Diplomatic Communications: A Close-Up Look

- Time For TV DXing
- Scanning America's Steam Railroads
- Low Frequency Maritime Monitoring
- Selected English Language Broadcasts: Summer 1986
- Scanning The U.S. Postal Service
- Portrait Of A Pirate
- Statue Of Liberty Radio Station
ICOM Introduces the IC-R71A 100KHz to 30MHz superior-grade general coverage HF receiver with innovative features including keyboard frequency entry and wireless remote control (optional).

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**Suggested Factory List Price $279.95**

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by Robert A. Hanson

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The stations nobody discusses! Are they terrorist and spy stations, or what?
Some facts you didn’t know, and a few guesses.
by Tom Kneitel, K2AES

Selected English Language Broadcasts
Summer 1986: The safest way to visit the world — via SW!
by Gerry L. Dexter

TV DXing: E-Skip
Now’s the best time of the year for TV DX. Try it!
by Jeff Dexter

Radio . . . The Good Old Days!
The Statue of Liberty and other historic stations.
by Alice Brannigan

Portrait Of A Pirate — Anarchy On The Airwaves
The story of Tangerine Radio—radical, outspoken, and just plain weird. You’ll want to know about this station.
by John Santosuosso

SCAN Public Service Award
New Jersey firefighter plunges into a frozen lake to save a life.

SCAN Photo Contest Winners
Congratulations to our winners this month for their terrific shacks.

Scanning The Steamers
Vacation time means that you can listen to the communications of steam, excursion, tourist, and movie railroads! Here’s how!
by Ron Steckx, KN4BNK

Pioneer Japanese Intercept Operations
Here’s the story of a team of WWII monitors who broke Japanese codes.
by Graydon A. Lewis, N7FCO

LF Maritime Log
Overlooked by many “ute” monitors, maritime communications below 535 kHz offer some new aspects to the hobby.
by V.K. Alfjuwani

This month’s cover: Vina Hill Farms in Virginia, top security transmitting site for U.S. diplomatic communications.

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Say what you want about the FCC, but never accuse the agency of releasing its vise-like grip on any of its cherished dreams. You may well have forgotten who E.K. Jett was — indeed, maybe you never heard of him— but for more than 40 years the FCC has been trying to make his dream a reality. Their latest try at doing so could affect you!

Ewell K. Jett, later a broadcasting executive at WMAR-TV in Baltimore, became an employee of the Federal Radio Commission in 1929. In 1931 he was promoted to the post of Assistant Chief Engineer of the FCC (as the FRC had become known); by 1938 he was the agency’s Chief Engineer, and a Commissioner in January of 1944. By November of 1944, President Franklin Roosevelt appointed Jett to temporarily serve as Chairman of the FCC. It was during Jett’s tenure as an FCC Commissioner that he came up with a catchy idea, the notion that “any American citizen, firm or group or community may privately transmit and receive short-range messages over certain wavelengths." He thought this would be useful for emergency communications, Civil Defense, on farms, for hunters, sportsmen, physicians, utilities, municipal agencies, and businesses of all kinds.

In January of 1945, shortly after Jett was appointed as the FCC’s temporary Chairman, he prepared a document known as Docket #6651 in which he outlined his dream. The concept was so revolutionary that, at the time, it bordered on being straight out of science fiction: The July 45 issue of the Saturday Evening Post celebrated Jett’s idea with a feature story called “Phone Me By Air,” which explained how WWII developments in walkie-talkie design would make it all possible in postwar society.

In July of 1946, the FCC announced its projected frequency allocation plans incorporating exciting new uses for communications above 30 MHz, employing frequencies that were thought to have been impractical for general public use only a few years earlier. Taxi cabs were to have two-way communications, trucks, buses and others —this, thanks to the accessibility of equipment operating above 30 MHz. Even Jett’s idea for short-range two-way communications found a niche in the frequency allocation plan. As the “Citizens Radio Service,” it was given a slot from 460 to 470 MHz.

With considerable fanfare, the frequency allocation plan was approved and Jett’s dream seemed on the way to reality. The Citizens Radio Service had two basic aspects, Class A and Class B. The Class A stations were medium powered units and appeared to be primarily intended for use by industrial interests that didn’t fit well into other two-way radio services. It was the Class B stations that contained the kernel of Jett’s dream for personal short-distance two-way communications.

Soon thereafter, there were experiments taking place to bring the service to the public. By 1947, both John M. Mulligan and Al Gross were independently experimenting with equipment designed for the service, and on December 1, 1947, Gross’ company, The Citizens Radio Corporation, received the first FCC certificate of type approval. Soon, additional approvals were granted to the Vocaline and Steward-Warner companies for Class B transceivers. Class B units all operated on 465.00 MHz with very low power. Weighing in at about 2½ lbs., they had regenerative receivers and were intended for short-range communications.

Only slight public interest was ever aroused in Class B; perhaps a few hundred transceivers were actually sold. You could shout further than you could communicate via these sets. Some people tried to convert WWII military surplus gear (such as the BC-645 airborne IFF transceiver designed for 470 to 495 MHz use) for this band, but it wasn’t worth the trouble.

The technology for Class B just wasn’t there during that era. Class A did see a bit of

(Continued on page 74)
NEW! Lower Price Scanners

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The most interesting questions we receive will be answered here in each issue. Address your questions to: Tom Kneitel, Editor, Popular Communications magazine, 76 North Broadway, Hicksville, NY 11801.

Is Your Past Showing?
Our high school radio club maintains a large reference library of radio magazines. While browsing through some old copies of POP'COMM's sister magazine, CQ, I came across a picture of a QSL card (March '57 edition). This card was from K2EOF, and what caught my eye was that the address on the card was 175 West 93rd Street in New York City. This is the same address shown on the "ute" QSL's sent to you in those years, as often run in POP'COMM's pages. What's with your "secret" K2EOF call sign? Jimmy O'Rourke Brooklyn, NY

Russell G. Sheley Phoenix, AZ
I've enjoyed Alice Brannigan's historic information, she does a very fine job.

Richard Clark Apartado 273 La Vega, Dominican Republic
Alice Brannigan's writings bring in a huge amount of mail, most of it favorable. Reader Sheley didn't say how he became so familiar with the contents of magazines directed at a female audience (don't let me catch you reading Cosmopolitan again, Russell!).—Editor

A Ceiling Point
While shopping for a powerboat, the salesman told me that I can order it with a built-in CMT (cellular mobile telephone). Is this a worthwhile boating accessory and does it take the place of a VHF marine radio? Also, the salesman was vague as to the cost of owning a CMT, other than the fact that it would run up the price of the boat by more than $2,000.

George Politakos San Luis Obispo, CA
Like the man once said, if you're worried about $2K one way or the other, then boating isn't for you. CMT's have become as much a status symbol as they are communications tools; a powerboat salesman recently said that nearly every new powerboat sold gets equipped with a CMT. One of the deciding factors is if you have a need for the landline telephone call service they provide; another factor is if CMT base stations are operational (or soon will be) in your primary cruising area.

Also consider the cost of having one. The CMT's sold by most boat dealers run between $1,600 and $3,000, depending upon the frills. I have a CMT aboard my own boat and find that the basic service charge is $15 per month plus 25 cents per minute "air time" for off-peak calls and 75 cents per minute in peak periods (7 a.m. to 7 p.m. weekdays). Landline and toll charges are additional, and CMT owners pay for incoming calls as well as outgoing calls. Cheap, it isn't.

Furthermore, a CMT is not in any way a substitute for a VHF/FM radio when an emergency arises. If you intend cruising away from the immediate shoreline, your CMT will quickly go out of communications range of the cellular base and you'll find your CMT to be a wholly useless accessory. Given the fact that a VHF/FM marine radio can also be used for sending/receiving landline telephone calls, while also being useful for contacting other vessels and the Coast Guard in areas where a CMT is useless, I'd say that a CMT aboard a boat should be regarded only as a luxurious "extra" to a VHF/FM, HF/SSB, or even CB communications capability. CMT's on boats might turn out to be a passing fancy or they could become a standard piece of boating electronics. I remember when the Omni aircraft navigation system became popular with the boating crowd — but faded away when Loran came along. Before that, RDF units were the rage. —Editor

Cable Ready?
The cable TV system in my area provides service that is frequently interrupted by disruptions of varying lengths. If a broadcast station was as reliable as this cable TV system, the Federal Communications Commission would probably remove the station from the airwaves. It's very annoying.

Cal Westin Central Islip, NY
Some cable systems seem to have more trouble than others when it comes to service interruptions. The CATV system that serves my own area, for instance, provides low quality or no service every time it gets windy or there's heavy rain or lightning. There doesn't seem to be much value in complaining to anybody and you might want to do what many other CATV customers have done — put an antenna on your roof or get a pair of "rabbit ears" (and possibly a TV pre-amp to boost the signal level) and then connect the antenna lead to one side of a two position switch to which the incoming cable is also attached. This way, when the cable konks out, you can switch over to the antenna system with ease. Of course, you will see only the regular TV stations and none of the cable broadcasts with your antenna, but you may nevertheless find it all a little less annoying and inconvenient than watching a screen full of TV "snow" while waiting for service to be restored. —Editor
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Dealer Inquiries Invited
The "Packet Racket"

If you’ve been hearing some strange sounds on your scanner recently on channels that normally have voice communications, chances are that it is digital communications. Ham radio operators have been leading the way with radioteleprinter (RTTY) and now Packet communications. But many other services including police departments are jumping on this digital bandwagon. What does this mean for the scanner listener? Are we all doomed to listening to meaningless chirps? Not at all! Fortunately there are some very simple and relatively inexpensive ways to put yourself into the digital scene. If your scanner has an audio output (external speaker) jack, as almost all do, there is no internal modification to your equipment needed. You just plug an adapter into the audio output jack and your personal computer and you’re in business. Then an entire new world opens up...

Like the tape recorder and activator I use while I’m away from home, the computer will store messages even when I’m not there. Hooked up to a printer, the computer can give you unlimited message storage. There is a totally different experience with data communications monitoring. For one thing, you can be listening to a TV or another scanner radio and still see the data communications coming across the computer video screen. You can monitor in total silence if you wish; get “hard copy” from the printer for future reference; receive communications news bulletins from Westlink and the ARRL. It is fascinating to come home from work and see the information that’s been left on the “machine.” Scanning is certainly changing. I don’t have a crystal ball that tells me when or if voice communications will largely disappear from the airwaves, but there are a great many advantages for radio users. For one thing, police in patrol cars can make license inquiries almost automatically and receive typed replies. Amateur Radio operators using automatic systems can have contacts with friends who are storage. And digital communications installations—especially mobile ones; it appears that it is the wave of the future. Now is the time to put a toe in the water and find out a little more about it.

Summer – From A Firefighter’s Perspective

We all love summer. Baseball weather! Time for vacations. Time to put up that new antenna. But firefighters in the northern part of our country have another reason to be glad it’s summer. Reprinted here is a column recently sent us from The Sounder, the official bulletin of the Chicago Firefighters Union...

“Well another winter is gone. No more fires at 3:00 A.M. with minus wind chill factors. No more cold bodies and sore joints or sleeping in the whole next day, while coughing up soot or smelling like you’ve been cooking in a Weber grill for four or five hours.”

Happy summer!

One Person’s Response To The Electronic Privacy Act...

Reprinted here is a letter that C. Randy Engholm, Vice President and General Counsel for Creative Solutions, Inc. wrote to his U.S. Representative and Senators. Since Mr. Engholm is in the computer data industry, an industry that this legislation is supposed to protect, we thought you might be interested in his response. Clearly Mr. Engholm recognizes, as we do, a distinction between wiretap laws protecting data communications and open radio signals dispersed widely through the airwaves...

Dear Senator Levin,

It is not often that I take the time to write to my senator on a legislative matter that concerns me, so I trust that you will bear with me for a moment or two. In principle, I suppose, everyone is for “privacy of communications after hearing stories in the press about computerized intrusion of privacy. As a lawyer who also happens to be an executive in the computer software industry, computerized security and privacy issues probably concern me more than most. The desire to protect the privacy of electronic mail and various types of computerized databases is understandable, but it is not that S-1667 achieves these goals, I support it. Unfortunately, S-1667 as drafted also contains undesirable side effects. S-1667 contains provisions that would prohibit persons from accessing material broadcast on the public airwaves—provisions that have no place in legislation dealing with the protection of computer data transmitted over telephone wires or leased lines.

U.S. Justice Department Support Us... Then Reverses Field Under Pressure!

In the final House Judiciary Committee hearing on the Communications Privacy Act, the U.S. Justice Department testified that they did not believe that hobby listening to the radio spectrum should be criminalized. In fact they argued “the cellular transmission conceivably should be entitled to no more reasonable expectation of privacy than the cordless (phone) transmission unless it has been encrypted in some way.” The Justice Department’s position was that criminal penalties should come into play only if a person intercepted and divulged for tortious or criminal gain.

The testimony brought an angry response from Bill sponsor Representative Carlos Moorhead of California. In attacking the Justice Department position he said, among other things, “It’s very clear that there’s all kinds of mischievous things that you can do if you’ve got one of these scanners.” Unfortunately, it appears that a lot of pressure has been put on the U.S. Justice Department by Moorhead and others. There are other parts of the Bill (that have nothing to do with scanner monitoring) that the Justice Department wants changed. It now appears that they are willing to agree to criminalizing mere interception of open radio communications on some frequencies in order to get the other compromises they seek. Too bad; their original position was the only one with logic behind it and the only type of law that can possibly be enforced. I would like to ask Representative Moorhead and the U.S. Justice Department who will be assigned the task of making sure that my neighbor Mary Smith isn’t secretly listening to a scanner in her closet. Let’s tell everyone just how ridiculous this law is going to be!

“The Best Thing You Ever Did!”

That’s a quote from one charter SCAN member who wrote to us about the incorporation of SCAN Magazine into Popular Communications. It echoes the comments of the many letters we have received. And judging from the number of entries we are receiving for the photo contest and public service award, Popular Communications subscribers are finding the SCAN features interesting, too. We welcome all your comments and suggestions. Just send them to SCAN, P.O. Box 414, Western Springs, IL 60558.
America's First Silver Dollar

In Accordance with Its Established Policy, The Washington Mint
Hereby Announces a Limited Release of 4,115 Silver Dollars from the period 1772-1821.

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**Coin Description:**
The obverse of each coin bears the profile of Charles III, King of Spain, and the year in which it was minted. The reverse bears the crown and shield of the Spanish Empire, the 8 Reales denomination, and the Mexico City mintmark.
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Insiders Report:

The Enigma Of "Diplomatic" Shortwave Stations
The Stations Nobody Discusses! Are They Terrorist And Spy Stations, Or What?

BY TOM KNEITEL, K2AES, EDITOR

It has been said that only 10% of international diplomacy takes place out in the open, where the news media (and the public) can be reassured that the nations of the world are making at least some attempt to smooth over the ripples and wrinkles in their relations with one another. That means that the remaining 90% of international diplomacy takes place away from the eyes and ears of the press and the public and is anything but diplomatic—being a shadowy and intrigue-filled world of secret alliances, plots, schemes, tactics, deals, buy outs, payoffs, threats, promises, espionage, and pressure politics.

Far be it from me to give a blanket endorsement to such a cynical observation, but it is a fact that the world's nations are constantly accusing one another of substituting terrorists or espionage agents as ringers for legitimate diplomatic personnel. Only this past April, for example, six European nations expelled many Libyan diplomats for what they said were acts of plotting terrorist attacks against Americans. As such incidents become more commonly reported in the media, it would certainly seem that some of the "hidden" (90%) part of diplomacy has started to boil over into the 10% segment normally assigned to treaty signings, VIP visits, and the overall "H&S" (handshakes and smiles) or public relations areas of international diplomacy.

Color It Immune

The international diplomatic scene is a world unto itself, existing beyond the pale. Diplomats have special passports that provide them with virtual immunity from the civil and criminal laws of the nations they visit. The many thousands of members of this exclusive and elite circle are concerned with the operation of the United Nations, and with embassies, consulates, missions, commissions, and all manner of delegations and persons accompanying visiting dignitaries from the nations of the world.

Written correspondence between residents of this unique world usually avoids normal international postal channels, instead being transported by means of special high-priority sealed diplomatic pouches, often escorted by couriers. The letters, documents, and parcels contained in the pouches are exempt from import duties and fees, and from inspection from Customs, law enforcement, and postal authorities. They aren't any enforceable restrictions as to what they may contain. Theoretically they could contain firearms, narcotics, explosives, diamonds, cash, precious metals, stolen artworks, illegally ob-
tained archaeological artifacts, rare coins and stamps, industrial espionage materials, terrorist information, and national defense information obtained by espionage operatives. Indeed, over the years, incoming and outgoing diplomatic pouches have been suspected of being the means of international transport for such items under the protocol and mutual

laisssez faire courtesies nations extend to the world's diplomatic corps.

If you've always marvelled at James ('007') Bond's so-called "license to kill," note that Jimmy had nothing on some diplomats who have actually been involved in murders. Their "punishment" has consisted of being asked to return to their country of origin.

The embassies and other diplomatic buildings throughout the world are considered to be sovereign territory of the nations that operate within their premises. The laws of the host nation don't apply within the walls of such structures. Local police, nor members of any other local, state, or federal agency are permitted to enter without an invitation. That includes firefighters!

Enter Communications

As you might imagine, with electronic communications being such an integral part of our life and times, it was only natural that it would come to pass that diplomats would wish to use radio for their own purposes. Given their rather unusual status, communications stations operated by diplomats posed unique problems.

Radio receivers (in most areas of the world) aren't normally regulated or licensed, other than equipment owners having to pay a usage fee. Transmitters, on the other hand, have long been subject to licensing and regulation touching upon assignment of call signs and frequencies, operator qualifications, antenna height and lighting, technical and power standards, permissible communications, and interference. In light of the agreement to regard diplomatic operations on a hands-off basis, all of this posed an entirely new set of circumstances that weren't in the various agreed-upon courtesies—circumstances fraught with questions about motives and regulatory matters.

For instance, would diplomats of one nation be welcome to establish their own private communications networks in order to talk with one another and with their head offices in their home nation? Would such stations be licensed or regulated, and by what agency of which nation? Would (or could) there be any restrictions as to the content or nature of the transmissions? Who would assign the frequencies? Was there a way to police such stations, and any way to effectively enforce any agreed-upon regulations? What would be the status of such a station under conditions of a revolution or war in the home or host nation? What would happen if one nation decided to establish a shortwave communications station within its embassy without the consent of the host nation, or even against that nation's expressed wishes. Was there anything or anybody that could stop them?

In 1960, I wrote to the FCC to try to get a line on which federal agency was operating several mystery stations. This reply gave the cold shoulder, but actually (without meaning to) gave more information that it intended.

With receiving-only installations, there seemed no question as to regulation or licensing. For several years now the American and Canadian news media have been unhappily pointing out that diplomatic buildings (including residences) owned by certain eastern European nations look to be loaded with wall-to-wall electronics monitoring equipment established for the purposes of monitoring everything from VHF two-way communications to microwave frequencies used for relaying long-distance telephone calls. Other than calling attention to such monitoring installations, nothing can be done to discontinue them. Even the proposed Electronics Privacy Act of 1985, intended (if it is passed) to stop Americans from much shortwave and VHF monitoring, would have no effect on diplomatic monitors!

The Transmitting Scene

While today, much diplomatic traffic is sent over wirelines or via secure satellite links, a surprisingly large number of nations maintain substantial private shortwave communications networks capable of operating on many frequencies. Ostensibly, these networks are for the exchange of which can only be vaguely termed as diplomatic messages. While some observers feel that such systems are being phased out of existence (because of increased reliance upon satellite communications), others say that they are back-up systems or used for rapid delivery of low-priority traffic. Despite such speculation, the activity level from these stations hasn't diminished, and one might note that shortwave communications are far more suitable for getting messages through to terrorists or espionage agents in the field than are satellite...
transmissions. The fact is that these stations have the capacity to send messages far more insidious than invitation lists for embassy teas.

On March 26, U.S. and western European intelligence agencies intercepted a radio message from Tripoli to Libyan embassies in Paris, Belgrade, and Geneva advising agents to "prepare and carry out the plan." Similar messages flashed to Libyan agents in Madrid, Berlin, and Rome. Shortly thereafter, a rash of terrorist bombings took place aboard a U.S. airliner, in Berlin and elsewhere in Europe, followed by congratulatory communications traffic over Libya's embassy radio network. Yes, the messages that have been known to pass through diplomatic radio channels can be far more insidious than invitation lists to social events and teas!

Without going overboard with speculations about the potentials and motives of all diplomatic stations (since this probably varies widely from nation-to-nation, anyway), obviously at some point in time the governments of the world came to a meeting of the minds that gave the green light for the establishment of a diplomatic category of stations. Yes, the messages that have been known to pass through diplomatic radio channels can be far more insidious than invitation lists to social events and teas!

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The main gate at Vint Hill Farms. Part of the antenna farm can be seen in the background.

Interestingly, diplomatic stations operated at foreign embassies situated within the U.S. are required to use American calligns. Thus far, these have been issued from the special callign block KNY20 through KNY40. Such stations are all "officially" located at Washington, DC; run 1,000 watts and may be authorized for SSB, CW and RTTY operation. None are licensed or regulated by the FCC; that's because their diplomatic immunity supersedes the FCC's scope of authority. Instead, these stations are "sanctioned" by the U.S. Department of State and are operated under that agency's aegis and indulgence.

Although their "official" locations are in Washington, these stations are actually operating not only from Washington, but also from New York, Chicago, San Francisco, and several other larger cities. Although the news media frequently reports with alarm that various Warsaw Pact nations are operating shortwave communications stations from embassies and consulates, they never seem to point out that such stations exist with the full consent of our own Department of State. Perhaps this factor hasn't been realized by the news media, and maybe our Department of State hadn't wished to clarify matters and thereby voluntarily walk into the hornet's nest of controversy surrounding such stations.

Nevertheless, these stations are quite active and regularly reported in our RTTY and Communications Confidential columns by our readers. Of course, their communications are in their native language or are encrypted, or both.

The American-Operated Stations

The U.S. Department of State, it would appear, has its own network of shortwave stations here and overseas. Even though many of these stations have been reported for decades, they have always been shrouded in mystery and government evasiveness. Who has tuned the CW or RTTY bands and not heard stations identifying as KWS78, KKN44, KRH50, KKN50 and other ID's used by some of these stations?

