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

Offices: 76 North Broadway, Hicksville, NY 11801. Telephone 516 681-2922. Fax 516 681-2906. Popular Communications (ISSN 0733-3315) is published monthly by CQ Communications, Inc. Second class postage paid at Hicksville, NY and additional offices. Subscription prices: Domestic—one year $18.00, two years $35.00, three years $52.00 Canada/Mexico—one year $20.00, two years $39.00, three years $56.00 Foreign—one year $22.00, two years $43.00, three years $64.00. Foreign Air Mail—one year $75.00, two years $149.00, three years $225.00. Entire contents copyright © 1990 by CQ Communications, Inc. Popular Communications assumes no responsibility for unsolicited manuscripts, photographs, or drawings. Allow six weeks for change of address or delivery of first issue. Printed in the United States of America.

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Not long ago, a friend of mine brought a cordless phone. When I saw him recently at his birthday celebration, he cornered me in order to extol the benefits of his wonderful device. I heard how he can make calls while in his swimming pool, on his ride-on lawn mower, and all sorts of other places where you'd think that most rational people would be thankful to temporarily escape from the need to place or receive telephone calls.

He'd been enumerating all of the features of his wonderful machine, from ten-channel, two-line operation to thirty number automatic dial, from its speakerphone base to automatic redial. I sat there with a painted-on smile, perfectly willing to let him rattle on for a while because everybody is entitled to bore at least one person to tears about their new toy. When it comes to hearing the virtues of everybody else's newly obtained electronic stuff, I am invariably at the top of the list of people they most like to tell. It's a calling and a curse, but I've got it pretty well down now. I can even manage to say that "that's wonderful", a couple of times and ask a few questions while my mind is totally disconnected from the entire description.

In my guy's case, I must admit that he had gone out and purchased himself quite an inferior and impressive contraption, and I imagine at a cost that most folks would consider extravagant. However, by the time I had missed my turn at the hors d'oeuvres tray after it was carried around the room three times, I realized that I was going to have to make a desperate move if I wanted any canapes before all that remained were those awful little orange fish eggs smothered on crackers. He had his nickel's worth of my adrenaline anyway, and it was apparent that the only way to bring him down was quickly, and with a thud.

As soon as he paused to take a breath, I tossed out the thought that lots of people had the capability of listening in on all of his cordless telephone calls. He was unshaken, saying he had forgotten to mention that when he told the salesperson that he sometimes discussed confidential matters on the phone, he was told about the federal secrecy laws that protected his privacy. Besides, the salesperson pointed out that the unit he was considering had a very effective "privacy" button that could be pushed.

I guessed that maybe the "privacy" button either shut off the system's second handset, or else prevented his neighbor's cordless phone from showing up on his favorite channel or accessing his dial tone. Whatever it was, it wasn't the voice scrambler he had assumed it was. I told him that anybody within a mile or two of his house that owned a police scanner could overhear every single word of his conversation. He was still certain that there was wrong, but by then our conversation had attracted a circle of others who owned cordless phones and were in varying stages of shock, disbelief, and indignity at the news I had brought.

While my XYJ was telling the hostess that this is why most people don't invite us to parties any longer, I had suddenly turned from being someone passively sitting in a corner, to being the focal point of attention with my heretical statements. Even the lady with the hors d'oeuvres tray was standing in the crowd, apparently one of the world's many cordless telephone owners who had never imagined that their calls were being sent out over the airwaves.

Finally, I had to go out to the car and bring in my handheld. Programming it to search 49 MHz, I challenged the host to carry his handset to some distant point, press his "privacy" button, and make a call. He agreed, but after a few others in the group said they had also heard that cordless phones offered no privacy, he seemed to realize that maybe I was right, after all. To the amazement of many, the test proved my point as his voice came blasting out of my handheld scanner.

My friend was furious.

