eyes for police agencies. Bob's good efforts were also reflected in convincing NASA to allow hams to retransmit Space Shuttle comms.

All of us here at POP'COMM extend our sincere sympathies to Bob's wife, Marilyn, his two teenage sons, and the rest of his family.

We invite our readers to contribute to the Robert Hanson Organ Transplant Fund, Box 766, Morris, IL 60450. This fund, organized by some of Bob's friends, is intended to help pay the absolutely staggering medical expenses Bob's protracted illness incurred.

COMMUNICATIONS SHOP

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Optional Accessory
- **PG-2N** Extra DC cable

Optional Accessories

R-2000:
- **VC-10** VHF converter
- **DCK-1** DC cable kit for 12 volt DC use.

R-5000:
- **VC-20** VHF converter
- **VS-1** Voice module
- **DCK-2** for 12 volt DC operation
- **YK-88A-1** AM filter
- **YK-88SN** SSB filter
- **YK-88C** CW filter
- **MB-430** Mounting bracket.

Other Accessories:
- **SP-430** External speaker
- **SP-41** Compact mobile speaker
- **SP-50B** Mobile speaker
- **HS-5** Deluxe headphones
- **HS-6** Lightweight headphones
- **HS-7** Mini-headphones.

KENWOOD

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Specifications, features, and prices are subject to change without notice or obligation.

CIRCLE 41 ON READER SERVICE CARD