The checkered careers of the American stations have never been fully understood or explained. Ultimately, they perhaps have more to do with "intelligence" operations than with anything that could be remotely described as "intelligence functions." One source reports that these stations are registered with the International Telecommunications Union (ITU) as stations of the CIA. Recent station listings produced by our own government indicate operation by the Department of State, although some say that it is the Department of State's Intelligence Service rather than the diplomatic end of the agency that's the salient factor here. One monitor states that the Department of State operates the stations on behalf of the Central Intelligence Agency! You'll have to make your own guesses.

These stations began appearing in about
A sturdy chain link fence topped with barbed wire tells visitors that they are not welcome down on the farm — Vint Hill Farms, that is! It is a high security installation.

We believe that this is the first published close-in view of one of the Vint Hill Farms antennas used for diplomatic (and other) communications.

1952, arousing immediate curiosity as to whether they were a commercial or federal operation. Records of the ITU at that time contained vague information. Locations for the stations in the U.S. were given as Washington, DC with geographic coordinates of 77-03W and 38-52N — sufficiently nebulous to signify the U.S. Capitol Building, the Pentagon, or the District of Columbia in general. Their points of communication were indicated as Swan island, the Canal Zone, Brazil, and Peru.

When the stations first went on the air they were using callsigns from the block KGA0 to KGA7. A couple of years later, those calls were phased out and replaced with callsigns beginning with the letters "KKN." Also, they were joined on the air by other stations with varying callsigns that were operating from overseas locations. Speculation and curiosity from within the monitoring community significantly increased, and that's when in early 1960 I decided to see what would happen if I wrote to the FCC to see what information they'd be willing to offer.

When I wrote to the FCC, I said that I was aware that these stations were government operations, but that I wanted to contact the agency responsible for their operation. The FCC's reply was evasive to the point of being a complete brush-off. Nevertheless, they did
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- EX310: Voice Synthesizer
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provide tacit confirmation that it was a federal operation. Moreover, their refusal to level with me as to which agency was involved perhaps indicated that we were looking at a heavy-duty outfit that was hoping to maintain anonymity. This was at least more information, such as it was, than had previously been available!

More recent federal records indicate the Department of State as the agency in charge of these stations, although only a few of the frequencies and none of the callsigns are given. The locations of the American-based stations are still given as Washington, DC. It does, however, appear that this announced location is a fudged and very liberal interpretation of the actual location.

In actuality, the American station signals are coming from the U.S. Army Garrison, Vint Hill Farm Station, U.S. Army Electronics Material Readiness Activity (an element of the Army’s Intelligence and Security Command).

Vint Hill Farms is nine miles from Warrenton, Virginia and 43 miles west of Washington, DC. Perhaps (or perhaps not) it is only coincidence that Vint Hill Farms is also the site from which many of the 4-digit so-called “spy-numbers” mystery transmissions are sent. This only serves to bring up additional questions concerning these stations.

While encrypted transmissions have been noted from these stations, often they are noted simply holding down a frequency with a callsign marker tape. Although specific KKN-type callsigns are assigned for use on most frequencies, at times the callsign KKN50 turns up on just about any of the “Washington” frequencies instead of the callsign that would seem to belong there. Could this, in itself, be a hidden message?

Inasmuch as the “spy-numbers” voice transmissions began appearing within the same general time frame as these CW/RTTY stations took upon their new “KKN” identities, and since they are all operating from the same high-security military transmitting site, it doesn’t seem unreasonable to believe that these stations are all more than distant cousins. None seem to have any tie-in to the 10% of international diplomacy that gets trotted out on TV every evening by Dan Rather, Tom Brokaw, Ted Koppel, and Peter Jennings.

Are these diplomatic stations? Yes, but probably from the more sinister area of such matters—a far cry from the embassy cocktail parties and formal receptions with everybody wearing morning suits and white gloves!

Hear Here!

Data on the American and foreign government-diplomatic stations has appeared, to one extent or another, in several publications available to the general public. Ferrell’s Confidential Frequency List (6th Edition, 2nd Printing) contains lots of good diplomatic station information. Michiel Schaya, a Dutch monitor, produced an interesting original overview of these stations on a worldwide basis although (by this own admission) it contains information gaps. His book, Embassy Radio Communications Workbook, is the first and most ambitious effort of its kind; it is available from some dealers in communications books and frequency registries.

Harry Helms book How To Tune The Secret Shortwave Spectrum (also available from dealers) contains fine insights along with some listings.

Essentially, the whole story has yet to be revealed, and the complete worldwide station roster has yet to be compiled. In my own files, I have collected a considerable amount of data (far more than anybody has yet published) on diplomatic stations operated by our Department of State and also by foreign governments with embassies and consulates in the U.S.

This information accompanies this report. Also included are some of the frequencies used by several nations that do not have stations within the U.S. You never know what you might hear in the way of activity on these frequencies. Interesting, too, to note that a flurry of activity in the diplomatic networks often heralds an international “incident” (usually of the terrorist kind), even though you can’t figure out exactly what they’re saying. All frequencies shown are ± 1 kHz.

In 1929, U.S. Secretary of State Henry Stimson abolished the only cryptoanalytic office within our government and thereupon uttered the now-famous observation that, “Gentlemen do not read each other’s mail.”

It was a remark that has inspired code-breakers and communications intelligence (COMINT) types for the past 57 years. Time has proven that the other fellow’s mail usually does contain interesting and useful information, especially if it is exchanged under the seemingly innocuous category of being “diplomatic” in nature.

The fact is that gentlemen do read each other’s mail, so have no fear that you’ll be alone in monitoring these signals. You’ll be in the company of gentlemen!
Andy is a Ham Radio operator and he's having the time of his life talking to new and old friends in this country and around the world.

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If you'd like to be part of the fun . . . if you'd like to feel the excitement . . . we can help you. We’ve got all the information you’ll need to get your Ham license. Let us help you join more than a million other Hams around the world and here at home. Who are we? We’re the American Radio Relay League, a non-profit representative organization of Amateur Radio operators.

For information on becoming a Ham operator circle number 110 on the reader service card or write to:

AMERICAN RADIO RELAY LEAGUE
Dept CQ, 225 Main Street
Newington, Conn. 06111.
Selected English Language Broadcasts

Summer 1986

BY GERRY L. DEXTER

Note: This list of English language broadcasts was accurate at the time of compilation, but stations often make changes in the hours and frequencies of their broadcasts with little advance warning. Hundreds of broadcasts are aired in English every day on the shortwave radio bands, many of them directed to an audience in North America. This is a representative sampling and not intended as a complete reference. Some broadcasters air only a part of their program in English during a given hour or may run the English segment into the next hour. Many stations, such as the BBC, VOA, Radio Moscow operate in English around the clock and only representative times and frequencies are listed for these. All times are in UTC. () indicates a start time so many minutes past the hour. Frequencies are in MHz.

<table>
<thead>
<tr>
<th>Time</th>
<th>Country</th>
<th>Frequencies</th>
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<tbody>
<tr>
<td>0000</td>
<td>Radio Sofia</td>
<td>6.070, 11.770</td>
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<tr>
<td></td>
<td>Radio Havana</td>
<td>6.100, 9.740</td>
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<td></td>
<td>R. Kiev (3)</td>
<td>7.165, 7.205, 9.520, 11.790, 11.860, 15.100</td>
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<td></td>
<td>Voice of Turkey</td>
<td>9.655, 11.905</td>
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<td></td>
<td>BBC</td>
<td>6.120, 7.125, 9.590, 11.750</td>
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<td></td>
<td>Voice of Israel</td>
<td>5.885, 7.410, 9.435</td>
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<td></td>
<td>Voice of Russia</td>
<td>5.960, 9.755</td>
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<tr>
<td></td>
<td>Radio Canada</td>
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TV DXing: E-Skip
There’s More On TV Than “Dynasty”!

BY JEFF PLOTKIN

W
hen one thinks of TV DXing, a picture of a huge TV antenna on a rotator mounted atop a tower or tall building comes to mind. This article will paint another picture.

There are various types of “skip.” Skip is a term that refers to the propagation of radio signals over considerable distances due to their reflection back to earth by the ionosphere. The type of skip that will be discussed in this article is E-skip. E-skip—which, to me is the most interesting form of skip—occurs when the E layer of the ionosphere becomes highly ionized. TV signals are then reflected at a different angle than usual, causing the signals to travel farther distances than usual.

When an E-skip opening occurs, reception of television signal from as far as 1200 to 1500 miles is possible.

First, let’s discuss the equipment needed to get started in TV DXing. Most obvious, you need a TV. A newer model with very good adjacent channel rejection is recommended. I prefer Sony televisions, since they have a very good tuner with a hot front end.

The most controversial area of TV DXing is the antenna. I use the rabbit ears (yes, the rabbit ears!), which are standard equipment on my Sony receiver. I do make a slight modification, though: I remove the rabbit ears from the back of the television and mount them on a camera tripod. This allows me to rotate the antenna through 360°, tilt it up and down, and make various adjustments to the antenna’s angle.

I also insert a pre-amp between the antenna and the TV. I find that the type that normally mounts on a roof pole or mast with the power supply in the house works best. I also use a medium-gain pre-ampifier, since a high-gain unit tends to overload the receiver.

I should point out that I live in the metropolitan New York area—Brooklyn, to be exact. My house is approximately 20 miles from the World Trade Center, the origination point of TV signals for the New York City area. I am on the ground floor of a two-story building, in a neighborhood filled with six-story brick apartment houses—a DXer’s nightmare!

Now let us discuss the technique. Knowing when there is an E-skip opening can be a little tricky, since E-skip openings are not affected by temperature or the time of day or night. My own experience shows that peak E-skip openings are most likely to occur from June through the beginning of August. The key to spotting an opening is to watch the lowest local channel in your area. In my case, that channel is Channel 2, WCBS-TV in New York City. E-skip will cause a horizontal rip or tear to appear in the picture. When this type of interference occurs, tune to the next open channel (the next channel for which there is no local TV station—Channel 3 in New York City) and see if there is a signal coming through. The antenna will have to be adjusted to obtain the best reception.

There may be times when you get this type of interference on your lowest channel, but when you tune to the next open channel you find no skip. Don’t give up; you might have to watch snow for a while, but the wait will be worth it when you finally catch an opening.

E-skip openings vary in duration. They can last from only a few seconds to as long as 30 to 60 minutes. Signal quality can also vary from poor to excellent. Most of the openings I have received had excellent picture and sound quality, and a number of the signals have even been in color!

My first experience with E-skip occurred in the second week of June, 1982. I noticed the interference on Channel 2 and switched to Channel 3, where I saw and heard a signal that I determined was not a local one. The station was televising a used car commercial at the time, and when the announcer gave the address and location of the dealership as Main Street in Pensacola, I realized I had tuned in Channel 3, WEAR-TV from Pensacola, Florida. I had experienced my first E-skip—using rabbit ears in Brooklyn, New York!

That same day, I logged four other distant stations—two in Florida and two in Georgia. Among the stations I have logged are:

WEAR-TV, Pensacola, FL
WEED-TV, Tampa, FL
WRBL-TV, Columbus, GA
WSAV-TV, Savannah, GA
KIF-TV, Mason City, IA
WJMN-TV, Escanaba, MI
WLBT-TV, Jackson, MS
KTV, Springfield, MO

Just to repeat, all of these loggings occurred in Brooklyn, New York, using rabbit ears, on Channel 3. On rare occasions, E-skip can affect channels as high as Channel 6. I have only experienced this type of signal once, when I logged the color signal of WCIX-TV, Miami, Florida.

E-skip can be a lot of fun, and, as you can see, you don’t need any expensive equipment or an elaborate antenna system. It might also mean watching a lot of snow on Channel 3 (which, incidentally, I recommend you don’t do in front of your wife or in-laws).

Be patient, and hang in there. You, too, can experience E-skip TV DXing.
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Radio . . . The Good Old Days!

The Statue Of Liberty And Other Historic Stations Are Discussed

BY ALICE BRANNIGAN

July 1986

What would July of 1986 be without a mention of the Statue of Liberty and its connection with communications? You got it! The little island in New York's busy harbor played its part in Miss Liberty's past.

It wasn't easy digging this information out, but I was able to piece together some tidbits. For instance, I couldn't find out when communications equipment was first installed on Bedloes Island (presently known as Liberty Island), although it was certainly there at least by 1917. The transmitting masts can be plainly seen in Charlie Chaplin's film, The Immigrant, released in June of that year. In 1917, the station was listed as WUM, with the official location as Ft. Wood on Governors Island, also in New York Harbor and two miles east of Bedloes Island.

In actuality, Ft. Wood was too large to fit in its entirety on Governors Island, so parts of it were built two miles away on Bedloes Island, thus creating a very high profile military presence in the upper harbor area so that all incoming vessels would have to pass between the two islands. I also suspect that WUM's two radio masts, located directly adjacent to Miss Liberty, were a symbol in their own right that projected a sort of high-tech image to new arrivals to the U.S.A.

By 1922, the call sign of the station had been changed from WUM to WVP. The station was transmitting on 208 and 223 kHz. By 1931 the frequencies at WVP had been expanded to: 159, 212, 223, 232, 4255, 6990, 8510, 12765, and 17020 kHz.

In the early 1930's it was decided to move the station's control point from Bedloes Island to Governors Island. The WVP receivers "through necessity" (as it was stated in 1933) were also to be relocated to Governors Island.

Speaking of necessity, that arrangement created one of major proportions! Controlling distant (remote) transmitters had traditionally been accomplished by means of landline or other "hard wire" direct connections. In the case of "The Voice of Miss Liberty" (as WVP became known), this arrangement was impractical.

A two mile cable would have been expensive, moreover it would have been vulnerable to intermittent damage from dragging ship anchors. The solution to the problem was the creation of one of the very first "UHF" (as it was regarded in 1933) remote control links.

The four transmitters at the Statue of Liberty were operated by a 55 MHz control link; a 1500 Hz tone turned the power on and off in each of WVP's four transmitters. A 600 Hz tone keyed the transmitters. The four WVP transmitters were operating on 159, 223, 7010 and 8510 kHz.

While none of this may sound particularly exotic relative to current practice and technology, in 1933 it was nothing short of dazzling in view of the 55 MHz frequency combined with the control circuit itself. I don't know how long the WVP transmitters remained on Bedloes Island in the shadow of Miss Liberty, but it's fitting that the station should be recalled at this time of tribute to our national symbol of freedom.

It's The "Most"

In past features, we've looked at materials issued by broadcasters claiming to have the tallest transmitting towers, the highest locations, the biggest ... the largest ... the most this or best that. But there's no getting away from the fact that station WSLM wasn't bashful about getting in on some of those good claims.

Located in Salem, Indiana, and with neither an especially tall tower nor heavy-weight transmitter (it was running 1 kW), it still managed to come up with an accurate superlatiave on an early promotional picture card; WSLM was the "most powerful radio station in south-central Indiana."

WSLM (1220 kHz) eventually went up in power to its present 5 kW rating. The station's founder, Don Martin, put WSLM on the air for the first time on St. Valentine's Day in 1953, thus dubbing the station "The Sweetheart of Southern Indiana."

Our (undated) card shows a neat one-story building with lawn furniture in front and a tower in the backyard. The location, known as "Radio Ridge," is located at the east edge of Salem on Highway 56. For the uninitiated, Salem, Indiana is about 27 miles northwest of Louisville, Kentucky.

Double The Pleasure

Only rarely do we get a chance to see a card hosting two different stations—that is, broadcasters not sharing the same transmitter, time, or frequency. We do have one on hand, however, and it turns out that when this QSL was sent out (in 1931), the only things that Los Angeles broadcasters KFI and KECA had in common was their studio
This transmitter was initially licensed to operate at 1 kW, with an authorization to test at 1.5 kW. Depending upon the results of those tests, KFI would then seek to run its full 5 kW. When the new transmitter was installed, the stations two towers were raised an additional 75-ft. for a total height above street level of 225 ft. (making them the highest structures in Los Angeles).

Eventually the station went into 5 kW operation, but by 1931 they had discarded the 5 kW rig and zoomed up to 50 kW and claimed to have the most powerful transmitter west of Chicago. KFI really made no bones about its status, and Radio Station Treasury notes that as early as 1926 KFI was calling itself “The Radio Central Super-Station. A national institution.” The KFI studios were at 1000 South Hope Street in Los Angeles, with the transmitting site at Buena Park, 21 miles to the southeast.

Seeing that KFI is still on 640 kHz, and running 50 kW, maybe nobody could argue with the claim to being a national institution that the station first made more than 60 years ago!

KECA, the other station on the QSL card, came along at its own route. It all began on April 15, 1925 as station KFVF (10 watts on 1440 kHz), licensed to Clarence B. Juneau, 8091 Santa Monica St. in Hollywood. In 1929, Juneau sold KFVF and it became KECA on 1430 kHz with 1 kW. Official records of 1931 show the new owner as the Pacific Development Radio Co. (Bertram O. Hellin and Alexander Hursh), although later records indicate that the owner was Earle C. Anthony, Inc. (as claimed on the QSL card).

KFI and KECA had both been NBC affiliates, one with the “NBC Red Network,” and the other with “NBC’s Blue Network.” When NBC’s two components were split into separate and competing companies, one called NBC and the other called ABC, Anthony was forced to divest his holdings of one station. That meant KECA went to ABC ownership, and by the end of WWII what with all of these changes, plus the effects of FCC frequency shuffling, the station was running 5 kW on 790 kHz from studios at 1440 N. Highland, and a transmitter at 2951 S. Fairfax. The call sign was later changed to KABC and, of course, this station is still operating and is the most powerful AM station in Los Angeles!

The combo KFI/KECA QSL card carries a space for an EKKO stamp, although none was supplied with the QSL we have. That’s what was missing then; now we’d like to see one of these good stations put missing Robert W. Morgan behind the microphone (local joke).

A 1927 view of the exterior of Japanese broadcaster JOCK in Nagoya.

Trans-Pacific

A popular form of DX‘ing in the early days of broadcasting, as it has remained throughout the decades, is pursuing the European, Asian, South American, and African broadcast band stations. One of the first major Asians to become a TP (Trans-Pacific) DX delight was station JOCK in Nagoya, Japan.

JOCK was one of Japan’s pioneer stations and its career began on 832.8 kHz, the common frequency assigned to the first American broadcasters. In 1927, however, long after American stations had increased in number and been shifted to different frequencies, JOCK remained on this frequency and running 6 kW. Thus its operation on a split frequency gave North American listeners a clear shot at hearing the station. This dream wasn’t to last forever; by 1931 the station had moved to 810 kHz where North American listeners had to try for it through the 5 kW signal of WCCO in Minneapolis, Minnesota.

By 1936, JOCK was running 10 kW, but...
WCCO had gone to 50 kW. Shortly thereaf- 
fter, JOCK called it quits on 810 kHz and 
got to 730 kHz. Although this move was 
probably inspired by reasons that had noth-
ing whatsoever to do with the status of 
North American stations on their frequency, 
it is worth noting that the only activity on 
730 kHz hereabouts consisted of four sta-
tions. One was in Cuba, three were in Cana-
da (and none ran more than 5 kW).

Our photo of JOCK was taken in early 
1927 and shows an impressive western-
style building flanked by two towers.

Today, JOCK is owned by the Japan 
Broadcasting Corp. (better known as 
NHK). It operates with 50 kW on 729 kHz; 
an FM outlet is on 82.5 MHz.

Dudley Doright’s Daddy

The sweltering month of July seemed a 
good time to introduce you to one of the 
northernmost communications stations 
they had “way back when.” That would be 
RCMP station C5AO, located at Pond’s 
Inlet, Baffin Island, NWT, Canada. C5AO’s 
location was north of the Arctic Circle and a 
place with four months of darkness!

Station C5AO was the RCMP’s man at a 
lonely outpost above the Arctic Circle. This 
station operated on 7596 kHz, but that was 
60 years ago!

The two-way communications station 
was, in 1926, manned by Constable Tins-
bury of the Royal Canadian Mounted 
Police, although it cannot be recalled which 
VIP’s car was ticketed in Ottawa in order to be 
assigned to this desolate outpost.

This station operated in the RCMP net on 
7596 kHz. The transmitter was designed by 
a former Canadian Coast Guard operator. 
A map crudely drawn on the wall shows the 
location of the two broadcast stations Con-
stable Tinsbury could rely upon for enter-
tainment—KDKA in Pittsburgh and KFKX 
in Hastings (Nebraska).

Shortwave Relays

It seemed like a good idea at the time, and 
still does! One of the first approaches to 
shortwave broadcasting in the U.S. was to 
have commercial broadcast band stations 
take out (experimental) licenses for short-
wave transmitters to relay their program-
ing. In the mid-1930’s, this was definitely 
the way to go.

Although the card isn’t dated, the vehi-
cles shown are all of mid-1930’s vintage. 
There were no broadcasting stations in Vir-
ginia Beach during the 1930’s and 1940’s, 
and (other than the U.S.C.G. station, 
which this station isn’t) there really isn’t any 
station I can assign to this photo.

Possibly it’s not a broadcasting station at 
all, but a maritime or police station. The 
Post Office location would suggest some 
other “official” station. If any reader has a 
notion about this station, please step forward. It seems like the wrong 
kind of antenna system to be USN radio 
compass station NCZ (375 kHz) in Virginia 
Beach. Or is it? I dunno!

Lancaster’s Broadcasters

Station WDBC on 1163 kHz, Lancaster 
(Pennsylvania), went on the air in 1922 with 
the big wave of early broadcasters that fol-

This view of Virginia Beach, Virginia, shows an impressive antenna system. Could it be that 
of station NCZ on 375 kHz? If not, then what station is it?
The early 1960's saw the initial trickle of pioneer broadcasters in 1921. Within a year, WDBC was joined by another local broadcaster, WGAL (1210 kHz), operated by the Lancaster Electric Supply and Construction Co. WDBC ran 50 watts, while WGAL had a mighty 10 watts.

By 1930, WDBC had become known as WKJC and was running 100 watts on 1200 kHz; WGAL (which had shifted to 1310 kHz) had caught up with a 100 watt transmitter of its own from 8 King Street. The year 1935 saw WKJC in status quo, but WGAL had again moved its frequency to 1500 kHz. It must have been a great piece of strategy, because within a year WGAL was Lancaster’s only broadcasting station!