To anybody who has any connection with communications, it seems so obvious that if a device has an antenna sticking out of it, then somehow, somewhere, a signal is involved, and there's a reasonably good chance that the signal can be intercepted, and perhaps without very much difficulty. Why this is such a shock to most of the public is somewhat of a mystery. Apparently, it is given some mention in some of the owners' manuals that come with cordless phones, but maybe it hasn't made clear, or stressed very hard, because it would certainly be a negative selling point. Of course, in the instance of my friend, a salesperson had given him incorrect advice, but I don't know whether out of his own ignorance, or just to make the sale.

One of my theories is that it might not make much of a difference if you tell people that their cordless phone (or car phone, or ship/shore) calls can be overhead by others, or else they simply disremember about it after a brief period of awareness since no bells, lights, or sirens have gone off in their cordless to announce that unknown ears are listening in.

Another theory is that, even persons who are fully aware of the potentials for their conversations to be overhead, cannot and do not retain this information at the forefront of their consciousness when they get involved in a protracted business, or personal discussion. This is especially true if emotions begin to run high, as they often do. At that point, the conversations can get far more frenetic than you'd imagine they'd be if the participants felt they had an audience of strangers so large that they're one step away from getting Arbitron ratings. Of course, I'm not talking about professional law enforcement, espionage, or intelligence agents who may be trained to be aware of what they say over any cordless, car, or hardwired phone.

Interestingly, people seem prone even to talking about illegal activities over cordless phones, or at least they often accused of doing so. In 1985, a fellow in Dixon, IA brought a huge lawsuit because his neighbors used their cordless to listen to him talking on his cordless phone. When he began discussing matters relating to a theft, the neighbors taped recorded his conversations and turned them over to the Scott County Sheriff's office as evidence. The federal court suit accused the Sheriff of illegally gathering information. The judge threw out the suit, ruling that the law didn't guarantee privacy for cordless telephone calls broadcast into the public airwaves. Of course, that was before the passage of Electronic Communications Privacy Act of 1986 (ECPA) was passed. That law says that you aren't allowed to listen to the pedestal (46 MHz) transmissions of cordless telephone systems. It's almost impossible to detect violations.

In post-ECPA days, there's the case of Peter Fata of Rockland County, NY. He didn't seem to realize that his cordless phone conversations were able to be picked up so easily on scanners. Among the casual listeners was an off-duty New York City police officer who happened to be a scanner owner. He suspected that the conversations he was hearing related to trafficking in illegal drugs, so he made a tape and returned it over to the Rockland County Sheriff's department.

The Sheriff then went out and got a warrant to make his own tapes of additional conversations and, in 1988, prosecuted Fata on charges of drug conspiracy. A felony charge conviction was obtained and Fata was given a sentence of three years to life.

Fata, however, appealed the conviction on the grounds that the police officer's original tape wasn't made with a warrant, was illegal, and therefore tainted the prosecution's case. In the appeal, the attorney claimed that the tape recording was an invasion of his client's privacy.

(Continued on page 80)
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MAILBAG

LETTERS TO THE EDITOR

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

Johnny, On The Spot
What's the status of the present sunspot cycle?
John Colton, Windsor, Ontario

They are presently at their peak and should remain at this level until about the end of April. At that point, they'll slowly begin tapering off for the next couple of years. — Editor

Late Night Radio Doings
I enjoyed hearing you, Tom, and the many other hams on the Ray Briem Show recently. I didn't mind staying up until the "wee hours" for this program. It's sad that Ray's show was later taken off the ABC TalkRadio Network.

James G. Malta, N2HOQ/KN2JKG, Piscataway, NJ

Many letters came in to our offices after the network pulled the plug on Ray's show. The several programs he devoted each year to SWL'ing and hammering were really looked forward to by many within the communications hobby. On the other hand, the program that replaced Ray's is a good cure for insomnia. — Editor

Still Willing To Put Up With Me
Are you the same Tom Kneitel that was with CB/DX Horizons magazine in the early 1960's? If so, I've been one of your readers for nearly 30 years. As I look back through the old "callbook" that used to cover CB, in the 1962 edition you were listed as 10Q3161. I was one of the first CB'ers licensed in San Juan County, UT and was also listed in the same edition as 15Q1381. I have maintained my interest in communications through the years and look forward to the day that the FCC finally approves a no-code ham license.