In 1946 WGAL was on 1490 kHz with 250 watts. The early 1960’s had WGAL operating with 1 kw on 1490 kHz, but joined by 5 kw station WLAN on 1390 kHz. Eventually WGAL’s callsign was changed to WLPA. These two stations continue to operate—WLPA, with 1 kw (days) and 250 watts (nights), and WLAN with 5 kw days and 1 kw nights.

Our WGAL verification letter is curious. It’s a form letter apparently made up on December 19, 1930. The details of the verification of reception almost a year later are entered in the blanks and the printed date has been hand-corrected. This was submitted by Jack Hotchkiss of Florida.

Looks like a wrap for this time! See you next month.

---

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**HISTORIC HAM QSL’s**

You won’t find a listing for the Principality of Liechtenstein in your copy of the *Radio TV Handbook*; nor is the nation in any listings of “ute” stations. This is because Liechtenstein is so small that there isn’t room to do very much there except accommodate the tourist and business people who flock to the European mini-nation.

About equal to our District of Columbia in size, and with a population of 27,000 (same as Hopkinsville, Kentucky; Colton, California; or Gloucester, Massachusetts), the nation lies between Switzerland and Austria. Because of its liberal tax regulations, Liechtenstein is home to the headquarters of a wide range of international corporations.

Switzerland has administered the nation’s postal and communications needs since 1921, and Liechtenstein is united with Switzerland in a monetary and customs union. For this reason, Liechtenstein doesn’t even have a callsign bloc of its own assigned by the ITU (not that it needs very many callsigns). That’s left poor little Liechtenstein somewhat of an orphan in respect to such matters. Mostly, it’s had to make-do with callsign handouts from Switzerland.

Official ARRL calligns prefix listings for 1938 and 1939 show no prefix for Liechtenstein’s Ham stations, although the 1947 listing indicated that the prefix HE1 (from the Swiss bloc) was assigned to the nation (Swiss operators use an HB9 prefix).

The current Ham prefix for Liechtenstein is HB9, but no matter what prefix is used, it’s a nation that’s high on almost everybody’s list of places they’d like to see active and verified. The card we show here is from station HE9LAC back in 1958. The operator was running 100 watts with a Johnson Viking II. He was on 20 Meters. Nice catch!

In response to readers who have asked if they might submit Historic Ham QSL’s from their own collections for use here, the answer is “yes!” Please don’t send the original cards; good quality prints from an office copier will be suitable.

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**UNIVERSAL SHORTWAVE RADIO**

1280 Aida Drive
Reynoldsburg, Ohio 43068
Phone 614-866-4267
Portrait Of A Pirate—Anarchy On The Airwaves

The Story Of Tangerine Radio

BY JOHN SANTOSUOSSO

On a recent trip I found myself traveling down "the dark, deserted streets of a city destroyed by time." It was an opportunity to visit the "Voice of Revolutionary Anarchism in North America," or as it is better known, Tangerine Radio. "Raunchy Rick," the station's operator, gave me a warm welcome, and we settled down to discuss what is one of the country's most unusual and most philosophical radio stations.

Raucy Rick claims he received that name because he does not hesitate to speak what is on his mind. It is easy to understand why many would find his thoughts unsettling. He openly and without apology rejects much of what most of us have been taught to believe all our lives. Yet, in some ways the name, if catchy, is unfortunate. Rick can be disturbing but also refreshing. Here is a rare honesty and a mind that at least forces you to rethink your own values if you intend to reject his. You soon realize that in this modest apartment, which serves as both home and studio, lives a philosopher as well as an expert in the field of radio electronics.

How does one become an advocate of the abolishment of taxation, most kinds of work, landlords, government, organized religion, capitalism, communism, and even clocks? Rick's background in some ways is rather typical. His origins are middle class, and he feels his family would still fit that description. However, he discovered rather early that he could not conform to that mold. Rick left high school and spent two years on the street. It was the street that taught him anarchism, and he met several avowed anarchists during this period of his life. He also learned first hand of the harassment that street people sometimes experience from the authorities, but there was the reality of human kindness as well. Street people help each other. One, "Joe the Bug Man," bought him a meal at a time when he badly needed it. Later he would lose this good friend when he died a tragic and preventable death.

Now the time on the streets is over. In his mid-twenties, Rick works as an unskilled laborer at work he feels is meaningless but necessary for his present survival. He no longer learns anarchism on the streets but from those who share his views, as well as from music and books. Music from as far back as the turbulent 1960's has had an impact on him, and he has devoured certain classics in political philosophy. Among these are the works of the famous Russian anarchist Prince Peter Kropotkin. To hear Rick speak is to sometimes catch the echo of Kropotkin's words in such books as The Conquest of Bread and Mutual Aid. He gives praise to the Englishman John Stuart Mill's profound statement on individual freedom, the Essay on Liberty, and also reads current anarchist magazines published here and in Europe. Included in his favorites are The Match, Black Flag, and Resistance.

Raucy Rick's philosophy is featured on Tangerine Radio broadcasts, along with appropriate music to help emphasize the points he wishes to make. In addition the station publishes a quarterly paper entitled The Wave, which is a vehicle for anarchism plus pirate radio, technical articles about radio, and listeners' letters.

It is not surprising that Rick chose radio as the chief method for expressing his views. He admits to being interested in it at an early age, and he worked briefly at both a commercial and college radio station. The apartment studio is well equipped with items carefully acquired, mostly at Ham fests. In addition to the Hallicrafters HT32 transmitter, there is a tape deck for editing, a Phillips turntable, a digital delay for special effects, a Radio Shack mixer, two stereo cassette decks, and several other pieces of equipment. Two strands of wire thrown into some convenient trees serve as the antenna. Several sympathetic pirates supplement the Tangerine Radio 25-watt (100 SSB) signal by relaying programs. Rick keeps up with what other pirates are doing through personal contacts, monitoring broadcasts, and reading various publications.

By now it should be clear that Tangerine Radio is not just another run-of-the-mill pi-
rate radio station. Tangerine Radio and Raunchy Rick have a cause. Since plans for the station began in 1982, and its initial broadcast in March 1984, that cause has been the proclamation of revolutionary anarchism, a philosophy that calls for the overthrow and abolition of all forms of government.

Rick does not feel that this is some sort of impossible dream. The country did go through a revolution in the 1770's. Several revolutionary movements were at work in the 1870's, and there is the more recent situation in the 1960's, when many of society's previously accepted values were seriously challenged. Revolution can happen, and it can be peaceful.

In addition, Rick hopes and feels that our present conservative society really contains many latent anarchists, people who express elements of the anarchist philosophy without realizing it. Among these, he would include persons who identify with the seemingly conservative Libertarian party. Interestingly enough, several years ago while doing research on the views of various pirate operators, this writer discovered that a number of them claimed to be Libertarians.

The actual message transmitted by Tangerine Radio can be divided into two parts. Programs are very specific as to what should be abolished in today's world. However, the emphasis is not strictly on the negative. Alternatives to the present situation are also presented.

Among the things rejected by Tangerine Radio is work in its present form. "Work is a prison of measured time. Work is not necessary. All forms of work stink," declares Rick. He believes that the profit system and most work must be abolished. Although some have advocated a reform policy, reform of work is not really possible. Much work is useless and turns out unnecessary products. In order to illustrate this point, one program features such products as Mr. Cardboard Tube and a gene splicer.

Workers lose many of the rights they have elsewhere in society, such as trial by jury and the freedom to choose leaders. In addition some, including miners, work in very unsafe conditions. Rick remarks, "Work is a very dangerous and deadly experience. Work kills." All of this is to benefit the capitalistic ruling class. On the other hand, the Soviet system is just a variation that could be called centralized capitalism.

What could be done to change things? Some work could be automated away. Much of the rest could be made more pleasant as people work for each other and produce only the things they really need instead of missiles, cordless telephones, whoopie cushions, and electric can openers. There is a real need to raise agricultural products that are safe and contribute to a healthy diet.

Also earning the wrath of Tangerine Radio are landlords. The station says they can be paid forever for doing nothing productive and that they should have no rights. Rick claims they receive "a profit which arises through no creative or productive effort whatsoever." Thus, he adds, "No one has the right to extort rent."

Instead of paying rent Tangerine Radio suggests that shelter for all could be built by a cooperative society. It points to the example of Amish barn raisings, where the structure can be built in a single day and not a cent paid for labor. Other possibilities include "squatting" in empty buildings, a practice now quite popular in several European countries. Further alternatives are to leave the city to live in the woods or swamps. In fact Rick himself hopes to eventually leave the city.

Tangerine Radio states that the environment must be protected. The station plays a song that warns, "If man is allowed to destroy all he needs, he will soon have to pay with his life for his greed." The balance in nature is considered to be the great example of anarchy in nature, but government and capitalism destroy it. "Just about every atro-

city committed against the environment can be chalked up to one of two wonderful institutions in our society—government and capitalism," says Rick.

Again alternatives are advocated. Instead of expensive, environmentally destructive power companies, Rick calls for decentralized solar and wind power. People can often substitute natural substances for some of the dangerous chemicals that are so commonly used today. For example, citrus oil can be used to kill fleas, and many herbs have various useful purposes.

Organized religion and the police come in for their share of criticism. Rick believes both have been used to keep the working class in line. He would argue that "the police segregate working-class and poor minority people into certain neighborhoods. That is why so much crime is poor person on poor person. The police are not there to protect everybody. They are there to protect the ruling class."

Instead of relying on such institutions he says we must realize. "This is the only life there is. Make this a world worth living in." Sometimes direct action may help bring this about. It can include such noncontroversial things as growing gardens to more hostile activities as flogging computers and deliberately overpaying bills by a slight amount.

The ultimate goal is a voluntary society with no hierarchy. Decisions would be made by consensus with no compulsion. Is this just some sort of hallucination? Tangerine Radio claims that such a society existed in certain rural areas of Spain in 1936 and 1937 and included eight million people who freely organized themselves into over 400 collective farms and organizations.

If that is the dream, is anybody listening? Certainly a shortwave pirate does not reach the vast numbers that commercial and government media do. However, for now, Rick is content with the modest audience he does have. During his first year of broadcasting he issued 56 QSLs in response to reception.
reports, and several additional letters were received. He also thinks the shortwave audience is more sophisticated than the general population and thus better able to appreciate his message. He can point to some specific responses as well, including one thoughtful letter from a listener who obviously did not share his religious perspective but did agree with many of his positions on work. To be sure, there have been opponents, such as one writer from Georgia who felt that all of the Tangerine Radio philosophy had been said before and was useless anyway. Still, Rick thinks that most who listen and write are at least partially sympathetic.

What about the future? Raunchy Rick hopes that the Tangerine Radio of tomorrow will be bigger and better. He would like to involve more people in the production of programs and, if possible, eventually move the station to what he believes would be a more healthy location in a rural environment. The station magazine, The Wave, will continue, and it helps to finance the work through subscriptions along with advertisements for Tangerine Radio tapes, T-shirts, and other merchandise. In size Tangerine Radio hardly compares with commercial stations, but it would be a mistake to question its dedication or sincerity.

If you seek to hear the sounds from “the streets of a city destroyed by time,” remember it will not be easy. Broadcasts, like those of other pirates, must be made on an irregular basis. Probably your best opportunity would be to search the 41-meter shortwave band (although others have been used) some weekend. You might also try around the night of the full moon. Should you be successful and wish to send a reception report, or wish to inquire about Tangerine Radio publications and products, you can try sending your letter to last known address of Tangerine Radio, Post Office Box 5074, Hilo, HI 96720. Be sure to enclose three mint first-class stamps for the forwarding of your letter.

I left Tangerine Radio’s facilities with some reluctance. I could not agree with everything that had been said. However, I remembered the words of a dear friend who once told me that “if two people agree on everything one of them is not necessary.” What really made me hesitate to go was the realization that this place forced one to think. You may reject Raunchy Rick’s philosophy, but in one way or another you are required to react to it. Encounter it once and you no longer automatically accept the status quo. If you do not like his alternative future then you are encouraged to explore what you would want and why. If we have to do this sort of thing often enough, then somehow we may just arrive at a better world. I drove back down “the dark, deserted streets of a city destroyed by time.” grateful for the time I had spent there.

---

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Quick thinking and quick action are required whenever a rescue from a river or lake is attempted. A lake that is partially frozen and an out-of-control automobile can make a potentially dangerous situation even worse.

Officer Kevin Greener of the Essex County (New Jersey) Police was able to think and act quickly—and rescue a Newark, New Jersey man whose car had plunged into Weequahic Park Lake one cold February day.

Phoas Wells Jr., the operator of the car, was listed in good condition at University Hospital, where he was suffering from exposure after Greener had pulled him from the water, according to an account of the incident in the Newark Star-Ledger.

Greener and his partner, Sabino Zarro, had been driving through the park when they were flagged down by several people who had seen the car go into the lake. The two officers drove toward the accident site and began a rescue immediately.

Zarro remained on the shore with a rope while Greener waded and swam toward the vehicle, still dressed in his uniform, according to Sgt. Frank Schafer of the Essex County police scuba team. Greener also had to push aside chunks of ice in the six-foot-deep lake and contend with the lake's muddy bottom. Schafer said that there may have been five feet of mud on the bottom of the man-made lake.

"The car was still above water, but it was pretty close to being submerged. There was about three inches of ice on the surface, which of course, couldn't hold it," Schafer told the Star-Ledger.

Greener was successful in getting to Wells and bringing the man to shore. Greener was also taken to University Hospital after the incident, where he was treated for exposure and released. Members of the county scuba team removed the car from the lake shortly after the rescue was completed. Police had not determined a cause for the accident.

Schafer told the Star-Ledger that this type of accident was not that unusual. "For almost any reason, people lose control (of their vehicles) and plunge into water," he said. "Most of them, however, are very lucky as far as survival goes."

As far as Phoas Wells Jr.'s survival is concerned, he was lucky that someone like Kevin Greener was nearby when his not-so-unusual accident occurred.

The 30-year-old Greener has been a member of the Essex County Police force for four years. He receives a special commendation plaque and a $100 cash prize for his efforts. SCAN member Joseph De Luisi of Newark also receives a special plaque for making the nomination. Congratulations to both of you.

Send all SCAN Public Service Award nominations to SCAN Public Service Award, P.O. Box 414, Western Springs, IL 60558. Please send a letter along with background information, such as a newspaper clipping.

**Best Appearing**

At first glance, it would appear from this photo that Joe Allison of Wytheville, Virginia, is as much an aficionado of maps as he is of scanners, but that is not the case.

Joe's interest in scanning started when he joined the Wythe County Rescue Squad five years ago. He has since left that service to devote more time to college, but reports that he is still an avid scanner enthusiast. Joe also remains a certified EMT-A and Red Cross Multimedia first aid instructor, although he is no longer a member of the rescue squad.

**Best Equipped**

Our winners in this category usually have a lot of equipment or have it arranged in some special way. John J. McConnell of Concord, New Hampshire, qualifies as this issue's winner on both counts.

Equipment in his radio room includes a
There was a time, decades ago, that steam locomotives were a common sight in the American countryside. As has been told so often, the venerable "iron horse" opened the western states to trade with the east coast and Europe. To be sure, the steam locomotive was responsible for at least 80% of the romantic image of railroading that many people still cherish; the fancy parlor cars and little red cabooses count for the remaining nostalgia.

But railroading has changed; electric and diesel replaced the steamers altogether about 30 years ago. That event heralded a general decline in the romantic image of railroading and its links to our nation's pioneering history. Probably just because it was coincidental to the rise of inexpensive air travel and truck shipping of cargo, when the iron horse was put out to pasture, American railroads began to decline and slide into a financial morass. Many historic railroad lines merged with others and lost their separate identities; others completely folded up and sold their cars and trackage for scrap, their routes having become worthless.

But the iron horse was a tough old nag and wasn't quite ready for the glue factory. Although the majority of antique steam locomotives did turn into rust or were demolished in scrap metal yards, some (relatively) few have survived and have been lovingly restored to their original running condition. What's more, these are in regular use throughout America on short routes, offering a wonderful chance for the public to ride in antique passenger cars being pulled by a wonderful, noisy, smoky, smelly, soot and steam spouting miracle called a steam locomotive.

What's best, while there are perhaps about 130 of these tourist or excursion railroads in operation, some of them operate with the modern convenience of two-way radio. And, if you know where to look for them on your scanner, you can take your scanner with you this summer and tune in on the most unique transportation communications you'll ever hear, anywhere. And while steam trains always attract photographers, you'll probably be the only one on board or at trackside with a scanner!

By the way, these unique railroads are frequently used by movie and TV show production companies; you may be lucky enough to
tune in on the action while filming is in progress! The TV show Petticoat Junction made heavy use of the rolling stock of the Sierra Railroad for eight years. All of the railroading sequences for the TV film The Gambler, starring Kenny Rogers, also used a Sierra locomotive.

While some of the steam railroads operate in the regular VHF high band on Railroad Radio Service frequencies, many are rather eclectic and turn up on oddball frequencies from the Business Radio Service. You've really got to know where to root them out, and we have done just that for you here.

In the event of movie and TV programs being filmed, in addition to the frequencies listed here, also monitor the following for chatter between the production crews: 173.225, 173.275, 173.325, and 173.375 MHz.

Our roster of steam tourist and excursion railroads also (for good measure) includes frequencies used by scaled down replica antique railroads operated at several theme parks. A few steam lines operate year-round, most are seasonal.

So get out those scanners, don your best railroading coveralls and cap, and get ready to scan the steamers!

**Additional Reference And Reading**

*Steam Passenger Service Directory*, Empire State Railway Museum, Middletown, NY.


*The Movie Railroads*, by Larry Jensen, Darwin Publications, Burbank, CA.

*Rail-Scan Directory of Railroad Scanner Frequencies*, by Tom Kneitel, CRB Research, Commack, NY.

**Steam/Excursion/Movie Railroads**

Bay Area Electric Railroad Association, operated by the California Railway museum near Fairfield and Rio Vista (Colano County), CA. Antique trolley rides and occasional steam train excursions. Listen on 161.355 MHz.

Boothbay Railway Village/Museum, Boothbay, ME. A narrow-gauge steam line ("Boothbay Central Railroad") runs excursion trips over a 1.5 mile route. Monitor 151.715 MHz.

Busch Gardens theme parks operate several trains. The scenic railway at The Dark Continent (Tampa, FL) offers monitoring on 153.03 and 154.51 MHz. The Old World (Williamsburg, VA) has an Alpine train; listen 151.26, 154.57, 463.425, 463.575, 463.775 MHz.

Castro Point Railway, operated by the Pacific Locomotive Association of Richmond and Sonora, CA, is a steam excursion train offering a 3-mile route along the shores of San Francisco Bay. Communications are on 160.59 and 160.695 MHz.

Chelatchie Prairie Train Rides, Inc., of Woodland, WA, operates on 464.225 MHz.

Conway Scenic Railroad, North Conway, NH, runs old time steam locomotives on excursion trips over an 11-mile route. This line operates on 161.25 MHz.

Cumbres & Toltec Scenic RR, Chama, NM, and Antonito, CO, is a famous narrow-gauge steam line built in 1880. Plenty of TV and movie exposure in western films such as The Lone Ranger, Missouri Breaks, Bite the Bullet, etc. Monitor 160.305 and 161.505 MHz.

Disneyland, of Anaheim, CA, has steam trains operating on 154.60 MHz.

Durango & Silverton Narrow Gauge Railroad, of Durango, CO, was constructed in the 1880's to service the area's many silver mines. Today, the 95-mile route is a favorite tourist attraction. Base stations at Durango and Silverton communicate with the steam locomotives on 160.86 and 161.295 MHz.

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This UHF antenna is mounted on the terminal building of the Delaware and Ulster in Arkville, New York. Obviously this excursion railroad is radio equipment, but hobbyists haven’t (yet) discovered their frequency.

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**East Broad Top R.R., of Rockhill Furnace near Orbisonia, PA, is a narrow-gauge steam line built in 1873. Also abandoned in 1956, it went back into operation for excursions over a 10-mile route in 1976. Possible operation on 161.255 MHz.**

**Eureka Springs & North Arkansas Railway, of Eureka Springs, AR, runs antique wood-burning steam locomotives over a 4-mile route. They operate on 160.275 MHz.**

**Fort Wayne Railroad Historical Society, Ft. Wayne, IN, offers special steam excursions to Big Four and Holly.**

**Great Adventure, a large theme park in Jackson, NJ, runs antique steam excursions during the warm months. Park operations are on 154.36, 154.60 and 444.675 MHz.**

**Great Divide, a theme park in Smithville, NJ, runs a scaled-down reproduction of an antique steam train. Operations are on 488.525 MHz.**

**Huckleberry R.R., operated in Plumas, CA, by the Genesee County Parks & Recreation Commission, is a narrow-gauge steam powered excursion train operating over a 10-mile route. Possible operation on 125.04 and/or 155.745 MHz.**

**J.B. Hill, of Jackson, OH, runs a 4-mile route for excursions. While steam power is used, so are electric and diesel engines.**

**J.E. Henry Woodburner R.R., is a scaled-down replica of an antique steam powered excursion train operating over a 10-mile route. Possible operation on 155.07 and/or 155.745 MHz.**

**Mad River & NKP Railroad Museum, at Delaware, OH, has 25 antique locomotives on 150 MHz.**

**Mid-Continent Railway Museum, of North Freedom, WI, runs a wonderfully restored historic steam train on a 3-mile route. Monitor 154.515 for their communications.**

**Minnesota Transportation Museum, of Hopkins, MN, runs an antique steam train on an irregular schedule over a 2-mile stretch of track between Lakes Harriet and Calhoun. Operations are on 163.355 MHz; possibly also 151.625 MHz.**

**Morris County Central Steam Railroad of New Jersey, NJ, runs communications on 160.875 MHz.**

**Mount Washington Cog Railway, of Mt. Washington, NH, uses a fleet of eight picturesque steam-powered pufferbelly locomotives (mostly built between 1870 and 1908) to move excursion trains up and down the side of NH’s scenic 6,288-ft. mountain. Listen on 160.411 MHz; possible additional operations on 151.655 and 151.025 MHz.**

**New Hope & Ivyland Railroad (also known as the Ivyland Railroad), of New Hope and Penndel, PA, operates a steam excursion train between New Hope and Lahaska, PA (an 8.5 mile trip). Monitor 160.425 and 161.473 MHz; possible additional communications on 152.16 MHz.**

**Pacific Scenic & Northern Railway, of Jamestown, CA, runs antique locomotives on a 2-mile stretch of track between 161.355 and 154.60 MHz.**

**Pike & Western Railroad, of Colorado Springs, CO, has been carrying passengers up and down the Pike’s Peak since 1891, on an 18-mile round-trip. These days it’s all dieselized, but still counts as a tourist line. Set your scanner to 155.4, 154.37, and 154.60 MHz; possibly also 154.515 MHz.**

**Sierra Railroad, located at California’s Railtown State Historic Park in Sonora, runs a 12-mile passenger excursion route through the "gold rush" country. It has appeared in many films and TV shows. The Great Northern Minnesota Raid, The Apple Dumpling Gang Rides Again, The Great Race, and Southern Flags theme parks all have railroad tracks. The park in Mokelumne, CA, operates on 160.411 and 160.575 MHz.**

**South Branch Valley Railroad, of Morefield, WV, runs excursion trains over a 4.5-mile stretch. Diesel engines rotate this railroad through highly scenic areas.**

**South Mountain Scenic Railroad, of Unionville, MD, is located in the historic hilly area of the South Mountain (near the West Virginia Border).**

**Strasburg Railroad, of Strasburg, PA, has a 9-mile stretch of steam powered railroad, and return. This is probably the most popular excursion line operating. A large railroad museum displays many artifacts of various antique red cabooses! The railroad operates on 151.34 and 160.575 MHz.**

**Tennessee Valley Railroad, of Chattanooga, TN, has several steam and older diesel engines that run on "excursion" type runs. Listen on 160.425 and 453.215 MHz.**

**Texas State Railroad, is a steam excursion line of a 23.5-mile route between Rusk and Palestine, Texas. It’s turned up in a number of films, including Lonesome Dove.**

**Virginia Valley Railroad Co., of Essex, CT, operates two restored antique locomotives that take excursion trains over a 10-mile route through the countryside. Listen on 152.36 MHz.**

**Whitehitchway Valley Railroad, of Connenville, IN, runs a 34-mile route for its excursion trains, pulled by antique steam locomotives. Monitor 160.65 MHz.**

**Wilmington & Western Railroad, of Wilmington, DE, has an 8-mile steam train trip that leaves from Winterthur (at Rockford and St Cloud) and up to Wilmington.**

**Winchester & Western Railroad of Winchester, VA, operates a tourist excursion train over an 18-mile route. Listen on 160.92 MHz.**

**Woodside Railroad, of Woodside, CA, runs a route through the enchanting Woodside, CA.**

Readers having additional information on any of the foregoing railroads, or on communications frequencies used by steam or excursion railroads not shown above, are invited to 1) List your information to the author, at PO Box 191, Broad St, Bicknell, NY 11801. If a sufficient amount of additional information is received, a revised roster will be published in a future issue of POPCOMM.
Pioneer Japanese Intercept Operations

Here’s The Story Of A Team Of WWII Monitors Who Broke Japanese Codes

BY GRAYDON A. LEWIS, N7FCO, Naval Cryptologic Veterans Association

Jim Pearson, pioneer Japanese Intercept Operator and “Dean” of the original group of operators. (Tom Warren Photo)

Pearson was chosen for individual duty aboard ship—not a Navy ship, though! Pearson and a few other Kana intercept operators were assigned to ride “first cabin” on various Dollar (later known as American President Lines) ships, which made runs to the Far East, including Japan. Arrangements were made with the company for “payment in kind” for those operators to ride the ships, along with a U.S. Weather Bureau Aerographer who would make weather observations. Each intercept operator obtained permission from his ship’s Master to string an antenna near the outboard rail of the weather deck, clear of all ships gear. The antenna lead-in trailed over the side and entered the porthole of the radioman’s cabin, one deck below. Each radioman brought along an RCA receiver, which was band switched to accommodate frequencies from 80 to 480 kHz. When not in use, the receiver was stowed under the radioman’s bunk. When in range of Japanese targets, and with his cabin door securely locked, the operator would copy Japanese target transmitters until the ship was no longer in range.

Although it might have sounded like fantastic duty for a navy sailor, it was not all the best duty. In late October, 1933, S.S. President Cleveland fought a 12-hour battle with a nasty typhoon in the East China Sea between Nagasaki and Shanghai. Three life boats were ripped from the davits and swept to sea. On the return leg of the same voyage, about four days out of Seattle, S.S. Cleveland went dead in the water for several hours due to engine breakdown, wallowing sickeningly in a majestic westerly swell.

After the 44-day round trip, the ships laid over in Seattle, and the Navy Intercept Operators bunked down at the Seattle “Y” until the ship departed once more. This welcome break also allowed Jimmy Pearson and other operators time for mail and pay at the Thirteenth Naval District Headquarters, and to mail the intercepted traffic back “home” to Washington.

Pearson’s 1930 code run, copied on a modified Underwood typewriter. (NCVA photo)

This article was reprinted courtesy of Naval Cryptologic Veterans Association.

THE MONITORING MAGAZINE

July 1986 / POPULAR COMMUNICATIONS / 35
Announcing RX325 Scanning Receiver

TEN-TEC, Inc. of Sevierville, Tennessee, longtime American manufacturer of radio equipment, is introducing a high quality, moderately priced scanning receiver to the shortwave listener market. An attractive, "high tech" appearance compliments a full range of needed standard features and available options in this new product.

Twenty-five high capacity memories will store not only frequency and mode but also the tuning rate selected. The memories can be scanned or tuned using the rotary knob. Memory lockout provides temporary removal of any number of memorized frequencies from the scan operation, yet retains them for later recall. Scan rate is front panel adjustable for both memory and program (band) scan. A "scratch pad" is even available for temporary, single entry memory.

Frequency coverage of RX325 is 100 kHz to 30 MHz. Three mode switches select AM, LSB (CW), or USB (CW). Standard features include blue vacuum fluorescent display, 6 kHz and 2.7 kHz filters, noise blanker, front end attenuator, lighted S meter, switchable AGC, clock/timer, built-in speaker, and AC adapter.

Literature can be obtained from TEN-TEC, Inc., Hwy. 411 E., Sevierville, TN 37862.

Wireless Tour Guide System For Manufacturing Plants And Museums

Sennheiser Electronic Corporation introduced the Infoport™, an innovative wireless tour guide system designed to provide corporations, manufacturing plants, and museums with enhanced portable high-frequency cordless communication capabilities. Utilizing Sennheiser's SK 1010-7 100 mW single-channel narrowband transmitter and HDE 300-6 stethoscope headphone receiver, the Infoport™ system combines excellent transmission quality, recording capabilities, and listener comfort in a package unmatched for economy and compactness.

"With the ever-increasing importance for rapid and uninterrupted communication, we are pleased to provide America's manufacturing, corporate, and private institutions with a technologically superior wireless communication system that is portable, flexible, affordable, and designed to grow with their needs," Andrew Brakhan, President of Sennheiser Electronic Corporation, stated.

"Due to a number of advances in our radio wireless technology, Sennheiser's new Infoport™ provides unparalleled communications capabilities for the business manager, manufacturing representative, museum staff, and visitor requiring uninterrupted and private wireless communication in a crowded or noisy environment," Mr. Brakhan continued.

The SK 1010-7 transmitter accommodates a variety of Sennheiser microphones, including the MKE 10 omnidirectional lavaliier, the MKE 2010 omnidirectional microphone, and the MKE 4010 cardioid microphone. The SK 1010-7 microphone is available in two configurations: a cordless microphone for use with a SK 1010-7 microphone receiver or a SK 1010-7 microphone and a Sennheiser microphone recharger column.

According to Sennheiser Product Manager Anthony Cafiero, the Infoport™ system allows the individual guide distortion-free communication with listeners up to between 100 and 150 feet away. For shorter distances, the SK 1010-6 economical 10 mW transmitter is available. Both the SK 1010-7 and SK 1010-6 are otherwise identical. Each is powered by a single 9 volt alkaline battery. Typical periods for the SK 1010-7 and SK 1010-6 are six and 20 hours, respectively.

Sennheiser's Infoport™ system operates on a 37.16 MHz fixed operating carrier frequency. It is also available for operation on optional carrier frequencies ranging from 30 to 45 MHz.

The standard Infoport™ system consists of ten HDE 300-6 receivers, one SK 1010-7 transmitter, one microphone, and one Sennheiser GZL 406 recharger column for easy recharging. Additional features include an output jack that can be connected to a portable recorder or dictating machine and a single rechargeable accumulator for the HDE 300-6 headphone that provides more than 10 hours of continuous use. Optional accessories include Sennheiser's EZL 300-20 carrying case with lock and key enclosure, a molded insert for 20 HDE 300-6 receivers, and either a SK 1010-6 or 1010-7 transmitter in one compact attach case.

For more information on Sennheiser's new Infoport™ system, contact Sennheiser Electronic Corporation, 48 West 38th Street, New York, NY 10018-6297.

Ham Upgrade Cassettes And Books

Gordon West's Radio School, the nation's largest producer of Morse-code stereo training tapes, has now produced a 4-cassette stereo theory course entitled "Tapes 'N Books Theory Course." Each course contains four long-play, stereo theory tapes plus a fully illustrated textbook and the ARRL FCC Rule Book. Theory cassette courses are available for all grades of amateur radio licensing - Novice, Technician, Advanced, and Extra.

The 4-set theory course not only contains the precise questions and answers to be found on any amateur radio examination, but also the "sounds" of amateur radio. You can actually hear the difference between a properly adjusted speech processor, and the effects of overmodulation. You can hear the difference between AMTOR, ASCII, and Baudot. You will tune into actual Ham radio transmissions, and actually hear the difference between long-path and short-path communications.

The stereo tapes will play equally well on monoaural tape cassette players. The spark-

www.americanradiohistory.com
The switch allows "Talk-around" switching. The frequency range runs 800 to 3000 MHz. These sample CW QSOs will also assist you in preparation for any code test that may be part of your theory upgrade. Also included with this course is the FCC test questions syllabus, with updates; the new Form 610; a sample VEC-type theory examination; and all FCC and VEC forms for the test.

All course material has been upgraded to reflect the newly revised questions and answers. Each course lists a cut-off date for the questions and answers contained within the course. Free question and answer updates are available in case of a delay in taking the examination.

All courses are $19.95 plus $5.00 for First Class, same-day, postage, handling, and mailing.

For more information or orders, write Gordon West Radio School, 2414 College Drive, Costa Mesa, California 92626; or phone Monday through Friday, 10:00 a.m. to 4:00 p.m. PST 714/549-5000.

800 MHz FM Two-Way Radio

Offering broad-band, full frequency coverage, the TK-9015 800 MHz Synthesized FM Two-Way Radio is designed for those systems requiring a conventional 800 MHz radio. The unit's RX frequency range runs from 851 to 870 MHz while the TX frequency range runs from 806 to 825 MHz and 851 to 870 MHz. The TK-9015 comes with a 16 (semi-duplex) channel switch for maximum flexibility.

The unit also provides for a convenient "Talk-Around" switch. When activated, this switch allows the user to transmit and receive on the same frequency by re-terminating the transmit frequency to the receive frequency. The user can then bypass the repeater during two-way conversation.

The TK-9015 has die-cast construction, high-impact molded case front and cover, glass epoxy circuit boards; front mounted heavy-duty speaker; rugged microphone; and a "Temperature Compensated Crystal Oscillator (TCXO)" that provides for frequency accuracy and stability.

A control station system, external speakers, various microphones, and tone signalling boards are all offered as options. The TK-9015 offers a one-year warranty on parts and labor. For further details in the unit, contact Donald L. Phipps, marketing manager, Trio-Kenwood Communications, 1111 West Walnut Street, Compton, California 90220.

CW Made Easier

This manual and tape is a complete guide to assist you in passing the 5, 13, and 20 WPM code exams. This is not a learning the Morse code or speed building kit, but rather a program of successfully applied ideas, hints, and exercises to help you understand and deal with problem areas.

How To Read What You Write contains all of the following topics plus more:

- Why students do not pass the code exam - how to avoid the common errors
- Setting goals in your code practice
- Reading the material and finding answers once you've copied the code
- Dealing with code opposites and letters and numbers that are easily confused
- Word and sentence techniques
- Overcoming plateaus
- How to do when its test day

Lorraine McCarthy, N6C10, Code Programs Manager for Radio School, Inc., shares with you the experience and information gained from six years of working with students on the code. Learning to recognize and deal with the types of problems you are having with the code will give you new confidence in pursuing your upgrade.

How To Read What You Write is available directly from Lorraine McCarthy, Code Programs Manager, 315½ Ruby, Balboa Island, CA 92662. The price is $14.95 and all orders are shipped First Class mail the same day. Add $2.00 postage and handling.

IC-751A HF Base Station Transceiver

ICOM announces the new IC-751A 100 watt HF base station transceiver with general coverage receiver (100 kHz - 30 MHz). The IC-751A incorporates the high performance features of the IC-751, plus new and improved features requested by amateur radio operators worldwide. The IC-751A top-of-the-line HF transceiver is new designed and has the following outstanding features:

- All modes built-in (USB, LSB, AM, FM, CW, RTTY)
- 100% duty cycle transmitter
- 105 dB dynamic range*
- 12 volt operation
- Electronic keyer unit included*
- FL-32A 9 MHz at 500 Hz CW factory-installed filter*
- QSK up to 40 WPM*
- New LED annunciator*
- 32 memories
- Thermo-sensor for improved stability*
- New 9 MHz notch filter*
- New AGC and improved noise blanker*
- CW sidetone for code practice*
- Low noise receiver*

Optional filters include the FL-52A CW 455 kHz at 500 Hz, FL-53A CW-N 455 kHz at 250 Hz, FL-63A CW-N 9.0106 MHz at 250 Hz, FL-33 AM 9.010 MHz at 600 Hz, and CR-64 high stability 30.72 MHz crystal filters.

For more information, contact ICOM America, Inc., 2380 116th Avenue NE, Bellevue, WA 98004.

*Improved or new features over the IC-751.
Large vessels of all kinds and sizes, even those on the Great Lakes (such as this one), make use of LF radio.

L.F. Maritime Log

Overlooked By Many “Ute” Monitors, Maritime Communications Below 535 kHz Offer Some New Aspects To The Hobby

BY V.K. ALJUWANI

Maritime stations operating on low frequencies (that is, below 535 kHz) are plentiful and consist of radiobeacons and communications facilities. Those that fit into the radiobeacon category are well accounted for and appear in Ken Stryker’s Beacon Guide. The problem is that those that aren’t radiobeacons are bluntly overlooked and ignored by all of the popularly available frequency directories and logs. And yet, these are full-blown two-way communications, same as you’ll find in the CW portions of the shortwave bands dedicated to maritime communication!

The problem seems to be that these stations are similar to what Dorothy saw in the The Wizard of Oz—horses of a different color. They just don’t seem to fit comfortably in anybody’s registry. Since they aren’t radiobeacons, they obviously don’t belong in a listing of those stations. Neither are they broadcasting stations, so forget about looking for them in White’s Radio Log, the Vane Jones Log or even the WRTVH. Not being shortwave stations, they aren’t in the Confidential Frequency List or other utility station data sources, either.

The purpose here is to offer the listener a listing of these stations, including those located in North America, Central America, and the Caribbean. This covers virtually all stations operating within this geographic area and on frequencies lying between 125 and 535 kHz, and dedicated to maritime communications (except, of course, radiobeacons).

With the exception of operations on 518 kHz, stations shown here use CW, although some RTTY has been heard. Some have regularly scheduled transmissions usually consisting of traffic lists, weather, or navigational warnings (or a combination of these elements).

Our listing indicates the frequencies, call-
When you’ll find unusual in 485 to 515 kHz segment of this band is that normal non-emergency communications must cease for three minutes twice each hour. This takes place at 15 and 45 minutes past the hour. The purpose of the ‘silent periods’ is to avoid any possibility of causing interference to distress calls from ships on 500 kHz. Possibly, this custom (actually, a regulation more than a mere custom) dates back to the old days of broadly tuned spark gap transmitters and regenerative receivers that were popular in the maritime radio service.

In general, 500 kHz is a good frequency to guard. You probably won’t hear very many distress calls, but it’s the frequency used by ships and coastal stations attempting to make contact with one another. Moreover, many coastal stations transmit an announcement on 500 kHz just before a scheduled traffic list or other broadcast elsewhere in this band. In other words, if you stay tuned to 500 kHz (and can copy CW), you’ll get a fine overview of the action in the entire band.

The best reception between 400 and 500 kHz is at night. At sunset and sunrise especially, you can sometimes find unusual DX openings. What with the hefty transmitter power used by most of the coastal stations, combined with the range-stretching CW mode employed, plus the propagation characteristics of these frequencies, you should be able to drag in those DX stations at night with no more than a decent receiver and a longwire antenna.

Too bad these stations remain ‘unlisted’ in monitoring registries. In reality, this band is active throughout the world, although our listing here covers only the areas in and around our own continent.

<table>
<thead>
<tr>
<th>kHz</th>
<th>Call</th>
<th>Location</th>
<th>kW</th>
<th>Sked/Remarks</th>
</tr>
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<tbody>
<tr>
<td>126.15</td>
<td>KPH</td>
<td>San Francisco CA</td>
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<td>Secondary Freq</td>
</tr>
<tr>
<td>130.33</td>
<td>WCC</td>
<td>Chatham MA</td>
<td>15</td>
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<td>VFO</td>
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<td>2</td>
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<tr>
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<td>FFO</td>
<td>Stellatula, Greenland</td>
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<td>Julieneshaat, Greenland</td>
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**Note:** The MHz column is not visible in the provided image.
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40 / POPULAR COMMUNICATIONS / July 1986
Get That Wallpaper!
Mastering the art and science of accumulating station verifications usually requires a lot of expensive trial-and-error, to say nothing of a large investment in postage. Gerry Dexter’s latest book, Secrets of Successful QSL’ing, puts you ahead of the game in all respects.

With 225 countries verified and a QSL return rate of more than 90%, backed up by 35 years of DX’ing, Gerry knows all of the ins and outs, the clever little tricks and psychological gambits that bring about maximum replies to reception reports. Perhaps most important, he knows what not to include in a report.

Secrets of Successful QSL’ing is a 113-page book that discusses basic reception reporting formats for broadcasting stations, for clandestines and pirates, for Hams, broadcast band stations, “utes,” and FM/TV stations. He tells about when and how to include return postage, when and how to follow-up a report that seems to have gone ignored, getting station addresses, tech information on the stations’ signals, using international time, special techniques for Warsaw Pact stations, and just about anything else you’d ever want or need to know in order to be as sure as possible of getting that valued hunk of DX wallpaper. In fact, the book is illustrated with examples of some of the results of Dexter’s QSL’ing efforts.

In all, we’d have to say that Dexter seems to have covered all of the bases in Secrets of Successful QSL’ing. Couldn’t really think of anything that wasn’t discussed in this very complete guide for the DX listener. You’d be surprised how many ideas Dexter offers that you’ve probably never tried, or even thought of.

Secrets of Successful QSL’ing is $9.95 (plus $1 postage) from Tiare Publications, P.O. Box 493, Lake Geneva, WI 53147.

South Carolina Scanning
Larry Williams of Radio Research, 10 Elf Lane, Greenville, SC 29611, sent us a copy of his current frequency directory for the upstate (10 county) area of South Carolina.

This is a 67-page publication covering police, fire, EMS, industrial and various other relevant frequencies in and around Greenville, Spartanburg, Anderson and environs. It’s quite a nice publication and contains all sorts of little extra useful tidbits, such as out-of-band programming tricks and skip signal frequencies noted in this neck of the state.

By the way, the book was done on a Radio Shack TRS-80 color computer and looks quite good.

Williams has done a nice job with this local frequency directory and it’s something that you’ll find worthwhile if you hail from its coverage area, or if you’ll be passing through on your vacation. This book is $6.95 plus 73 cents postage.

You can order it from Radio Research (address given above).

Want Privacy?
Tired of telephone interruptions? Junk mail? Unwanted salesmen? Feeling “exposed” and vulnerable by your personal records? Want peace and quiet, and total privacy in regard to your mail/telephone/address, your bank accounts and finances, cars, possessions, health/education/court/credit and education records, and your personal identity?

A useful book simply called Privacy offers 28 brilliant chapters detailing hundreds of practical solutions. No matter what your circumstances, you can increase your privacy to the point of virtually “disappearing.”

Privacy expert Bill Kaysing tells you how to avoid electronic surveillance/eavesdropping, become “invisible” to investigators, stop generating financial records, and how to acquire telephone/mail privacy.

He tells you how to avoid Big Brother by staying out of government files, how to stop generating negative files and start cranking out helpful new records, how to generate a quick cash income, and how to interface multiple addresses to achieve “deep cover.”

This is a new updated and enlarged edition that includes expanded coverage of financial privacy including how not to use checking accounts, and how to employ all manner of really clever approaches to insuring that your earnings and savings aren’t an open book for strangers to review.

These are the best techniques we’ve yet seen for getting complete privacy and enjoying same. This large 160-page book is $18.95 plus $1 postage/handling to addresses in USA/Canada/APO/FPO. Order it from CRB Research, P.O. Box 56, Commmack, NY 11725.
Last month we briefly mentioned the news that Spanish Foreign Radio is to build a relay station in Costa Rica in order to provide Western Hemisphere listeners with a stronger signal. It looks like the power of this one will be 500 kW, which means you’ll probably be able to tune it in without even having to turn on the radio. As a bonus, the transmitters will also be used for broadcasts of “Radio Costa Rica International.” We presume, but don’t know for certain, that this will mean English programming from Costa Rica.

Another station we’ll be hearing more clearly in the future is Radio Beijing. The Chinese and the French have agreed to devote time on their transmitters to relaying each other’s programming. So, Radio Beijing will be aired over Radio France International’s hefty 500 kilowatt relay station in French Guiana. Again, we don’t know how soon this is going to begin.

Brunei, a small oil-rich state nestled against the north coast of the island of Borneo has been silent on shortwave since 1981, the culprit being old equipment for which parts were too hard to locate. It seems that the authorities in Brunei (the radio folks, anyway) are at least in the talking stage regarding a return to shortwave. D. C. English, the station’s Supervisory Engineer, wrote Florida DX’er Terry Krueger that letters of support from listeners will be used as part of the justification for a return to shortwave. So, here’s your chance to have a voice in a shortwave decision. Write to Mr. English at Radio TV Brunei, Bandar Seri Begawan, Negera Brunei Darussalam (Brunei).