J. Clarence Johnson, SSB 46E, Bluff, UT

Yes, I was with that magazine in California and Oklahoma for a year beginning in April of 1961. My first 27 MHz CB license was 2W1965, issued in early 1959. Always glad to hear from readers who go back a way with me — Editor.

Calling All Tapesponders
Not too many years ago, we joined a tapespondence club through a classified ad in a radio magazine and the results were wonderful.

Unfortunately, by moving about so much, we lost all our records and addresses. We would like to get into tapespondence again and wonder if you knew of the existence of any tapespondence clubs in the U.S.A.

On 20 meters, most every ham is great, but tapesponders are quite different in their desire to maintain correspondence within the U.S.A.

Any information you can dig up for us would be most appreciated.

Good luck with your publication.

Milton Lederman, WB2HHR, 27 West 72nd St., New York, NY 10023

Any readers who can help Milton may contact him directly at the address shown — Editor.

Blue Suede Footwarmer?
A DJ on a local radio station has mentioned several times that Elvis Presley was a CB'er during the days he was a trucker. I called the station and asked him if it were true, and he said it was common knowledge. This would make a good story for POPCOMM. I am a big Elvis fan.

P.N. Hollister, Sevierville, TN

It would make a good story if there were any truth to it, but it's been a rumor that circulated for years that is totally unfounded.

Prestley was driving a local delivery truck in 1954 when he began recording for Sun Records in Memphis. Towards the end of 1955 he was singing full-time, had signed Col. Tom Parker as his manager, had a recording contract with RCA Victor and was on his way to fame. In 1956, he was famous enough to go to Hollywood to star in "Love Me Tender." CB radio didn't come into existence until late 1958, and really didn't get started until 1960. By then, Presley was not only a major star, but he was in the U.S. Army and stationed in West Germany. Moreover, the "trucker" aspects of CB didn't even show up until about 1974, which was a good twenty years after Elvis had been behind the wheel of anything larger than a pink Cadillac. I hate to be the one to toss cold water on popular myth.

Chances are that it grew out of the fact that Presley had many friends who happened to (incidentally) be CB'ers. As a result, he was interested in CB radio and was known to have done a number of kindnesses for CB'ers who were down on their luck, and apparently had shown up unexpectedly at several 1960's CB jamborees in the Memphis area — Editor.

No-Code? No Way!
I am a former CB'er, and used to think it would be nice if there was a no-code, feeling that I couldn't learn the code. Finally, I began studying for my Novice ticket. I was surprised to find that learning code at 5 w.p.m. was easy and I passed the test. I had a little trouble getting to 13 w.p.m. for the General ticket, but I made it and now hold an Advanced ticket (studying for Extra). I'm against a no-code ham ticket and fear that it could turn ham radio into the chaos that CB became. Handicapped persons get no special treatment when it comes to ham tickets, so why give someone special consideration because they are too lazy to learn the code? I felt a sense of accomplishment when I learned the code. One ham I work on CW is unable to see or hear. If he can master the code, then anybody should be able to do so.

Bill McCollum, KE0QX, Omaha, NE

Ancient Modulation
Now that SSB has taken over voice communications on HF, and FM has done so above 30 MHz, it appears that the last refuge of old double-sideband AM is the shortwave and mediumwave broadcasting bands. At what point will the FCC officially close the door on this dated technology? I, for one, say "good riddance."