Adventist World Radio Asia should be on the air with its new station in Guam by sometime this summer. The call letters KSDA will be used. Most of the broadcasts will be in various Asian languages, but there will be some English. The tentative summer schedule includes English from 0300-0400 on 15140, at 0900 on 15440, probably just prior to 1500 on 9870, 2100 on 7160, 2200 on 11880, 0900 (or 0930 more likely) on 11860 and 1000 (or 1030) on 11855. None of these look like ideal times for matches up in the U.S. It’s possible that English IDs will be part of the transmissions in other languages.

The Dominican Republic station we mentioned last month did run tests very briefly during the first couple of days of March, but wasn’t heard in the days following. It may well have returned to the air by now and may even be a regular. Tests were on 6245 during the evening and 15045 was slated for daytime use, but we can’t say if either will be a permanent frequency. The station is in Santo Domingo and is called Radio Caribe Mundial (Caribbean World).

Bill Loucks in Marion, Indiana writes to tell us that the 100 kW Harris transmitter at WHRI is feeding a log periodic antenna. Programs are fed via phone line from studios in South Bend to the transmitter in Noblesville, though the station hopes to do this via satellite eventually. Additional info from the station says two log periodic antennas are used, with azimuths of 42 and 157 degrees and an effective radiated power of four million watts. Noblesville is about eight miles northeast of Indianapolis and South Bend is about 115 miles north of Noblesville. Douglas W. Garlinger is the Chief Engineer at WHRI and signs the QSL cards which are now being sent. Any reader in the area who can supply us with some pictures of the station?

Kenya Beat That!

John Weersing in Wildomar, California vacationed in Kenya a while back and sends a clipping from Nairobi’s Daily Nation of 11 February. The paper carried an item complaining about poor reception of the Voice of Kenya within the country, particularly in western Kenya. The broadcasts are the most poorly heard on shortwave, according to the article. Now, the Voice of Kenya recently installed 250 kilowatt transmitters and many, including ye ed, thought reception of the station would improve considerably. Guess they have a way to go yet.

Inscrutable Chinese

An article from last year’s April edition of Asia Week was sent in by Ron Jack in Hinton, Alberta. The article deals with the several anti-Beijing clandestine broadcasters—Radio October Storm, Radio Spark, Voice of the People’s Liberation Army and Contingent of Proletarian Fighters—that occasionally air brief transmissions critical of the government of Deng Ziaopeng. Ron wonders if there’s any more information about these stations. The general consensus, Ron, is that they are Soviet-sponsored and probably come from the Vladivostok area. Some of them, at least, have been active off and on since the days of Mao. The stations apparently have an inexplicable habit of going off the air for summer vacation. Even when they are active it is only on a sporadic basis, with transmissions lasting only five to ten minutes. They can show up anytime between 0900 to 1200, most commonly on 7525 and 9627. Activity also seems largely dependent on the current state of relations between Moscow and Beijing. Most have been heard in the U.S., though not with any consistancy.

Caiman? Cayman?

One of our readers caught a very early broadcast of the anti-Cuban clandestine Radio Caiman. Even though he wasn’t alone in thinking that at first it was Radio Cayman in the Cayman Islands (wouldn’t we love it, were it so?) we won’t use his name here to save him any possible embarrassment. Anyway, the reader fired a reception report to Radio Cayman and got a QSL in response! Radio Cayman does receive foreign reports thanks to its 1555 kHz medium wave outlet, but they apparently didn’t check this one very closely. Unfortunately, Radio Caiman is an anti-Cuban clandestine, while Radio Cayman is a legitimate government/commercial outlet. The two have no connection. A QSL isn’t always a QSL!

The Rest of The Mail

Nancy Lindsay in Roanoke, Virginia would like us to pass along her thanks to whomever it was who recommended her for a spot on ANARC’s Frequency Recommendation Committee. Done.

Jed Hill in Falls Church, Virginia sends along a photo of a portion of the Radio Netherlands antenna farm on Bonaire, which he took while on vacation there. Jed says he couldn’t get everything in the picture—the
A part of the antenna installation at the Radio Netherlands Relay station on Bonaire in the Netherlands Antilles. Special thanks to Jed Hill, Virginia.

the place is so big! Jed went snorkeling just across from the Radio Netherlands installation with the accompaniment of a "constant hum of the trade winds whistling through the wires." Sigh! We really love getting station pictures from our readers, Jed! Thanks!

Do you use a Kenwood R-2000? If so, William Fry would like to hear from you at P.O. Box 135, Twilligant, Newfoundland, Canada. William is looking for a good receiver to copy CW and RTTY and was told his present set isn't very good for that purpose. Contact one of the SWL suppliers advertising in POPCOMM, Bill. They can give you suggestions.

John Mayson in Tampa, Florida is one of the big guns in "Flashdx," the Florida chapter of the SPEEDX club. They're looking for new members; if you live in Florida you're urged to make contact. Meetings are normally held in the Tampa area. Write John at 4009 Arroyo Lane, Tampa, FL 33624.

David Cole in Baton Rouge, Louisiana is studying for his Ph.D. in political science at Louisiana State University and relies on shortwave to keep himself up to date on the international news. David has his eye on a new Sony ICF-2010.

Two guys from Alaska, Gary Bledsoe (1722 Crescent Drive, Anchorage 99508) and Dave Twiggs of Ft. Richardson are interested in forming a club for listeners in that state. Gary says that DX from his location is a challenge with lots of noise, aurora, blackouts, and a "serious" distance between stations. However, Gary says the DX from Asia is "a snap." Gary holds Ham call AL7HM, but is inactive because he says he's having too much fun SWLing. Dave reports he and Gary are planning a trip to KNLS and promises pictures. We look forward to that!

The nice QSL card from Radio Pakistan pictured this month is courtesy of Stanley Mayo in Yarmouth, Maine. Stan says his Drake SSS-1 receiver was damaged as it was being shipped back to him after a tune up, so Stan is currently without a radio.

Sara Vickers of Pittsburgh, Pennsylvania recently moved up to a Kenwood R-2000 and checks in with a report this month. Welcome back and, in answer to your question, look for Radio Dublin International in the evenings on 6.910. Generally it's poor, but once in a while it comes in fairly well.

Garth Carmon of Edmonton, Alberta wants to know what type of QSLs we are looking for as possible illustrations. Just about anything, although we obviously have many of the more common ones on hand. Many of the covers are simply not useable due to too much or not enough contrast. The ideal situation is when readers have a duplicate they can send and don't need to have returned.

Another Ham getting into shortwave listening is Philip Ryals, WB6WGRU of Fremont, California. He joins us thanks to the transfer of SCAN subscribers to POPCOMM. Although he's getting started with an old Heathkit receiver, Phil sees an ICOM R71A on the horizon. You'll hope he checks in often, Philip.

Let's Hear From You!

We encourage your loggings (by country with your name and state abbreviation after each and some distance, i.e. white space, in between, please). Also comments, questions, observations, clippings, shack photos, schedules, and a wide variety of other what-have-you's are always welcome.

Listening Reports

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CIRCLE 14 ON READER SERVICE CARD

44 / POPULAR COMMUNICATIONS / July 1986

THE MONITORING MAGAZINE
Although the telephone industry is the oldest section of the electronics industry, it is still coming out with new products. Some of these are the same old phones in new bodies and some are applications of new technology.

One new product that has been introduced to handle a problem created by new phone services is the Telephone Sentinel, made by Telecommunications Technology Corporation of McLean, Virginia. The Telephone Sentinel is a programmable toll restrictor.

This device's primary use is for blocking "976" calls—at last relief for parents! Also, it can restrict all long distance calls, all outgoing calls, 411 calls, and 555 calls. The Sentinel will allow 911 emergency calls and can be programmed to allow only certain calls through or block specific numbers, such as the pizza delivery service or mother-in-law's number.

The Sentinel can be mounted on a specific phone or the whole line. It will work with both pulse and tone phones. Programming is done via the phone dial using an access code. The access code can be changed at any time by the owner. The restricted phone numbers can also be overridden. The Telephone Sentinel is available at phone stores, distributors, and Radio Shack (under the DuoPhone label). The price is about $80.

With the explosion of cellular phone service, accessories for cellular equipment are now turning up. One device is the AB1X cellular interface. What this device does is attach to a cellular phone and provide a standard RJ11 phone jack that will accept regular phone accessories. A cellular phone is really a radio, so it does not supply the kind of current or ringing signals needed for regular phone equipment. The AB1X takes care of this problem.

Phone answering machines, regular telephones, cordless phones, speaker phones, and even standard modems can now be attached to a cellular phone. It also has a tape recorder output jack to record phone conversations. It will also accept either tone or pulse dialing. The AB1X is made by Morrison and Dempsey of Northridge, California and costs about $400.

For those people who install phones and work on phone lines, there is a new test set on the market. This is the Ameritec AM-44 transmission test set. Until now, test sets have been large expensive boxes. The AM-44 is the same size as a hand-held digital multimeter. It will measure line loss, frequency, noise, generate tones, allow monitoring of the line and work as a speaker phone. Pulse or touch-tone dialing are accommodated, as well as MF interoffice signaling. MF interoffice signaling consists of tones used by the phone company for routing calls. This is a very sophisticated piece of equipment. Ameritec is located in Covina, California and the AM-44 costs about $2,500, which may seem a lot but is what such equipment costs, whatever its size.

For home or small business use, Panasonic has come out with a small PBX. Mitel has discontinued their SX-5 small PBX, so this introduction by Panasonic is on its own in the market. Small PBXs are just the thing in large houses and small business. The Panasonic KX-T616 will accept up to six incoming lines and sixteen extensions. Each extension can power three phones.

The new Panasonic PBX has all the usual PBX features, such as music on hold, paging, tone or pulse operation, intercom between extensions, hold, call waiting, speed dialing, toll restriction and SMDR. SMDR (Subscriber Message Detail Recording) is a printout of calls made and received, which extension they were made from, and the durations of the calls. Like all PBXs, the KX-T616 is fully programmable. The KX-T616 costs about $1,000 and telephone instruments, paging amplifiers, etc. are extra. This is relatively inexpensive for a system of this power and size.

The usual way to price a PBX is figure what it costs per extension. To do this, divide the number of extensions into the price. The Panasonic comes out at $62.50 per extension. In business use a price per extension of $350 is considered reasonable, so the Panasonic is quite a deal. As a PBX is easily installed, requiring only two wires per extension, any home owner or small businessman should be able to install this PBX.

Also from Panasonic are a couple of small key systems. Key systems have most of the features of a PBX, but require special phones and more wires per instrument than a PBX. There are two key systems from Panasonic—the VA-208 and the VA-412. The smallest system, the VA-208, will handle two lines and eight extensions. The VA-412 will handle four lines and twelve extensions.

Both these units and most PBXs will also handle a "door phone," which is useful for security or people who have trouble getting to the door. These key systems, being electronic, require only four wires per phone and can be easily installed by anyone competent with a screwdriver. The VA-208 costs about $1,600 or $200 per extension. The VA-412 costs about $2,300, with all extensions or about $190 per extension. These prices are higher than the PBX price previous, but bear in mind the phones are included. Yet a PBX regular 2500 set costs $60 each, as opposed to about $125 for a key system set.

Comdial, a company that used to be called Stromberg Carlson, has been making phones for about 100 years. They have an electronic key system called the Executive. This is a rugged piece of equipment that comes in many models, from three lines and eight extensions to eight lines and 24 extensions...
sions. Like the Panasonic units, they require four wires per extension.

The Comdial units come with a choice of two colors, ash and black. Every unit also has a built-in speed dialer. The price of the three line, eight extension system is about $1,550 fully equipped or about $180 per extension. The big system, eight lines with 24 extensions, costs about $4,500 or about $180 per extension.

Let's move on to the biggest selling and most used item in the telephone business—single line phones. There have been some changes and some new phones introduced.

From Europe there are two entries and one exit. L. M. Ericsson, the Swedish manufacturer, has withdrawn their top of the line phones from the U.S. market. The Royal Wood phone and the 1892 are no longer available. The Royal 100, known in the rest of the world as the Diavox, is still available. The Diavox sells for about $70.

The Royal Wood and 1892 phones may still be available in the stores, but if they are gone, if you want one, you will have to buy it on your next trip to Europe. The Royal Wood was a Diavox made of redwood. It was available in mahogany, cherry, rosewood, and walnut. A beautiful phone, it was perfect for the man who has everything. The 1892 was a reproduction of the world's first telephone with a handset. This was a wonderful piece of Victorian made with cast iron and gold leaf decoration.

France presents a very nice looking phone called the SE 84. This phone is available in many bright colors and has a bell adjustable in loudness and tone. It is manufactured by Sedeca, who have an office in Canyon Country, California, and costs about $70. Sedeca is a large French manufacturer that makes telephone equipment for hotel and business use.

For telephone sales or "boiler room" use, there is now a telephone specifically for headsets. The phone is about the size of a pack of cigarettes, so it can be clipped on a belt or attached with velcro on the side of a desk. It has a touch tone pad and ringer. For those hard to hear calls it has volume control. The unit comes complete with a head set and costs about $70. It is manufactured by Wicom of Tarzana, California who, for some bizarre reason, have decided to call the unit the "Walk 'N' Talk."

From Germany, the equipment manufacturer Krone have a well-built telephone available in many colors, as well as a brushed metal finish. Krone have an office in Wilton, Connecticut. Their phone sells for about $90.

Northern Telecom, the Canadian company that also manufactures in Nashville, Tennessee, have some new nice looking phones. This company was a Bell company back in the old days and make equipment that meets the Bell specifications. The new
residential phone is called Harmony and will sit on a desk or mount on a wall. It comes in five different colors, but not black. The price is about $65.

The other phone for single line use is the Quick Touch. This is a feature phone with built-in dialer and hold. It comes in three colors—sorbet, still no black. The price for this phone is about $100.

Appearing on the market these days are phones distributed by the RBOCs (Regional Bell Operating Companies). Judge Greene has not allowed these companies to manufacture products, but they may sell and distribute. Another thing that Judge Greene gave them was the right to use the Bell name and logo.

The result of this is that the RBOCs are selling phones imported from the Far East and marking the boxes "Genuine Bell." This is a misrepresentation. To the public, "Genuine Bell" means a phone manufactured by Western Electric—the "old" Bell system. The "new" Genuine Bell phones I have checked do not in any way approach the quality and performance of phones made by Western Electric, which is now called AT&T. Unfortunately, people will buy these phones hoping they are buying a well-made phone.

The world's biggest telephone manufacturer, AT&T, seems to have changed their standard $5000 zts from gong ringers to electronic ringers. This makes the phones lighter, which means they fall off the desk more readily. Refurbished AT&T phones with gong ringers are still available.

I wish I had more information about what AT&T is doing, but their PR people never seem to have the time to discuss anything with me. They want to keep the info a secret, I guess.

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CIRCLE 65 ON READER SERVICE CARD

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The TD-17 warns of the presence of nearby RF transmitters, within the frequency range of 1 MHz to 1,000 MHz, when the RF Alert LED turns on. The flashing Amber LED and audio tone give an indication of the distance to the bug. The Sensitivity control, used in conjunction with the two LEDs, helps you quickly zero in on hidden bugs.

The hand-held TD-17 weighs less than 7 oz. and is housed in a high-impact plastic case. Furnished complete with battery, antenna, instruction manual and one year Limited Warranty. Save $100 to $200 and order at our factory direct price of only $98. VISA and MASTERCARD accepted. Satisfaction guaranteed or your money back.

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On the subject of gong versus electronic ringers, this is a subject of much debate. The camps are well divided. Everyone has their point.

The gong ringer is the loudest ringer you can power off the phone line. It is a strident ring that will wake the dead and is hard to ignore. It adds weight and substance to the phone. The sound is very directional, so in a large open plan office it is easy to locate which phone is ringing. People have been conditioned over the years to recognize the sound of a telephone bell.

The electronic ringer, which warbles or chirps, usually has a warm pleasant sound that does not jar. It is always softer than a gong ringer, so people who do not have good hearing can have problems perceiving that the phone is ringing. Music lovers can have the same problem as the melodious tones from the phone can blend in with the music from the HiFi. Although the location of electronic ringers may be hard to identify, the pitch and duration can be changed. This way, unless you are tone deaf, phones can be differentiated. The volume of electronic ringers can be adjusted so they can ring as softly as you wish.
## U.S. Postal Service Station Roster

**Some Of The Stations Believed To Be Operating As Part Of The USPS System**

**BY RICK MASLAU, KNY2GL**

### Postal Inspectors: 169.65 169.85 MHz

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### The Monitoring Magazine

July 1986 / POPULAR COMMUNICATIONS / 51

[www.americanradiohistory.com](http://www.americanradiohistory.com)
Two Solid-State Satellite Antenna Motor Drives

Two new motor drives, both stressing simplicity of operation and reliable performance, have been added to Channel Master's Satscan line of satellite antenna positioners. The first, Model 6253, is a basic unit featuring easy-to-use pushbutton controls for simple up-down operation. The second unit (Model 6252) adds an infrared hand-held remote control for the basic Satscan. Operation of both units is quickly learned by the consumer. Pushing either button moves the dish. The consumer compares the LED read-out with the satellite locations recorded by the installer on the consumer's permanent satellite locator card, kept near the Satscan.

"Operating these Satscans is as easy as operating a basic TV," commented Channel Master's Don Berg. "For consumers who are not comfortable with today's key-pad consumer electronics technology, these Satscans are perfect," he continued.

Both models employ solid-state circuitry instead of mechanical relays, an improvement that will eliminate the industry-wide problem of motor drives "hanging up." The company believes that it is the first satellite manufacturer to introduce this solid-state technology to dish actuators.

Both units use low 36-volt DC operation, have non-volatile memory, heavy-duty ball screw linear actuator drive, and are protected by a weatherproof expandable jack bellows and motor boot.

The basic unit retails for $395 with the remote version selling for $495. They are available through Channel Master distributors located in over 400 cities throughout the United States.

Two New Mesh Dishes For The Satellite TV Market

Luxor North America Corp. has introduced two aluminum mesh satellite TV antennas for the U.S. market. The Luxor Satellite TV Antenna is available in a 9-foot, 12-rib design and a 10.5-foot, 18-rib design. Each antenna has "deep dish" parabolic geometry for maximum signal reception.

The Luxor antennas are designed for maximum strength with minimal lightness for ease of shipping and handling. Their basic structure is a 14½" parabolically-shaped steel hub supporting heavy-duty, steel ribs in a poly trans vinyl sheath. The snap-in mesh petals are rust-proof, hexagonal-patterned expanded aluminum mesh for a high strength-to-weight ratio. The outer rim, a rigid extruded aluminum rail anchored to the ribs, forms a solid framework for the petals.

Running the length of the poly trans vinyl sheath are extended channel "steps" designed for easy insertion and retention of the mesh petals. These make possible the antennas' quick step rib assembly. The mesh is laid on the steps and quickly snapped in place without the tedious fitting associated with slide-in panels. The mesh petals are finished in a durable baked-on, low-luster, black satin finish. All hardware is plated for weather protection.

Poly trans vinyl is tough, resilient plastic developed for the satellite field. It is invisible to satellite signals and, as a rib cover, creates no gap in the dish's reflective surface.

The new Luxor polar mount features self-aligning bearings that minimize pivot-point wear, a finely-adjustable declination offset for on-line satellite tracking regardless of geographic location, and provision for a linear antenna actuator. The antennas will accommodate a Chaparral Polatoror One, dual feedhorn, or sidewinder.

The two sizes of Luxor antennas are shipped UPS and packaged in easily-handled cartons. An optional LNA (low noise amplifier) enclosure is available. The antennas are U.S. manufactured to Luxor design, performance, and material specs. Each unit carries a 5-year warranty.

Full-Function Microprocessor-Controlled Satellite Receiver

Kenwood's new advanced design satellite receiver system represents a unique approach to satellite television reception. Unlike current products on the marketplace, which require manual operation for most or all of their functions, the Kenwood Satellite Receiver uses advanced computer technology to perform virtually all receiver functions. The KSR-1000 4 GHz Satellite Receiver,
KSP-1000 Satellite Antenna Positioner, LNB-1000 Low Noise Block Down Convertor/Amplifier (LNB), and KSA-900 Antenna Actuator is an interactive system, designed to function as a single unit.

The KSR-1000 serves as the control unit, while the KSP-1000 optimizes antenna position, the KSA-900 drives the antenna, and the LNB delivers the antenna output to the receiver. Once the system is installed, satellite broadcasts can be selected with a single switch, and transponder frequencies tuned in with a single tuning knob.

"Kenwood's new satellite system is as simple to use as a conventional television set," says Dan Petersen, Vice President of Sales and Marketing. "Microprocessor technology has helped us create the first truly convenient satellite receiver. You just select the satellite and tune it to the desired transponder."

The KSR-1000 Stereo Satellite Receiver is the heart of the system. Up to 18 satellite signals may be stored in the receiver memory. The KSP-1000 can be fine-positioned to any of 360 points, providing access to satellites anywhere in the sky. All transponder frequencies currently broadcasting have been preset at the factory, eliminating the need for any post-installation modification. A unique parental lock feature allows parents to "lock out" any two transponder frequencies on a locked-in satellite so that children will not be able to access adult channels. The dish antenna can also be completely locked by a pre-programmed numerical code which will prevent children from playing with the antenna.

The KSR-1000 is a true state-of-the-art product offering stereo reception and built-in Dolby B noise reduction for current Dolby broadcasts, such as those found on the Disney Channel, MTV, and several movie channels. The SCAN mode helps for preset of satellite position. Once a broadcasting satellite is located, the antenna position is locked in and the transponder selector can be used to tune in the transmission. The KSR-1000 is capable of receiving Mono/Multiple Stereo, Discrete Stereo, and Matrix Stereo signal and will automatically reproduce the audio mode of the signal received. A single infrared remote control unit can activate all system operations, making the Kenwood Satellite Receiver system the most convenient on the market today.

The KSR-1000 is perfectly complemented by the KSP-1000 Satellite Positioner. Like the KSR-1000, it is microprocessor controlled with positional data on up to 18 satellites stored in its memory. The microprocessor technology facilitates precise fine tuning, enabling the actuator to be adjusted to any one of 360 points for flawless reception. The KSP-1000 can also be activated by the KSR-1000's remote control, further enhancing the incredible convenience of this sophisticated system. A bright fluorescent digital readout displays all relevant information, including satellite number, antenna position and over-travel limits, while soft-touch controls are easy to operate.

Kenwood quality permeates each of the four components of the new satellite receiver system. From the clean styling and functional design of the components to the advanced technology engineering, the Kenwood Satellite Receiver system is truly high-end. Kenwood is backing the system with a complete 1-year warranty. Kenwood satellite dealers will emphasize installation and service, reinforcing Kenwood's commitment to the quality of this unique product. The Kenwood Satellite Receiver system (without antenna and feed horn) will be offered at a suggested retail price of $2,390.

Microprocessor Controlled Antenna Positioner

Prostar Microwave, Inc. is proud to announce the Pro XP-1 microprocessor controlled antenna positioner, manufactured by Pen-tec MTI.

Designed to compliment the Prostar XR-1 remote control stereo satellite receiver, all receiver and actuator functions can be controlled by the XR-1's existing remote control. The XP-1 remembers skew, format, and satellite position for up to 24 satellites. Other features include a 10-year non-volatile memory, parental lock-out, large easy-to-read alpha-numeric display, and programmable east and west limits.

Although designed to work together as a pair, the XR-1 and XP-1 can be used alone to compliment any satellite system. For further information, contact Wayne Gaines at Prostar Microwave, Inc., 2757 Baird Road, Penfield, NY 14526.
One of the best hand-held scanners made to date has been Regency's HX1000. However, unless you find some old stock sitting around in a radio shop, you won't be able to find the HX1000 anymore. Regency Electronics, Inc. has replaced the HX1000 with the HX1200, a hand-held in the same case, minus and plus a few features.

First of all, the HX1200's frequency range isn't as broad as the HX1000, even though they've added the 118-136 MHz aircraft band to the new model. The new HX1200 covers 26.15-59.995, 118-135.975, and 406.519.9875. The old HX1000 covers 26-65, 116-196, and 406-544 MHz, all FM only.

Two of the most exciting features of the HX1200 are that it can scan up to 45 channels and there is direct-channel access to programmed channels, something the 30-channel HX1000 doesn't have. For instance, if you want to lock in on the frequency on Channel 16 while scanning, all you have to do is hit "manual," "16," and "manual." That's a real time-saving feature you miss with the HX1000, which you have to manually step through the channels to monitor a particular channel.

If you want to use the lamp on the HX1000, you often have to fiddle in the dark to find the switch on the bottom-right-hand side of the keyboard. Even then, the light will remain lit for only 20 seconds in an effort to cut down on battery drain. However, with the new HX1200, all you need to do is activate the LCD viewing light is push the "push-to-talk-type" switch on the side of the radio. That's real handy and easy to use, especially for mobile use.

On the HX1000, the "PTT" switch is used to access a clock, something Regency decided to leave out of the HX1200. While I never used the clock feature for telling time on the HX1000 (most scanner listeners wear a watch, don't they?), it was nice in that I set the clock to 0:00 every time I charged the nicd batteries. Thus, when I reached about eight to nine hours of usage according to the clock, it was time for a recharge, eliminating the need to place it in the charger every day. By turning off the clock with the switch in the HX1000's battery compartment, it lapsed time only when the radio was turned on. Also on the clock switch inside the HX1000, there was a CPU reset position. If for some reason the radio's programming capability and operation locked up during operation, the CPU reset switch enabled the radio to operate again, however, all programming would be lost when throwing the switch. The HX1200 does tend to lock up, it happened to me at least three times. The HX1200 doesn't have a CPU reset switch, so hopefully the radio won't experience any lockup. The PTT clock switch on the HX1000 also doubled as a stop-scan switch. If activity caused the radio to lock onto a particular channel during scanning, you could hold the channel even after the transmission ended by holding the PTT switch down. There's no way to do that with the HX1200.

When I'm frantically trying to search out a particular frequency, I like to monitor the one channel while programming in the other. With the HX1200, the receiver continues to receive on the last entered channel while entering a new frequency or checking your search limits. The HX1200 mutes the receiver while programming in new frequencies, something that might prove irritating. I imagine there's a way to eliminate muting if you got out the soldering iron, I did it to my Regency M100 because it bothered me.

A couple of new features on the HX1200 includes a "clear button. If you goof while entering a frequency, simply push the clear button and poof—it's gone. With the HX1000, everybody probably has their own method to goof control. Mine is to hit "manual," others might just turn off the radio or enter the goofed frequency and then re-enter the correct frequency. The "clear" button on the HX1200 makes it easier. There is also an indicator on the HX1200's display to show the keyboard lock switch is on. An additional dot above the frequency decimal shows when the lock is activated so keyboard functions are disabled.

On the HX1000, locked-out channels are indicated by the channel number flashing, which can be hard to see while stepping through channels to review what channels might be locked out. On the HX1200, the letter "L," appears after the frequency on the display to indicate a locked-out channel in scan. It's a lot easier to see when reviewing all 45 channels. If you want to review all 45 channels on the HX1200, you must press the manual button each time to review each channel. If you depress the manual button and hold it down, it reverts to scanning until you remove your finger. The HX1200 slowly steps through the various channels when you hold down the manual button, thus eliminating the need to constantly push the manual button for each channel.

A drawback of the HX1200 is noise the radio generates as it's scanning or searching. It puts out a constant low tapping sound as it scans each frequency or searches through frequencies. That's not to say the HX1200 is noiseless. The HX1000 generates a slight "rushing" sound as you increase the volume control while scanning channels.

The HX1200 also has adopted Bearcat's infamous "rolling zeroes" on scan: The channel numbers scan as the zeroes roll across the display. The HX1000 just shows the frequencies and channel numbers during scan. I can't imagine what purpose the rolling zeroes actually serve. Let's see the actual frequencies! The HX1200's keyboard entry beep is a bit lower in pitch than the HX1000, too. Sometimes the beep on the HX1000 can be bothersome; it would be nice if the function could be user-silenced (on all scanners).

One feature Regency didn't carry over from the HX1000 to the HX1200 is the ability to zoom in on frequencies during search. The HX1000 has up and down search capability to fine the center of a received frequency. If you overshoot a received frequency on search on the HX1200, you'll have to start again on the search.

One annoying feature of the HX1000 is that you have to push "scan" every time you turn it on because it sits in manual on Channel 1. The new HX1200, however, remembers whether you were in manual or scan the last time you had the radio on and returns to that channel you had in manual each time you turn on the radio. It's nice to know the radio will scan each time it is turned on.

When searching with the HX1200, the radio won't return to the lower search limit.
The new Regency HX1200 hand-held scanner has replaced their popular HX1000.

unless the radio is turned off, in which case it automatically returns to search from the lower limit when turned on. With the HX1000, all you need to do is push “search program” and then “search scan” again to return to the lower search limit again. Another thing to note with searching on the HX1200 is that if you search on hold and move the switch to delay after it has locked onto a channel, the radio won’t automatically start searching again, as it would with the HX1000.

The HX1200 comes in the same case as the HX1000 and has a black keyboard, rather than the brushed aluminum face. The HX1000 has. The receiver is as good as the HX1000, which is excellent. You’ll hear a lot with this radio, including signals over far distances. Compared side by side, the receivers perform roughly the same.

A news release from Regency says the radio comes “programmed with 45 of the most popular frequencies.” However, I really wouldn’t consider frequencies such as 30.00 MHz a “popular” frequency. Some frequencies such as 155.340, the national medical emergency channel, were programmed in, however, I guess some were programmed in for test purposes.

Once again, the manual included with the HX1200 is typical of those included with most radios: they don’t tell you the whole story. Only a tinkerer such as myself will learn of some of the radio’s tricks, such as the “lock” indicator on the display.

In its news release on the HX1200, Regency says the radio is for those who “appreciate the versatility of a hand-held scanner when they want to keep up with the action at air shows and other outdoor events.” And that’s really the main difference between it and the HX1000. The HX1200 includes the aircraft band and it has 45 channels.

The HX1200 has a suggested list price of $370, however, mail order and telephone sales outlets are selling it for $220 or less.

Added note: For those of you really on the go and who might give their HX1000 or HX1200 a beating, one manufacturer of leather cases for two-way radios has come out with a model for the radio. Bee Electronics Inc. (2655 Gardner Road, Broadview, IL 60153) sells two models for the HX1000 and HX1200. Model No. 6540 fits both scanners and protects the radio with leather. Model 6545 also fits both radios, however, it allows access to the keyboard without removing the scanner. Both models retail for $46.95. For further information, write to the company or call 800-336-3115. The company also has a model (No. 9340) that fits the Radio Shack Realistic Pro-30 hand-held scanner and retails for $46.95.

We’d like to hear your comments at POPCOMM. We also welcome your letters, frequency lists, and photographs. If you have a question, don’t hesitate to send it in and we’ll try to answer it. Write: Chuck Gysi, N2DUP, Scanner Scene, Popular Communications, 76 North Broadway, Hicksville, NY 11801-2909.

Coming Soon In

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Back in the March column, The Old Farmer’s Almanac was mentioned in connection with meteor showers. The meteor showers can create exciting DX for the TV and FM listeners. As the meteors enter the earth’s atmosphere they can cause the reflection of the VHF frequencies, which will cause the signals to be heard greater distances than normal. The length of the signal burst is not very long, so it is important to have a tape recorder running to help in the id of the station. Of course, a VCR would be helpful when using a TV set for DXing anyway. The biggest shower of the year will be the Perseids, which will occur August 11-13 with the best time being at 4 a.m. (EST). The next best showers will be Orion on October 20 and Gemini on December 13. For Perseid point your antenna to the north, but for Orion and Gemini, south would work better. The time for best results is 2 a.m. for Gemini and 4 a.m. for Orion. The signals will not be particularly strong and will last for only a short time, so be prepared for fast work.

AM Stereo discussions among broadcasters seem to be taking a back seat for the time being as a general upgrading of the AM signal has become more important in order to compete with the FM stations. The National Association of Broadcasters is building a facility west of Washington, DC, on which they will erect two antenna systems in order to experiment with antennas proposed by two engineers which are designed to reduce sky wave propagation. This should reduce interference to stations on the same channel as well as adjacent channels, while improving local coverage. The tests will be conducted between 1600 and 1700 kHz. This is the same story I reported to you several months ago. The land has been purchased and construction has begun, but it will be next year before the station is on the air. I’ll keep you informed.

As far as AM Stereo is concerned the growth rate in the U.S. is not skyrocketing as Motorola and Kahn might like it to be. C-Quam has been accepted as the standard in Brazil, the country that has more AM stations than any other except the U.S. I have installed in my auto radio, twin decoders for C-Quam and Kahn and am planning a trip to Florida next week, so I hope to get some first-hand experience in listening to AM Stereo “on the road.”

If the static of the AM band is getting too strong to handle, how about some good reading. There has just been published in Baltimore a book written by a long time Baltimore broadcaster, Tom O’Connor, called Baltimore Broadcasting from A to Z. It is written in the trivia format and has lots of old-time pictures. Many shots are of radio and TV. Baltimore has lots of broadcasting “firsts” that Tom mentions in his book. If you would like a copy, send $8.95 (that includes postage) to Tom O’Connor, 116 W. University Parkway, Baltimore, MD 21210. Another book I really enjoyed, which is now in paperback, was Rocking America by Rick Skylar. Rick tells about the early days of rock at WABC in New York and even before, mentioning some of the early rock jocks, such as Jack Lacey, Freid, and others. Skylar’s book is published nationwide and should be available at many book stores. If you can’t find it, let me know and

### Station Updates

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I'll dig up the address. If the behind the scenes stories of radio operations are interesting to you this will be a fun book to read.

The other new book is the 1986 WRTV Handbook. It is the 40th anniversary issue and is jam packed with new BCB stations, both in the U.S. and abroad. It is much easier to find the different areas this year since they have gone to two colors of ink to separate the columns. It is advertised by several firms throughout the pages of POP'COMM.

Those who enjoy the RPU monitoring might try KABC-TV which, according to Robert Homuth, uses 26.190 MHz for program cueing. He also says the station QSLs. Send reception reports to Steven C. Fair, Engineering Supervisor (Mini-Cam), c/o ABC, 4151 Prospect Ave., Hollywood, CA 90027. Bob asks of other RPs in use and for the moment all I can suggest is keep reading, as we always include this type of report in the column. The other one you mentioned (WTVN on 26.250) is one of the most active.

My AM STEREO bumper sticker for this month comes from Edward Bunch. By the way I found another AM stereo auto radio advertised in the J. C. Penney catalog. Several people, including Richard Matias, have written to mention the Radio Shack units. I haven't found for AM Stereo bumper stickers, but readers have been sending them in each month so they have been in the column for the past six months or so without fail. I don't know if we'll have one next month... just have to wait and see. Roy Hafeli sent a sticker from his college station and cable broadcast station CFML in British Columbia, Canada. Interesting letter, Roy.

Bob Gallardo sent the kind of letter everyone likes to get. "I just wanted to tell you that the BCB loop antenna you described in the May, 1985 issue of POP'COMM WORKS GREAT!... Your directions were very clear and concise... The loop antenna completely cured the severe noise problem I had... Using the loop antenna with my Kenwood R-600... What more can I say? Bob said it all! Thanks for taking the time to write, Bob. Box loop plans are $5.50 and ferrite loops plans are $7.50. The ferrite loop includes a preamp, which by itself is $2.50 for the plan. The box loops normally don't need a preamp. Modification plans for the R-70/71 front end on the BC band are also $2.50. All plans are post-paid.

Shawn Axlrod writes asking about loops, saying he just discovered his long wire is hard to rotate! Don't feel lonesome, Shawn; even if you did rotate the long wire it wouldn't make much difference in the ability to null a station. Shawn also mentions the SR/SS times he uses for DX'ing in Winnipeg, Manitoba. I mentioned The Old Farmers Almanac a few months ago for getting SR and SS times in the U.S. for grey line DX'ing. They are available in Canada from the weather office (Environment Canada) in 15-year cycles for $5. Mention the closest major Canadian city when ordering.

Milton Strathoaller sent a letter with a whole bunch of questions, but did not include any return postage. I would appreciate getting return postage if the writer has need for information to be returned to him. I did answer Milt and would mention the questions here but most of them did not pertain to BCB DX'ing.
Any readers living near Garberville, California, may wonder what's going on at KERG. The station, when it applied for a power increase from 3 kilowatts to 51 kilowatts, was granted the additional power by the FCC. The KERG tower is located just over 60 feet from a California state Department of Forestry fire watch tower and apparently the antenna is nearly on the level of the fire tower's manned operation post. The state complained about the higher radiation level the men in the tower were facing and the FCC reduced the station to two kilowatts. The station, when it next applied for a power increase to 18 kilowatts, was granted the increase by the FCC. The state then complained about the higher radiation level near the fire tower and the FCC reduced KERG to two kilowatts. So, the FCC has decided to reduce KERG to two kilowatts. The station is also hoping to have the FCC increase their power to something more than two kilowatts!

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Here's what you've been looking for—an all new hard-hitting monthly magazine which gives a unique insider's view of what's really going on in the world of communications. POP'COMM is your primary source of information—bigger and better than any communications magazine, with exciting coverage of scanners, shortwave broadcast & utility stations, spy stations, pirate and clandestine broadcasters, RTTY monitoring, survivalist communications systems, FCC news, wiretapping and bugging, scrambling/unscrambling, surveillance/undercover communications, satellite & cable TV, sophisticated telephones & more. What you've been looking for all along! Take advantage of substantial savings over the newsstand price by subscribing now. Don't miss out on even one single issue of POPULAR COMMUNICATIONS—order your subscription now.

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with Mexico in place later this year giving stations on the Mexican clears some operating time at night. The Mexican clears are 540, 730, 800, 900, 1050, 1220, and 1570 kHz. An interesting note along this line is the power of a local station here on 1010 kHz. They are now on at night with 25 watts. The previous station that I heard on 1010 was WINS from New York, which had a listenable signal most of the time. Now neither signal is listenable on 1010. I live about five or so miles from the station running 25 watts. The feelings are mixed on all these low power assignments. I wonder how much listening is being destroyed. I spend some time at night listening to WNEW on 1130 kHz, and if a local came on that channel creating interference I would miss WNEW. There happens to be no other stations, AM or FM, with their format within the Baltimore/Washington market. There are stations playing old records but they don't have the "class" of WNEW and are not "interesting" listening. As this post-sunset operating continues many listeners are going to lose their favorite stations due to interference.

Power increases are in the works for many stations in Alaska, Hawaii, Puerto Rico, and the Virgin Islands. The FCC has decided to change the Class IV rules in those areas, making the stations come under Class III rules. This will allow some of the stations to increase their power to as much as 50 kilowatts. These increases will have to protect mainland U.S. stations operating on 1230, 1240, 1340, 1400, 1450, and 1490 kHz. The Caribbean islands have been subject to considerable interference from other islands across the water due to the high conductivity of sea water.

More power, more power—seems that's all you hear from the FCC. Well, the trend will not likely reverse anytime soon, so the best answer for the DXer is better receiver, better antenna. This is what we spend quite a bit of time on in this column and will continue to do so. This applies to AM and FM—especially to FM right now with the power increases coming faster each month since the commission has said up your power or forever be pinned to your current coverage. No one likes to be held down...so the FM power increases will continue until the deadline is reached. The only way to counter is with a better receiver and/or a better antenna.

How does one determine the different receiver qualities before spending mucho bucks? There is a book currently on the market which does just this for less than $20, "Radio Receivers, Chance or Choice". Also the World Radio TV Handbook does excellent reviews in their publications throughout the year. The reports are honest and they pull no punches.

That about runs the clock down for this month. Remember, your comments and suggestions and pictures are always welcome. The mailing address is P.O. Box 5624, Baltimore, MD 21210.
RADAR REFLECTIONS

RADAR DETECTORS AND THEIR USE

INTRODUCTION OF DETECTOR BANS DECLARED UNCONSTITUTIONAL

Across the nation state officials' frustration is escalating. Unless they find a way to slow speeding motorists on their highways, they stand to lose part of their federal highway construction funds. Frustrated lawmakers sometimes do strange things. Even though these actions aren't always appropriate, doing something—anything—seems to lower their blood pressure.

Statehouse frustration has caused a rash of unusual legislation lately; eleven bills have been introduced to ban radar detectors. Note that such bans are being considered this year in Maryland, Massachusetts, Maine, New York, Rhode Island, and Wisconsin, and, as president of Radio Association Defending Airwave Rights, Inc. (RADAR), I sympathize with the lawmakers' frustration.

But I'm worried that their frustration has impaired their common sense. Here's why:

Over 150 million Americans have driver's licenses. About four million radar detectors have been sold. According to federal figures, over half of our nation's drivers exceed the speed limit. Even if detectors were banned, over 71 million motorists would still be speeding. These numbers certainly don't justify banning radar detectors. I encourage radar detector owners in the affected states to ask their lawmakers to check their math.

To emphasize that radar detector bans cannot reduce speeding, I cite Connecticut as an example. During the first year of its crackdown on speeding, that state spent about $500,000 in overtime pay for troopers. This crackdown yielded 108,632 speeding tickets and a 29 percent decline in speeding motorists according to the state's transportation department. Connecticut is one of only two states with detector bans. If banning radar detectors was effective, Connecticut would not have spent a half-million dollars.

Even though Connecticut's detector ban has been on the books since 1962, troopers find it is almost impossible to enforce. Courts have ruled that possession does not imply use. Therefore, to convict a motorist of using a detector, officers must actually see the device being used.

Connecticut's experience is not an exception. No matter how they are written, detector bans are a law enforcement nightmare. Technological changes have reduced the easy-to-spot black box on the dashboard to a cassette, easy-to-conceal device. Shorth Onto setting up roadblocks and searching cars, officers cannot enforce a law prohibiting possession or installation of a detector. For these reasons, Connecticut lawmakers are currently considering making radar detectors legal again.

I believe detector bans are not only useless, but they also malign detector owners. These citizens are presumed guilty by association. Marketing studies reveal that typical detector owners are not lane-hopping speedsters. Usually they are people who drive frequently. They purchase radar detectors to defend themselves against malfunctioning or incorrectly operated police radar. These drivers realize that one out of every five radar speeding tickets is spurious. Detector owners believe the Constitution gives them the right to know when they are in a traffic radar's beam.

Because of this right, I doubt that lawmakers in any of these six states will actually ban radar detectors. I have seen over 27 state legislatures debate such bans. In each case, lawmakers decided against a ban because it violates drivers' freedom of speech. This includes listening to radar devices.

In addition, lawmakers have noted that the 1934 Communications Act allows only federal lawmakers to regulate radio receivers. Last summer the FCC reaffirmed that radar detectors are radio receivers. Therefore, state lawmakers cannot turn them off without tromping on federal toes.

All in all, I believe lawmakers who introduce detector bans are looking for a quick fix to relieve their frustration over a national problem. Unfortunately, their solution will work about as well as putting a band-aid on a split radiator hose on a hot summer day.

Vermont Is Illegally Confiscating Radar Detectors

The recycling craze has hit Bennington, Vermont's police department. They're trying to recycle an old law banning police scanners in vehicles and apply it to radar detectors. Lumper Vega found out about police recycling efforts the hard way: Officer Penny Kuzmak was stopped, confiscated his radar device, and gave him a ticket. Vega is charged with violating regulation T-13VSA3014—use of a radio receiving device in a vehicle.

Vega and his lawyer, Patricia B. Barr of Bennington, believe that in this case police recycling will prove futile. So do I. Four states (Indiana, Kentucky, Michigan, and New York) have attempted to apply these types of laws to radar detectors with no success. It is clear that the intent of Vermont's regulation is to prevent lawbreakers from evading police on radar, and also to prevent them from jamming police broadcasts.

Radar detectors neither receive nor interfere with police radio messages. The frequencies used for police communications are different than those used by traffic radar. Similar to an auto's AM/FM radio, radar detectors are simply radio receivers tuned to traffic radar. Detectors do not affect traffic radar any more than a radio alters a radio station's signal.

Bennington police seem to have fallen victim to an anti-detector virus that has infected the New England states. Sponsors claim that the bills they have introduced banning radar detectors will solve their states' constant struggle to comply with federal speed guidelines. States exceeding speed guidelines have been threatened with reductions in their share of federal highway construction funds.

I recognize that the issue is indeed serious, but doubt that any of the New England states will approve such legislation. In the last eight years, 27 states (a total of 75 bills) have defeated similar legislation. One of the main reasons is that lawmakers who respect motorists' constitutional rights cannot vote for a detector ban.

I hope that New England lawmakers will take a long look at Connecticut's experience. That state is now considering rescinding its 24-year ban on using and installing radar detectors. Connecticut's recent crackdown on speeders proves that banning detectors does not stop speeding.