B.E. Kondrick.
Conway, AR

Whoa! AM is a long way from being ready for the scrap heap. In the field of two-way communications, it's used by millions of CB'ers, and also for aero communications in the 118 to 136 MHz and 225 to 400 MHz bands. Even in the world of ham radio, AM is promoted by a national organization called the Society for The Preservation of Amplitude Modulation (SPAM), of Box 27, Potrero, CA 92063. The following AM frequencies are listed by SPAM: 1885. 1895. 1900. 1990. 1996. 3870 to 3980. 7160. 7195. 7295. 7290. 7250. 14250. 21350. 28304. to 28325. 29000 to 29200 Hz, and also 50.4 and 144.5 MHz on VHF. Ancient AM still serves many useful and necessary roles in communications. Don't count the old gal out yet — Editor.
Andy’s Having A Ball . . .

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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.

This space donated by this publication in cooperation with the American Radio Relay League.
A partial view of Caracas, the Venezuelan capital city.

**DX'ing Little Venice**

*Here Comes The Big “YV” Parade!*

**BY GERRY L. DEXTER**

One might be forgiven for wondering what in the world possessed Spanish explorers to name the place Venezuela; there hardly seems any connection with Venice. It was the Indian dwellings on Lake Maracaibo which caused the inspiration. Perhaps, that far from home, it’s easy to see reminders that wouldn’t otherwise be so obvious.

Venezuela was pretty much a nothing place for nearly all of its existence. The Indians hadn’t developed much in the way of culture or civilization by the time the Spanish arrived and their arrival and dominance over the next 400 years didn’t exactly bring on a great new world. The boom began in 1917 with the discovery of oil. Venezuela became one of the world’s top oil producers and exporters and its standard of living is now up there at the top of the list amongst Latin American nations.

For some never explained reason, Venezuela seems to inspire little excitement amongst shortwave broadcast DX’ers, even those for whom Latin America is a prime interest. Perhaps it’s the fact that the majority of the stations are relatively easy to hear, or perhaps its the sense the Venezuela’s culture isn’t as distinctive as those of Peru or Bolivia or Ecuador. Whatever the reason, as far as many DX’ers are concerned Venezuela is still the uninspiring poor boy of South America, even though it is fairly rich in shortwave stations.

Not as rich as it used to be, however. Like many Latin American countries, the number of active shortwave broadcast stations is on a steady decline. In 1969, the SWL could hear many Venezuelan broadcasters which are not audible today: Radio Coro, Radio Bocono, Radio Barquisimeto, Radio Caracas, Radio Sucre, Radio Cabimas, Radio Miranda, Emisoras Vargas, Radio Barcelona, Ondas del Lago and numerous others—some of which had had a long runs on shortwave—are gone. The World Radio TV Handbook for that year listed some 60 Venezuelan shortwave broadcasters. Then years later the number had been cut in half!

That alone is a good reason to begin exploring for Venezuelan SWBC stations—you can never be sure how much longer a particular station will be on the air, never mind the fact that some of them have been around since the 1940’s! By the same token, however, Venezuelans, like Latin American broadcasters in general, sometimes remind you of something out of a Stephen King novel—you can never quite be sure they are going to stay dead!

DX’ing Venezuelans means spending a lot of listening time down on the tropical bands—90 and 60 meters—as well as 49 meters since that’s where most of these stations hang out. Typically of Latins, not all of the stations you find on a “current” list are active at any one time, so in some cases, it is
Radio Nacional's schedule shows programs of news, history, folk, popular and Caribbean music, sports, economic and cultural news to name a few.

a matter of being aware of where a station would be if it were active and then cruising by the frequency every now and then just to see if somebody may have finally turned the lights on.

Most YV's operate on an 0900 to 0400 UTC schedule, though you shouldn't look upon that rule as inviolable. The best times to look for these stations are, quite logically, the evenings and early mornings, since that's when the applicable SWBC bands will be open. Sign on is an especially good time to check for these stations on 49 meters, since there is often less interference from the big international broadcasters at that time. Hunting Venezuelans will also make you very familiar with the national anthem of that country, known amongst DXers 'cause it's I-o-n-g! Station sign on and sign on announcements can also be lengthy, even a bit stentorian.