There's only one thing more difficult than actually seeing a driver using a radar detector: That's trying to recycle an old law by charging a driver with possession of a radio receiver that is really a radar detector.

Janice Lee is the Editor of Monday, A.M., the newsletter of ELECTROLET, Inc.
Would you like to receive RTTY and FAX printouts on just one machine? Now you can with a Tactical Facsimile Recorder recently introduced to the U.S. military and various governmental agencies and commercial firms by Alden Electronics, Inc., of Westboro, Massachusetts.

The unit is a portable receiver that operates from 2 to 30 MHz. It is small, compact, lightweight, and comes in a carrying case. It contains a built-in synthesized HF radio for listening to worldwide shortwave broadcast stations. The antenna and operating supplies, including paper and the means to obtain printouts, are packed in the case.

Information about this recorder was found in a military magazine article about product developments. The recorder’s price was not given, but it can be assumed that it is quite expensive in that it is being made for professional use. Mention of the product is made here in hopes that a similar recorder will be manufactured in the not-too-distant future by a commercial firm for the consumer market. Alden, of course, is a supplier of the FAX equipment used by hobby users as well as professional users.

How are secret codes tested to determine their vulnerability to cracking? An article in the February 1986 PC World magazine, for which its author interviewed some cryptographers, says, “The customary modus operandi in cryptography is to publish your secret code in scientific journals, then wait as the rest of the cryptographic community tries to prove mathematically that it’s a piece of junk. Most codes are effectively cast into oblivion via this procedure.”

In this column last December, mention was made of an encryption system that had been used for nearly a decade by the military and federal government and may have been used to encrypt RTTY messages. The system, called Public Key Encryption (PKE) when it was developed by Massachusetts Institute of Technology nearly 10 years ago, uses “public” and “private” keys for coding and decoding messages. It can now be purchased under the brand name of “Mailsafe,” which is manufactured by RSA Data Security Inc., and is patented by RSA as a “Public Key Cryptosystem.” The firm has the exclusive patent from MIT to sell products based on PKE, and to license its use to other vendors.

Those of you who use microcomputers to store RTTY copy from HF radio should keep your eyes peeled to developments in language translation software and hardware. I have only seen brief mentions of such programs in the trade press and understand that there are still problems with translating material from foreign languages into English. As the programs become perfected, you should consider purchasing the ones for French, German, and Spanish, to use in translating RTTY news copy into English. It is not advisable to get software to translate the Cyrillic or Arabic texts you see on your computer screens (if they become available) because of the differences in the keyboard systems from what the Russians and Arabs use and what we use.

Two questions before we begin the loggings. Are any of the readers of this column who use RTTY monitors? (We haven’t seen recent Alice Brannigan RTTY loggings!) Has anyone within the continental United States been able to log any RTTY stations besides CFH on the VLF band? This column sure would appreciate loggings from our YL readers and VLF RTTY loggings from all readers.

RTTY Loggings

Time to turn on that old RTTY machine and view the action.

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Radar adorns the deck of NBOY, USNS Range Sentinel, a missile range instrumentation ship that has been logged with sending of RTTY traffic. She is operated by the Military SeaLift Command, is unarmed and noncommissioned. Propulsion is by steam turbine. Her crew consists of 14 officers and 54 men, all of whom are civilians, and 27 technicians. (Photo courtesy U.S. Navy)

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**Abbreviations Used in the RTTY Column**

<table>
<thead>
<tr>
<th>Abbreviation</th>
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<td>AA</td>
<td>Arabic</td>
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<td>ARG</td>
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<td>Broadcast</td>
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<td>EE</td>
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<td>FFC</td>
<td>Forward Error Correction mode</td>
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<tr>
<td>FF</td>
<td>French</td>
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<tr>
<td>faxes</td>
<td>&quot;Quick brown fox...&quot; test tape</td>
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<td>GG</td>
<td>German</td>
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<tr>
<td>ID</td>
<td>Identification/IED</td>
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<td>MFA</td>
<td>Ministry of Foreign Affairs</td>
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<td>na</td>
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<td>PP</td>
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<td>RRYY</td>
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2345: L0003, Argentine Navy, Rio Grande, Argentina, RRYY test to ZLE at 0950, 850/64R (Fred Heatherington, FL). ZLE is probably Royal New Zealand Navy - Editor.

3267: News in SS from TELAM, Buenos Aires, Argentina, at 0425, 800/64N (Dallas Williams, CO).

3694: RPTTH, the ID used by the Portuguese Navy base at Horta, Azores. Noted w/RRYY & foxes at 0259, 850/64R (Editor’s logging).

3999:2; HZJ, Jedish Aero, Saudi Arabia, RRYY at 0245, 425/64N (Editor’s logging).

4097:4; "Kilo Cinco Kilo" spotted w/RRYY to "Papa Cinco Charlie" at 1057, 850/64N (Editor’s logging).

4174: RRYY & "URBB DE UIVY" noted at 0245, 70/64N (David Alpert, NY). Welcome to the column, Dave! UIVY is the call sign of a Soviet ship, URB2 is the coastal station at Kaliningrad that the ship was contacting. Had you stuck with this contact you'd soon have gotten the name of the ship—Editor.

4172; WLO, Mobile, AL, w/WX in FEC mode at 0545 (Guy Atkins, WA).
BUOY NODZ, the MD). WA. Guess, it seems, that it was manually sent & also that it was from either MFA or PTT in Havana, working a station on another frequency, you described seems pretty common from these Cuban stations & also the weather you monitored—Editor.

10059: SS text with doubting or tripling of each word in succession. Was 425/66 at 2305 (Navary, VA). What this note indicates is that it was manually sent & also that it was from either MFA or PTT in Havana, working on a station on another frequency, you described seems pretty common from these Cuban stations & also the weather you monitored—Editor.

10080: NA, Buenos Aires, Argentina, n/k BC in SS at 0232, 800/100 (Navary, TX).

11006:3 The AFRTS commander in Los Angeles w/his SS at 0315, 800/100 (Navary, VA).

11052: ftc in an un-ID language noted at 0238. A Cyrillic keyboard appears to have been used but there were many Latin suffixes in the text. Some easily ID’d words such as "Lenin" were noted. Was 230/66 (Williams, CO).

11404:4 JMS) sending 5F group ftc at 2242, 450/50 (Walker, TX). Most likely from Havana—Ed.

11438:1 Coded w/ticket w/telegram in SS at EGEC sent at 1848 by DDKB, Hangaroo, Weito, Germany, 425/66 (Editor's logging).

12182: WTD, KUNA, Kabul, Kuwait, w/AA nx at 2000, 400/600 (Hetherington, FL).

12238:4 CD, Chile, w/lyric from 1200-1300, 425/66 (Hetherington, FL).

12352:0 Reception of SSB & very short 5F mag at 1445, 500/600. Suspect it to be E. German embassy in Havana (Editor's logging).

13161:7 Various w/Telegram in 2452/66R. Items include various Latin suffixes, 1348, 13510:

13489:4 VNC, VAP, Sydney, Australia, w/EE nx at 0240 to the Antarctic, 1155 in 300/600 (Hetherington, FL).

13497: Y2D, TANJUG, Belgrade, Yugoslavia, w/NC at 0245/66R (Freed, W/V Germany).

14100: w/BRT, Miami Metro, FL, w/coded wtx at 0300, 850/1000 (Hemmer Weber, IL; Atkins, WA).

14102: CLS, Havana, Cuba, w/EE nx at 0400, 450/450R (122, 438).

15307: SKGQ, the Polish refeer ship DZIECI POLSKIE w/telegram at 2421 in ARQ to station SP14, 425/110. (Walker, TX).

15346: LBN, the Norwegian chemical tanker YER HERON w/LOG in ARQ at 0010 (Jim Navary, VA).

15348: ICEI, the Italian passenger ship ENRICO C w/Telenor to Dakar via HECIB in Berne, Switzerland, w/telegram at ARQ in 2349 (Herting, CO). Jim, you noted that it was 713 ft. in length & 53,000 tons in 1966. MFA reference (Jane’s Merchant Ships) says 757 ft. long & 193 in (w/PROVENCE)–Editor. 

15350: WGD, the Soviet bulk carrier ANDROS ISLAND, w/EE nx at SVA in Athens at 0050 in ARQ (Navary, VA).

15354: UNICHR, the Soviet M/V ANDRONES w/EE nx at UFN in Noravask, 0006 in ARQ (Hetherington, FL). Editor's logging. Police combo bulk & Lincon carrier. For those of you unfamiliar with maritime abbreviations, M/V means "motor vessel." Other similar spelling seems to include M/S (motor ship), M/T (motor twin-screw, or motor turbine ship), M/G or M/GL (motor twin-screw, or motor turbine ship), S (steamship), T/S (twin-screw ship), TSS (twin-screw ship, steamship, or turbine ship) & TTS (twin turbine).—Editor.

15351: FPC2, CBLT, working WLO in ARQ at 0010 (Herting, MD). The CBLT-101 is a French cable repair ship. It is working somewhere around South America—Editor.

15354: SPMY, the Polish passenger ship STEFAN DĄBROWSKI w/telegram at ARQ via 0441 (Editor's logging). 

15355: UMOG, the Swedish bulk carrier HONKOLU, 1104/66, working NODZ, the USCGC WOODHULL at 0439 in 170/100R (Williams, CO). The cutter is a snagging boat for the USCG—Editor.

19820: RUZU, the Soviet nx outpat at Molozhzhenskyy, Antarctica w/coded wtx at 0315, 425/66R (Editor's logging).

The SASENCIA, Albidon, Ivory Coast w/lyric at 0344 in 425/66H (Editor's logging).

104352: 2AY. ATA nx in FF from Tiran, Algeria. w/telegram at 1440 in ARQ (Hetherington, FL). 

10959: SS text with doubting or tripling of each word in succession. Was 425/66 at 2305 (Navary, VA). What this note indicates is that it was manually sent & also that it was from either MFA or PTT in Havana, working on a station on another frequency, you described seems pretty common from these Cuban stations & also the weather you monitored—Editor.

10805: NA, Buenos Aires, Argentina, n/k BC in SS at 0232, 800/100 (Walker, TX).

11080: WLOR, the Swedish carrier M/V LINDBERG, Liberia, w/JSIA nx BC in EE at 0110, 800/100 (Navary, VA).

11106:3 The AFRTS commander in Los Angeles w/his SS at 0315, 800/100 (Navary, VA).

11121: 2AY, ATA nx in FF from Tiran, Algeria. w/telegram at 1440 in ARQ (Hetherington, FL). 

11185:1301, 1348, 13827.6: NNNONIM, USN MARS station, Gulfport, MS, w/telegram at NNNDNR in PR at 2237, 170/100 (Symington, OH).

11195: CLPI, MFA in Havana w/dipto ftc to embassies in the Congo, Guyana & Libya at 1730, 425/69 (Rich Knowles, NV).

11199: FTDN, DIPOLO, Paris, France, at 1730, 425/64. F/P nx BC, about 150 million francs set aside for treating air pollution (Editor's logging).

13462:8 CMEK126, Czech embassy at Havana w/5F groups to MFA in Prague at 1348, 425/100, followed by CQ ftc.

14724:3 TNL:, ASECNA, Brazzaville, Congo, w/TTY at 1448, 425/66 (Editor's logging).

14901: CLN451, Pl., Havana, Cuba, w/news in EE at 2005, 425/64. Items about Haitian situation (Phil Clindor, TN). Let’s welcome this new contributor to the ARH!

14922:4 ASP, Algiers, Algeria, w/AA nx at 2034, 800/600 (MFA's logging).

14932:7 5US, ASECNA, Namib, Niger, w/AA nx at 1730 w/flight plan in FF for a DC-8 to fly for observation in Mali. W5 2566 (Editor's logging).

14978:3 TNL77, Brazzaville Metro, Congo, w/TTY at 2237, 425/64 (Editor's logging).

15040:4 ASP, Algiers, Algeria, w/SS nx at 2034, 800/600 (Editor’s logging).

15063: 6RKF, TASS, Moscow, USSR, w/AA nx at 1535, 425/64 (Navary, VA).

15662:5 KX12LD, ARCO Marine's tanker AMERICAN SPIRIT w/TTY in ARQ at 1856 to WLO (Editor's logging).

18873:1 DIPOLO, Paris, France, w/FF nx, 320/60 (Frankie Gittens, Barbados).

Contributors to this column should note that there is normally a time lapse from the time you mail your loggings to POPCOM to the time they appear in print. Don’t waste time to see them in print before contributing more loggings! We’ll use what you send, don’t worry! Keep sending them regularly so there are plenty of loggings to use each month PC.
The usual scanner antenna is resonated away from the aero frequencies. The main antenna design emphasis is on the 150-MHz region while aircraft activities are found around 125 MHz, not much above the end of the FM broadcast band. Some scanners do not contain an AM demodulator and aeron band pick up is not included; hence, the aeron band antenna performance has often been a secondary consideration. There are top performance commercial-grade aeron band antennas available, but they can be costly.

Why not put your own together? You can even duplicate exactly the construction information that follows or use a bit of your own mechanical ingenuity depending upon the materials you have available. All you need do is to stick to the given dimensions and observe a few construction tips. Try to find some scrap aluminium tubing. You don't need much. Perhaps you have an old TV antenna in the basement or one up on the roof you no longer use. Watch out for neighborhood discards. Of course there are the flea markets and hamfests, too.

An omnidirectional antenna can be a simple versatile dipole cut for 125 MHz (Figure 1A). On the aeron band it will usually outperform the usual so-called all-band scanner antenna, particularly on this frequency. Mount it on a crossarm so the associated transmission line runs straight away from the dipole feed point by at least 0.2 wavelengths so as to sustain a reasonable omnidirectional pattern.

If you wish some directivity and gain in one general direction (you may wish to aim on a particular airport), you can go to a simple beam (Figure 1B). A parasitic reflector will give you a boost in that general direction with some decline in back pick up (even back pick up will be better or no worse than what you obtain from the usual all-band compromise antenna). In my own situation I can pick up a readable but not strong signal from the Philadelphia control tower, which is just not there when using an all-bander.

Omnidirectional antenna (Figure 2), was assembled from two pieces of ¾” aluminum tubing and a 22” length of 1” PVC piping that served as the crossarm. The latter is held fast to the top of the mast with a U-bolt assembly readily available from your hardware store or, maybe as a scrap item from a discarded TV antenna. Transmission line runs through the tubing from the dipole, exiting at the opposite end, then proceeds down the mast externally to the level at which the trip is made to your radio room. Note that this arrangement guides the line perpendicularly away from the dipole by the 22” length of the crosspiece.

Construction begins with the drilling of two terminal holes at the one end of the crossarm. Eye-ring solder lugs are attached to the ends of the inner conductor and braid of the transmission line. Push the line through the crosspiece and, then, pass the terminal bolts through the eye-rings. Now pass the terminal bolts through the end holes from the inside. Attach external nuts temporarily. Next cut the two 22½” lengths of aluminum tubing. Flatten one end of each and drill an end hole to accommodate each protruding terminal bolt. Bend each aluminum end at an angle of 90° and tighten to the terminals using nuts and lockwashers (Figure 3). Remember the transmission-lines eyebolts are held down internally by the bolt heads; dipoles, externally by the lockwashers and nuts. Sealant tape over the
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When a gain antenna is preferred, you can use the same basic construction; only this time a 47" reflector is bolted to the very end of the opposite end of the crossarm (Figure 4), and the U-bolt is moved along to the crossarm center (Figure 5). Flatten the central area of the reflector and drill an appropriate hole. Hold the reflector tight to the crossarm with a bolt/nut/lockwasher combination. If you like you can invest in another U-bolt assembly for a firmer attachment to the crossarm. In this case two properly spaced holes must be drilled in the reflector, one on each side of the very center of the reflector tubing. Again the transmission line exists from the reflector end and is returned to the mast in a lazy loop, where it is taped as it proceeds down the mast.

Aero Antenna Checking

In checking a scanner antenna you need some method of quick comparison with another antenna that you use as a reference. Furthermore, you must make your tests on weak signals because the combination of scanner AGC and squelch make it just about impossible to evaluate antennas on the basis of strong incoming signals. More details on this subject were given in the Better Signals column of the April 86 issue.

If you plan a directional antenna, you must always have knowledge of direction of signal arrival. You must know whom you are listening to! An aero frequency guide is essential. A very useful publication is Air Scan (Fourth Edition) from CRB Research, PO Box 56, Comma, NY 11725 ($10.95 plus $1.00 shipping).

If you are within range of a control tower, they represent an excellent test signal. Tower transmitters operate at low power and direct their signals upward toward circling and incoming aircraft. Thus, the overland range is limited and signals are weak and useful for testing. They also provide a positive bearing for checking directional antennas. My own location provides one tower signal arriving from due east (received with ease) and second one from due south (receivable on a good antenna). Also, there are towers a considerable distance away both north and west. Although the tower signals do not come through they represent useful testing facilities. All one need do is sit on the tower frequencies and wait for an aircraft that is requesting landing instructions from the tower. The aircraft signal is often readable because the aircraft transmitter is much higher than the control tower and usually of higher power.

Similar conditions exist for the FAA air route traffic control centers. There are a number of these centers spaced about the country. In addition they have remote-control transmitters in various locations about the center. If you learn the location of these centers you can use them in checking out the performance of receiving antennas. Again if you are located near to such a remote location you not only hear the calling aircraft but also the information sent from the remote site to the planes flying along the FAA air route. When you are a distance away from such a FAA remote, you can hear the planes calling in as they are enroute. Often they will give a geographical location and, if you know it, you have a temporary fix in checking out a directional antenna.

Small airports usually have transmit capability that is active only at specific times. There are often practice landing sessions and you can hear the small planes requesting landing instructions. If you are really interested, you can visit one of these airports and inquire about their radio facilities and equipment.

Aero listening is interesting and instructive. Send for your guide and begin to build special antennas for this band.

Kind Readers,

Thank you for the kind letters in response to my article on DXing with an antique one-tube radio. I'm happy to have brought back some fond memories. However, I should have mentioned I was also an O1A radio Ham. The Depression era Ham usually didn't pamper tubes and to get more output always used more than the recommended filament and plate voltages. Also rheostats and dropping resistors took money away from buying an extra battery to hook in the B series. My own home brew regen shortwave receiver and Hartley oscillator or MOPA O1A transmitters always operated with full storage battery voltage (kept up there with a Tungar rectifier power supply) and as many B batteries as an anemic pocket book could afford. Actually, we always rationalized that the "good-performance" emission life of the O1A was no doubt longer with high filament voltage, although total life may have been shorter. After all it was being reactivated all the time???

— Ed Noll, W3FQJ
AM/FM-TV Mobile Reception

A n important part of any emergency mobile communications center is the ability to receive outside news reports on radio or television. Many times, viewing a "live" picture may assist you and your emergency communications committee on the severity of the disaster and where special emergency equipment may be needed.

Luckily for us, portable radio and portable television prices have plummeted, and so has the size of the equipment. The latest of liquid crystal display technology now allows us to view a small, hand-held type television for hours on just a single charge of its internal battery pack. This type of equipment lends itself perfectly to a mobile command post or an emergency mobile communications center.

Good reception depends on a well-planned AM/FM-TV antenna system—and these antenna systems may be the critical part of adequate reception. Let's take a look and see what a good AM/FM-TV antenna system may consist of.

Here are the frequencies we wish covered:
- AM Broadcast Radio Reception—55 MHz to 1.705 MHz
- Shortwave Reception—2 MHz to 30 MHz
- TV Channels 2 to 6—55 MHz through 88 MHz
- FM Entertainment Radio Band—88 MHz through 211 MHz
- TV Channels 7 to 13—175 MHz through 211 MHz
- UHF Television Channels 14 to 28—470 MHz to 512 MHz
- UHF Television Channels 28 to 69—512 MHz to 908 MHz

Trying to use your existing all-band scanner antenna usually won't do the trick to bring in all of these frequencies to your AM/FM-TV equipment. The scanner antenna is matched to a characteristic impedance of 50 to 70 ohms, and is usually vertically polarized. Polarization and impedance mismatches won't bring in the reception as you would like.

**Impedance Matching**

Even reception-only antennas (as opposed to transmitting antennas) require impedance matching. An impedance mismatch could result in a standing wave ratio as high as 4 to 1, and this would cause the AM or FM signal to drop by as much as 12 to 15 dB.

Your automobile-type AM and FM/cassette receiver requires a characteristic input impedance of 92 ohms. If you have ever cut into a piece of car-radio coax, you will see that it has a tiny, hair-like center conductor surrounded by a foil jacket. This is special 92-ohm coax matched specifically for automotive-type receivers. This coax terminates into a Motorola input jack.

For the best automobile radio AM/FM reception, almost any low-priced, telescopic, automotive-type, whip antenna will work well. It must be mounted high above any metal structures, and for best results, it must be mounted on a piece of metal to act as a ground plane. Using the automobile-type antenna on a piece of wood will indeed pull in signals, but signals may be attenuated by as much as 6 dB by not having the necessary ground plane beneath the whip. You will experience marginal to poor reception by simply pushing a piece of wire into the automotive radio jack; avoid this whenever possible!

You will also find poor reception on your automobile-type radio if you try and hook in your RV-style television antenna.

"Our directional, amplified, AC/DC, mini-state" TV antenna that we bought at Radio Shack has a built-in 20 dB trap specifically designed to cancel FM frequencies," comments Bill Alber, WA6CAX, a well-known survivalist communicator.

"Unless that 20 dB trap is bridged, the mobile, omni-directional, amplified antenna won't work at all on FM music band frequencies. The coax is also not suited for any type of AM reception at all, so anyone using an RV-type, amplified TV antenna will have minimum reception when this equipment is connected into a regular automotive receiver," adds Alber.

That 20 dB trap used on the FM band is specifically designed to knock out FM reception that may create "cross hatch" on TV Channel 6. This TV-only antenna also uses a different impedance coax—75 ohms; instead of a Motorola-type plug on the end of the coax, it uses a standard television F-connector.

In short, don't use your RV TV antenna for your automobile AM or FM reception. It won't work.

**TV Reception**

For the best long-distance television and FM music band reception for television and home-style FM stereo receivers, a Yagi antenna would be your best bet. The Yagi antenna is your standard beam-type television antenna with elements tuned to cover the entire television band. The longer elements work on the lower TV channels, including FM stereo reception, and the smaller elements work on the high VHF TV channels.
as well as all of the UHF TV channels. This type of antenna must be used in conjunction with a rotator in order to aim it at the transmitting TV stations.