Virtually all of the broadcast time is in Spanish, although the government station, Radio Nacional, has aired some English in the past. All of the Venezuelan shortwave broadcasters are commercial outlets. Venezuela has never been very much represented by religious or cultural stations on shortwave, in contrast to most other Latin American countries.

By and large the Venezuelan stations are pretty good when it comes to confirming listener reception reports. Perhaps 6.5 on a scale of 10; slightly better than the average for South America. Reception reports should be in Spanish and include return postage in the form of unused Venezuelan stamps of International Reply Coupons.

Here's a by-city survey of what there is to hear on shortwave from "Little Venice" CARACAS. The Venezuelan capital lies in the Caracas basin, on the slopes of the central highlands. It's an impressive, modern city built by oil.

There are three shortwave stations operating from Caracas, including what must be the easiest of all Venezuelans to hear—Radio Rumbos, Rumbos operates in parallel on two shortwave frequencies, with 10 kW on each. YVLM in on 4970 and is easily heard in the early morning or evening hours and YVLM on 9660 can be heard daytimes. The schedule is 0900 to 0600. This is one of the country's major broadcasters. It operates a national network. Reports go to Apartado (P.O. Box) 2618, Caracas.

A second Caracas station, appropriately named Radio Capital, holds forth on 4850, although it has periods of inactivity. The call letters are YVKX and the power, like the majority of Venezuelans, is a fairly modest 1 kW. It's scheduled from 1000-0400 but 24 hours on weekends. Reports go to Centro Comercial Los Ruices, Av. Francisco de Miranda, Caracas.

The government station, Radio Nacional, has made attempts at providing a true international service on and off over the past several years but never quite gets it done. Radio Nacional has five frequencies available. YVSC on 5020 used 30 kW, is assigned to 9500 and 9540, though the latter frequency is shown with a 50 kW transmitter and is part of the international service. YVOV and YVLS, both 10 kW, are listed.
for 11695 and 11860, respectively. 9540, 11860, and 11695 are scheduled between 1100-1200, 1400-1500, 1800-1900, 0000, 0100 and 0300-0400 but not all of these are active—often it's just one of the three and most recently that has been 9540. Operation on 5020 is also sporadic. The station still indicates it plans to offer programming in English, French and Portuguese at some future point. Reports go to Apartado 3979, Caracas 1010.

SAN CRISTOBAL sits on a tri-level pla-
teau with the base on the shores of the
Tobres River. Founded in 1561, San Cristo-
bal retains a good detail of the Spanish col-
onial look. There are two shortwave stations
still active here and both are pretty easy
catches.

Ecos del Torbes was founded in 1947. The
YVOC call identifies a 10 kW transmis-
ter operating on 4980 from 0900-0400. QSLs come from Apartado 152, San Cristo-
bal, Tachira state.

Almost as easily snagged is Radio Tachira
on 4830 which also runs 10 kW. YVQB
uses "first in the Andes" as one of its slogans
and is scheduled from 0900-0400. The only
problem in getting a good log on this one is
the ORG from the Costa Rican, Radio Relij, on
4832. Radio Tachira is a pretty good verifi-
er. Reports go to Apartado 37, San Cristo-
bal, Tachira.

MARACAIBO—This dump, hot city of
700,000 on the northwest shore of the
famous lake Maracaibo is an exporter of cof-
fee and shrimp. But oil is where it's really at.
70% of Venezuela's oil comes from this area.

Like the other major Venezuelan cities,
Maracaibo used to have several active short-
wave stations. Now the number is down to
just two, and even they aren't consistently
active. Check 3275 for the 1 kW signal of
Radio Mara which is scheduled for 1000-
0400. Reports on YVMC go to Apartado
1969, Maracaibo 4001A, Zulia state.

Also from Maracaibo is Radio Popular,
YVMU, with 1 kW on 4810, though it has
not been active in awhile. Were it so, the
schedule would probably 0900 or 1000 to
0400. The address is Apartado 347, Mara-
caibo, Zulia.

MERIDA is the capital of the state of the
same name. Surrounded by cliffs and plan-
tations, it is home to the University of the
Andes and is also known for its candied
fruits.