The benefit of this type of antenna is high gain and directivity, and minimum reception of reflections that cause ghosting. If you have a permanent type of emergency communications point, the Yagi antenna is a good way to go.

Mobile communication centers may require the amplified, omni-directional or compact directional antennas housed in a white fiberglass dome. The small directional-type antennas work well to minimize ghosting. They achieve gain through a 20 or 30 dB amplifier built into the antenna system. The omni-directional antennas also have the same type of gain circuit, but they receive signals in all directions.

The big problem with omni-directional, amplified TV antennas is ghosting. Since they receive signals in all directions, TV and FM reception may come in at different angles and slightly out of phase. The phase shift is what creates ghosts. The beauty of these antennas is that you don’t need to aim them—simply turn them on and park your vehicle in an area of best reception.

Another popular type of mobile television antenna is the “swept wing,” horizontal dipole antenna. You see these a lot on chauffeur-driven limousines. These are usually effective in strong signal areas when used with a built-in amplifier, but ghosting is a very common problem with this type of low-profile antenna system. Despite what the manufacturers claim, it’s also bi-directional, which requires you to maneuver your vehicle for best reception.

One of the finest scanner/receivers available for FM music and all-channel TV reception to include all-mode and all-frequency VHF and UHF scanner reception is the Yaesu FRG-9600 scanner receiver. This high-performance receiver takes a plug-in module for video reception; simply take the video output from the set and hook it to any black-and-white or color monitor, and presto, you’ll get a sharp television picture that has been internally amplified by the receiver. This type of receiver will also allow you to fine tune the picture for maximum clarity and minimum ghosting and snow. With 99 channels memory, you can set it and forget it.

For best automobile AM/FM reception, stick with your standard automotive-type, telescopic whip antenna. Although there are advertised AM/FM antenna pre-amps designed for automotive-type, telescopic whip, these pre-amps usually do nothing more than increase both the noise as well as the relative signal level.

For the best in television reception, a Yagi antenna would be your first choice, followed by mobile-type, amplified, omni-directional or directional TV antennas. Always use coaxial cable to feed these antennas to your TV receiver; never use twin lead that is susceptible to ghosting and interference.

Through the use of top-notch, professionally designed TV antennas, you will be assured of picking up strong signals in almost every emergency communications area you should travel to.

The new Yaesu scanner is more than capable of picking up TV.
COMMUNICATIONS
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YOUR GUIDE TO SHORTWAVE "UTILITY" STATIONS

In the January 1986 Intercepts Section there was a cipher text item supplied by Steve Johnson, Florida, which he heard on 4780 kHz. I checked out this frequency and have concluded that the transmission he heard must have been the Federal Emergency Management Agency (FEMA) station WGY912, which is the VIP Relocation Site, Mt. Weather, Virginia. Mt. Weather is located at Berryville, Virginia, which is in the Blue Ridge Mountains. This station sends very slow encrypted traffic consisting of 5L groups. Further details on FEMA communications can be found in the Shortwave Directory (2nd Edition), pages 55-58, edited by Bob Grove. The directory is available from various POPCOM advertisers.

Owen O'Neil sent in a note along with his intercept and offered the following comments: "I'm real new to SWLing. Just started about 4 months ago — I spend a lot of time in the 2 to 3 MHz band ... common receptions include Halifax, NS, St. Johns, Newfoundland, and various U.S. Coast Guard Stations such as Norfolk, Miami, New Orleans, etc. Thus I was really surprised to pick up a station on the other side of the world. On 2701 kHz at 0130 I heard a YL repeating in English 'This is Cyprus Radio with your telephone maritime service.' She would then say the same thing again in a foreign language (Turkish?)" Owen has a Kenwood R600 hooked up to a 150-foot long wire in the back yard. His antenna runs East/West, and he also uses a ground of six feet of copper pipe driven into the ground. Thanks for your letter Owen, and good DXing.

Robert Homuth, Arizona gave us some copies of recent QSL letters he had received. The one from WWV/WWVB was particularly interesting. They are presented here for your information.

Chris Nicholson, Indiana has provided a picture of his equipment layout with the following description: "My monitoring equipment includes a Hammarlund HQ100A, Hammarlund HQ170, URR/35C Military Air Receiver, and several scanners. I love to experiment with and repair radio equipment. My helper, Kitty, serves as a heat sink for the Boonton 202N Signal Generator and is also a good static electricity source. I hold a First Class Commercial with Radar endorsement (that has expired to become a General Radiotelephone license). I am putting together a GMRS station licensed as KAD9453 on 462.55/467.55 MHz.

"The test equipment pictured includes a Polabrad SA-84 WA Spectrum Analyzer, TEK 543 Scope, URM-25F Generator, Option Electronics 8013 Counter, FLUKE.

This letter from WWV/WWVB sent to Robert Homuth of Arizona is of special interest.

December 17, 1985

Mr. Robert C. Homuth

Dear Sir:

Thank you for your interesting letter of November 26th. We are always pleased to hear from our (harmless) listeners. Please excuse the tardiness of my reply. Between two feats of snow and jury duty, I am really behind.

I suspect that you are indeed hearing WWV at 428 kHz. I have not heard of that particular harmonic being heard, but I'm sure it is our station.

The WWV transmitter is an untuned 50 kw. amplifier, similar to an audio amplifier. I suspect that the harmonic in question is down some 20-30 db from the fundamental. This would indicate a power level of from 10 to 100 watts.

I have enclosed a copy of the WWV format so you could accurately check what you hear. If you can report reception on 60 kHz, we would be glad to send you a QSL card.

Sincerely,

John B. Hilton, Chief Engineer WWV/WWVB

A reception report of the Skookumchuck (SX) Non-Directional Beacon, near Cranbrook, British Columbia, Canada. (Courtesy of Robert Homuth)

Transport Tournaments
Canada Canada
Air Administration
P.O. Box 200
Vancouver, B.C.
W6L USS Canada

J3 December 1985

Mr. Robert C. Homuth

Dear Mr. Homuth:

This letter confirms your reception of the Skookumchuck (SX) Non-Directional Beacon. The beacon is located approximately 20 miles from Cranbrook Airport near Cranbrook, British Columbia. The beacon is used to provide guidance to aircraft on IFR approach to Cranbrook Airport.

Technical Data:
- Transmitter:
  - Type: NEL 8001
  - Manufacturer: Niall Electronics Laboratories Ltd.
  - Racken's Cove, Nova Scotia, Canada
  - Power: 100 watts CW, 100 watts PEP
  - Frequency: 368 kHz
  - Antenna: 45°57'17" N, 115°37'30" W
  - Good DXing and have a Merry Christmas!

Yours truly,

C.H. Wheeler
Navigational Systems Specialist

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THE MONITORING MAGAZINE

www.americanradiohistory.com
Robert Homuth received confirmation of reception of Santa Cruz Radiolocation Beacon.

8060A DMM, Bird Watt Meter, and several power supplies. I am a technician maintaining linear and digital IC test systems at an IC manufacturing plant here in Kokomo, Indiana (Silicon Prairie). I live close to Grissom AFB and the Military Air Band can get very active, especially during Military Exercises. Here are some of his air band items: All entries are AM mode and in MHz.

271.8 WX info, updated hourly
275.8 & 295.7 Tower
362.9 & 372.9 Approach

Reader Hank Rogers, Pennsylvania, copied some unidentified transmissions on 6450 during the day and 4700 at night. The CW signal is usually sent as VVV VVV, or sometimes just VVV, repeated over and over with no further identification. Hank said he has heard this broadcast day after day. Any guesses?

Again, let me remind readers that we actively solicit "ute" station loggings for our intercepts listings. Listings should be in ascending frequency order (that is, lowest frequencies first), and should include as much relevant information as possible, including callsign, location, mode, time (in UTC), and information regarding the type of communication monitored and/or the callsigns of the stations being called or worked. If at all possible, type your loggings for maximum clarity; if they can't be typed, please print clearly in letters that are large enough to be easily readable without the help of a magnifying glass. It also helps if you list your name at the end of each individual logging and also leave a sufficient amount of space for your poor old editor to cut them apart for mixing in frequency order with the loggings that other monitors have submitted. These are just some suggestions I'm passing along in order to provide you with the best column possible.

Unfortunately, some listings that have come in can't be used because the handwriting is just too difficult (or too tiny) for me to decipher. Your loggings are important; please submit them so that they are able to be included. It truly pains me to have to discard loggings that simply can't be read no matter how much effort I make!

**Intercepts**

224: QM beacon, Mancon, NB, at 0305 (Robert Ross, ONT).
288: SL beacon, San Luis Obispo, CA. This is a USCG 30/10 sequence beacon running 13 watts. At 1302 (R. Homuth, AZ).
294: 5 beacon, Santa Cruz, CA at 1330 (Homuth, AZ).
317: PB beacon, Pedras Blancas, CA at 1330 (Homuth, AZ).
359: AQD beacon, Hartfield, CT, at 0143 (Ross, ONT).
375: HJO beacon, Nueva, CO (Homuth, AZ).
366: SYF, St. Francis, KS (Grace Flight Service, Inc.), 30-50 watts at 0439 (Homuth, AZ).
396: ZBB beacon, Bimini Island, at 0227 (George Osier, NY).
420: WYVB, Ft. Collins CO. A harmonic of time signals very strong at 1300 every morning (Homuth, AZ).
437: CP-4, Maritime Command Radio, Halifax, NS, w/notes for the Caribbean. "The vessel is shitting & assist if possible & report sightings to Coast Guard, San Juan." Also, Aircraft, red and white Cassino 210, 2 persons on board, expected to have ditched 5-10 miles west of St. Martin, report to Coast Guard, San Juan." This monitored at 0134 (Osier, NY).
521: INE beacon, Missoula, MT at 0600 (Homuth, AZ).
783: UN-ID "pips", 1 every 2 seconds at 0227 (Osier, NY).
2182: USCG Eastern Shore(? in USB at 0235 asking all stations to tune to 2670 for wx BC (C. Nicholsen, IN).
1783: UN-ID "pips", 1 every 2 seconds from 0227 (Osier, NY).
2182: USCG Eastern Shore(? in USB at 0235 asking all stations to tune to 2670 for wx BC (C. Nicholsen, IN).

**Abbreviations Used For Intercepts**

- AM: Amplitude Modulation mode
- BC: Broadcast
- CW: Morse Code mode
- EE: English
- GG: German
- ID: Identifier/identity
- LSB: Lower Sideband mode
- OM: Male operator
- PP: Portuguese
- SS: Spanish
- T: 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
- XL: 5-letter coded groups (i.e. IGXJ)

AFDIYD in USB at 0040. This is MARS Region #1 Channel, "Plumes Alffs" (Par Griffin, CO).
4043: KSFK, W/KEYSTONE CANYON in USB to WKM (on 4357.4 kHz) w/ph. patches (David Symington, OH).
1046:1: USS NEW JERSEY (BB-62) battle ship in USB at 0035 w/ph. patches to CSS1 (San Diego) on 4360.5 kHz (Symington, OH).
1411: AM voice tfc, seems like net of Arabic or Indian OM's, also on 4100 & 4165 w/freqs drifting at times as much as 10-20 kHz! Also what sounds like keying marks on/off very fast, possibly modulated, strong on carrier. Noted at 0138; 1st time I've heard anything like this (Osier, NY).
1433: QM beacon, MVV SEALEAN PACER in USB at 0012 to MNK (USCG Portmouth VA) on 6564.5 kHz (Symington, OH).
2412: JFV, ship, ORIENTAL HOPE in CW at 0450 w/Texelis (Margolis, IL).
4220: LZW, Xana, Bulgaria, in CW w/call in 0030 (Ross, ONT).
4221: GYB, Gibraltar Naval Radio, CW call in 0023 (Osier, NY).
4252: CFY (Canadian allocation but this is probably a tactical ID), CW w/call in 0030 (Hall, WA).
4275: FU1J, Noumea Naval Radio, New Caledonia, in CW at 0168 w/call (Osier, NY).
4275: ZS3CC, Capetown, RSA w/call in 0026 (Sjunni, IL).
4348: KLJ, Seattle, WA at 0018 w/call (Ross, ONT).
4360: VACANCY working GREEN EYES in LSB at 0235 w/tfc about fire exercise & running phone loops (Symington, OH).
4385:3: VA1, Canadian Coasgt Guard, Vancouver, w/Pacific Coast wx & sea forecast/conditions in USB or 0408 (Gittiff, CO).
4400: VID, Darwin, Australia. High Seas station working Macassar II in duplex (paired w/4106 kHz) in USB at 0053 (Hall, WA).
4400B: NRVW, USCGG SUGSTUG to Commsstable in USB at 0402 (Symington, OH).
4425A: WDM, Miami, FL w/High Seas ship/shore traffic to vessel KATHY LOUISE in USB at 0026 (Gittiff, CO).
4428: VIS, Sidney, Australia High Seas Radio
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CIRCLE 55 ON READER SERVICE CARD
A ho"y there! You are sailing in pirate waters again, mate, and if you are a pirate fan, welcome aboard.

Pirate activity at present continues to be somewhat on the "down" side. I don't know if there's a direct connection between this slackened activity and the FCC's apparent crackdown on pirate broadcasters, or whether the reasons lie elsewhere. Perhaps it is some of both that is causing the current rough waters. I do know that the FCC's Grand Island, Nebraska office recently released another list of cities in which it says it is investigating pirate activity. The list included such places as Newark, Delaware; Green Bay, Wisconsin; Pierce, Alabama; Ponca City, Oklahoma; and Minneapolis/St. Paul, Minnesota, among others. St. Paul was recently the site of a pirate bust. KSMR there was closed down and fined $750.

In Europe, the problems of the pirates seem more related to inadequate funds or plain bad luck than they do to government crackdowns. Laser 558, the American-owned station that made such a splash when it went on the air nearly two years ago, is now off the air, and it looks permanent. Reports and news articles sent in by David Kerr of Cedar Rapids, Iowa and Bartok Jaruzelski in London say Laser's ship, the MV Communicator, suffered generator and engine failure and came close to sinking in a storm on November 8. The Communicator was towed into the British port of Harwich, where several civil rights have been served by persons to whom Laser owed money. The ship will have to be sold to pay off the debts. Laser operated from the North Sea, outside the British 12-mile limit and had five American disc jockeys.

Radio Caroline is "still going strong" according to Bartok Jaruzelski. Operating from the Motor Vessel Ross Revenge, Caroline runs a combined oldies and Top 40 format from a 5 kilowatt transmitter, which has now moved to Laser's old 558 kHz frequency. A second Caroline outlet uses 50 kW on 963 and airs the Dutch "Radio Monique," commercial U.S. religious programs, and its own "Caroline Overdrive," which is an English language album rock service. I understand Caroline plans to add a transmitter on short-wave and I'd appreciate details on this.

Jaruzelski also says there are rumors in Britain that a new station, Stereo 531, is being outfitted in Honduras, after which it will sail for the British coast. Bartok speculates this may be just rumor, as were stories of WRLI, which was to operate from the Four Freedoms, and Tennessee Sound, which was supposedly planned to broadcast from the General Lee.

Across The Dial

Radio 7425 informs this column that it operates most weekends between 0000 to 0400 UTC on 7435. They also say they operate nightly on 27.995 and 27.885 MHz lower sideband. 7425 uses a Drake T4X8 transmitter and 50 watts. The 11 meter band frequencies have two Cobra 2000 GTL's of 100 watts each. Programming is Top 40 and shortwave listening tips. During February operations were on 11 meters and 7435 was scheduled for use in March. The station didn't give an address but noted they do announce one on the air.

WGAT--"Gator Radio from the Great Dismal Swamp of Virginia"--was heard in late December by Marty Lukacz in Ohio. In fact, Marty heard the station with several different transmissions on December 31. Among the info gleaned from the broadcasts (which were hosted by "Dr. Klystron") was a power of 500 watts using a 31-year-old RCA transmitter feeding a half wave dipole. Programming was pop and rock with "ads" for antenna insulators and antenna wax. The location was said to be "four miles from the nearest paved road." WGAT said reception reports were to be sent to this column.

So. It must be said again. In a word: NO!
Programming is big band music and old time radio shows. Transmitter is only 10 watts, feeding an 850 foot antenna supported by a helium balloon. You can listen for this one on 1000 kHz. Thanks to Alex Cannon in Riverside, California for the information.

Unidentified Robert S. Ross in London, Ontario heard a pirate on January 2 at 0332 on 7418 playing Michael Jackson’s “Thriller” until abrupt sign off at 0336. Anyone know which station this was?

Hello, Hilo? Tracy Sands in Anaheim, California says that mail sent to the venerable Hilo, Hawaii mail drop is now being returned by the post office. Well, that’s the first such instance I’m aware of. Perhaps an isolated case? Anyone else having trouble lately?

KNRH is reportedly on the air on 11975, but the station says it has not received any DX reports so far.

Remember, this column needs your information! If you operate or are connected with a pirate station, please send us information about your station. We also need photos of pirate installations, copies of pirate QSL cards, news and clippings about pirate broadcasting and activities. And, of course, everybody’s pirate loggings! Be a first rate, first mate of Pirates Den, join in and help out your fellow pirate enthusiasts with whatever info you can provide. Letters should go to Pirates Den, c/o Popular Communications, 76 North Broadway, Hickeyville, NY 11801. Thanks. See you next month when we drop anchor here again!

---

Radio Dead Man’s literature could give you bad dreams at night!

91.5 and is on every other Friday night til 8 a.m. Saturday. In addition, WHOT also uses 1625 (AM) Friday and Saturday nights taking telephone calls and QSL requests. KBXL is on the air Saturday nights from 9 til 11 p.m. (I assume this is Pacific Standard Time) from its headquarters in California.

---

ICF-2010

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Speaker: 4 inch dynamic
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activity, but it was far from being anything that might be labeled "successful."

After roughly ten years of nothing happening on the short-range personal communications scene, the FCC decided to try yet another approach. In the late 1950's the agency cancelled the so-called 11 meter Ham band (on 27 MHz) and established the Class D Citizens Band. Although it took another fifteen years to click with the public, it was apparent right from the start (in 1959) that the band was regarded by its users as a great hobby service used to meet new friends on a local and international scope.

Although the general public loved CB radio on 27 MHz, insofar as the FCC's idea of establishing a short-range personal radio service went, it was a monumental disaster. Possibly in dread of the Class A CB service being tainted by their rowdy and fun-loving cousins on 27 MHz, the FCC changed the name of the Class A Citizens Radio Service to the General Mobile Radio Service (GMRS). Oddly enough, under its new name, the 462/467 MHz service seemed to finally show signs of genuine public interest. Many individuals and small businesses who had purchased 27 MHz equipment and thought the antics and crowding on that band in the 1970's too overwhelming found the GMRS (which offered FM and repeaters) to be more to their liking.

Still questing after their (seemingly) impossible dream, the FCC then came up with still another approach—that of allocating frequencies on 49 MHz for low-powered short-range communications at minimal cost to the consumer. In the creation of this band, the FCC forced unlicensed 100 mw hand-held transceivers off the 27 MHz band and demanded that such devices be operated on 49 MHz. That failed to make 49 MHz a roaring success, however, the eventual development of "hands-free" FM transceivers that clip onto a person's belt began bringing the usefulness of the 49 MHz band into reality. It is questionable if the addition of cordless telephone operations to 49 MHz served any beneficial purpose toward promoting the concept of short-range personal communications in that band.

Apparently the FCC has not felt that the new Cellular Mobile service, the GMRS, nor the 49 MHz band is going to pan out as the way to make E.K. Jett's 1945 dream come true. At any rate, they're still searching around for that elusive handle to grab in order to get this idea off the ground to their complete satisfaction.

Having totally walked away in frustration at the inability to exercise any real control over 27 MHz CB; having ruled out proposals for a (Class E CB) 220 MHz-band personal radio service; having ended consideration for opening up a short-range service on 900 MHz; and having killed the G.E. proposed Personal Radio Communications Service (also known as PCRS, a concept that G.E. is said to have spent more than

$25-million developing)—the agency has come up with still another idea.

This time it's the Consumer Radio Service. The new idea is to give the public a 460 MHz transceiver in the $50 to $80 price range that offers a communication range of less than 500 feet for conversations lasting from thirty seconds to one minute. Furthermore, one transceiver would be able to signal specific individual transceivers within range.

There is, as you might expect, a trade-off for the benefits of this new proposed radio service. Well, it's that all of this is part of a plan the FCC says is to "restructure" (translation: "kill off") the GMRS. If the FCC proposal (PR Docket 86-38) is approved, more than half of the existing 20,000 GMRS users will be negatively affected.

Gone will be GMRS repeaters and licensed stations to make room for a radio service that seems, to me, to be far less useful than the existing services! Marrying selective calling to a two-way circuit is nothing new or especially novel; it could be added to 49 MHz transceivers just as easily.

As it turns out, selective calling accessories used to be available for 27 MHz CB gear in the early 1960's. The idea was a flop and the equipment was soon withdrawn from the marketplace. Why anybody thinks that selective calling on a transceiver with a piddling 500 ft. range is going to be especially useful is a total enigma. Anyway, doesn't the Cellular service already offer this?

GMRS users, by the way, are not at all happy about this latest FCC concept. Frankly, I tend to think it's kind of silly myself. The FCC has certainly had sufficient time and opportunity to get Jett's idea on the road, and the public has been sufficiently disrupted as the agency tinkers and experimentally with a seemingly unending parade of schemes that have thusfar caused the public confusion, inconvenience, needless expense, and annoyance.

Yes, I agree that 40 years ago E.K. Jett had a great vision. If it did no more than inspire the concept of Dick Tracy's two-way wrist radio, it was worthwhile. On the other hand, it may well be that after four decades of obsession with Jett's dream, somebody ought to know when to mercifully give it a rest. It may well be that, at this point, it's a case of trying to reinvent the wheel because the public's need for such communications have been adequately accommodated by existing services. Or possibly the public doesn't really want this service; or technology still hasn't caught up with the concept. Either that, or else there's something lacking in the FCC's ability to convince the public that Jett's idea has to be given existence at any cost and inconvenience, no matter how long it takes.

On the face of it, the basic FCC description for this proposed 460 MHz Consumer Radio Service looks like we've now gone full circle and are back where it all began in the 1940's. No mas! No mas!
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