Merida's one shortwave outlet is Radio
Los Andes, YVSB, one of a handful of Ven-
ezuelans up on the 49 meter band—in this
case a slightly variable 6010. operations are
somewhat irregular and, with all of the in-
terference usually found in this area, your best
shot at logging this 1 kilowatt is probably
around the 1000 sign on (keep in mind that
sign on sometimes start a couple of minutes
before the hour so you may wish to be on
the scene early). Reports go to Apartado
47, Merida, Merida.

TOVAR, also in Merida state, is a small
city of around 20,000. The one shortwave
station here. Radio Occidente, is listed for
3225 and 9750. The former frequency is
occasionally active, the latter never heard.
YVTC used 1 kilowatt, scheduled at 1000-
0400. Reports can be sent to Cra. 4, No.
6-46, Tovar, Merida.

TRUJILLO, the city and the state are in
the Sierra Nevada de Merida where the
higher mountain peaks are snow capped
year round. Most of the population lives in
the many basins and valleys. Even though
it's the state capital, Trujillo has only around
20,000 people.

YVOG, Radio Trujillo, listed for 3295
with 1 kW hasn't been reported in some-
time, so this may be one of those borderline
situations where a license is being held on to
"just in case." The schedule is listed at 0955
to 0300 and it's surely worth an occasional
check to see if this one has suddenly come to
life. The address is Ave. Independencia
10-11, Trujillo, Trujillo.

VALERA. With more than twice the pop-
ulation of Trujillo, Valera has grown consid-
erable as a trading center in Trujillo state.
Its more active shortwave outlet, Radio Va-
lera, is normally found between 0900-0300
on 4840. YVOG's address is Av. 10, No.
9-31, Valera, Trujillo.

Radio Turisino, YVMH, with 1 kW on
6180 is more irregular. The station, with the
slogan "la voz expresion de Venezuela," is
listed with an 0900-0200 schedule and log-
gings by North American DX'ers are almost
always during the first hour of the station's
operation. Reports go to Apartado 12, Va-
lera, Trujillo.

BARINAS is a cattle center and home to
foreign oil camps. It's a fairly small city, too,
with around 25,000 people.

It's also home to one of the newer Venezuelan shortwave stations, Radio Continental, with 1 kW on 4940 (variable to slightly lower). It's scheduled from 1100 to 0400. It has been a good, through slow verifier of reports so far. The station's address is Av. Marques del Pumar, Barinas, Barinas.

CIUDAD BOLIVAR on the south bank of the Orinoco River, is a trading center for the Guaya highlands. "CB", as it's locally known, is said to be the best place in Venezuela to shop for gold jewelry and other gold items.

Radio Mundial Bolivar (formerly Radio Bolivar) is another of those "sometimes active, sometimes not" kind of operations. YVNW's 1 kW is on 4770, listed for 0900 to 0400. The address is Apartado 123, Ciudad Bolivar, Bolivar.

VALENCE. The capital of Carabobo state, Venezuela's fourth largest city sits on the west bank of the Carabobo River. It's the center of the country's most highly developed agricultural region and home to quite a number of transplanted Europeans and Americans.

La Voz de Carabobo, YVLA on 4780, has the dubious distinction of being about the toughest of the active Venezuelans to QSL. It is active on a pretty consistent basis and, when the U.S. government's FBI station isn't interfering, can usually be heard quite well. The schedule is 0900 to 0400. Address: Torre Trebol, Urb. Lomas del Este, Valencia, Valencia.

EL TIGRE is an important but fairly small trading and market center in Anzoategui state.

This is home to la Voz del El Tigre, which also ID's as Radio 980 (its medium wave channel). YVQH is not always active and you have to tune the more temperamental 96 meter band to find it. A little patience and persistance should bring it in, though. It's scheduled with 1 kW at 0900-0400 and reports to go Apartado 430, 6034 El Tigre, Anzoategui.

Maturin is a commercial center of about 55,000 in Monagas state and is home to another shortwave station with irregular habits.

Radio Maturin, YVQH, sometimes fires up its 1 kilowatt transmitter on 5040, generally with an 0900-0400 schedule. Reception reports go to sucres 73, Maturin, Monagas state.

OCUMARE DEL TUY in Miranda state is the site for Radio Valles del Tuy, listed for 1 kW on 6130. This one, however, has not been reported in some time and it's anyone's guess—probably including the owners, too—whether it will ever return. You might spot check the frequency around 0900 or 1000. If you do find this one active, report to Altos Teatro Cine, Av. Miranda, Ocumare del Tuy, Miranda state.

TARIBA, in Tachira state, is home to another station unreported in several years, yet still on the lists. Radio Sucesos, YVTH, listed for 1 kW on 9700. If you do have success with this one the address is Carrera a4, No. 1-35, Tariba, Tachira.

Beyond all these stations, there was a recent report that Radio Yaracuy in San Felipe had plans to resume shortwave broadcasts. But their old frequency of 4940 is now occupied by Radio Continental. For the past several years a Radio Alto Llano has been reported due to activate on 5010 but hasn't been heard. Nor have two others which have been listed for some years—Radio Elorza and Radio Corora, both named after their home cities.

Even if none of the above four stations ever show up, others are bound to. And even if there's never any fresh activity, Venezuela still offers a sizeable number of targets, and with reasonably good chances for a QSL, too. If you are just getting your feet wet in Latin American DX'ing the Venezuelans is a great way to begin. And if you've ignored Little Venice in favor of "better" pickings elsewhere your missing some good targets.
High Seas Telephone Service
AT&T's Network of HF SSB Stations Calling Ships at Sea

By Anson MacFarland, KVA4EX

"High Seas" radio channels provide essential communications for the maritime community. The channels are available for business and personal, safety, and distress communications. Although many vessels on the high seas have installed sophisticated satellite communications equipment, high frequency (HF) single sideband (SSB) comms remain their primary link to virtually any telephone in the world via the "High Seas Operator."

Each nation has its own group of coastal stations performing this service. Some are operated by government telecommunications authorities, but in some nations it's a service provided by the private sector. In the United States, it's a service of private industry. An independent station (WLO) in Mobile, AL operates, plus three sta-

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Channels 416-1203

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◇ Broadcasts of national weather service information.
Note: Traffic lists and weather will be omitted if channel is busy.
*Formerly GMT

The complete frequency guide and schedule of weather and traffic list broadcasts from AT&T's three high seas telephone stations.

The KMI High Seas Radiotelephone and Public Point-To-Point Receiver Station, located in Point Reyes, California and American Telephone and Telegraph Company. Long Lines Department is pleased to acknowledge your reception of one of our transmissions on ________

KMI transmits on directional rhombic antennas located at Dixon, California, in 4-23 MHz bands for high seas service in the 73150 to 23025 kHz range for public point-to-point service.

We wish you continued success in the radio communications field.

This acknowledgment card is sent out by station KMI in response to reception reports.

Coast Station KMI—California
Address: AT&T Station KMI P.O. Box 8 Inverness, California 94937
For Technical Information Call: (415) 669-1055

Coast Station WOM—Florida
Address: AT&T Station WOM 1350 N.W. 40th Avenue Fort Lauderdale, Florida 33313
For Technical Information Call: (305) 587-0910

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Channels 403, 802, 1206 and 1601

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*Formerly GMT

12 / POPULAR COMMUNICATIONS / March 1990

THE MONITORING MAGAZINE
A reply card from WOO mentions using 10 kW into rhombic, log periodic, and omnidirectional antenna systems.

A reply card from WOO mentions using 10 kW into rhombic, log periodic, and omnidirectional antenna systems.

The stations run by AT&T. This story will focus on the three AT&T stations: California (KMI), Florida (WOM), and New Jersey (WOO).

These stations provide two-way voice communications between ships on the high seas (also aircraft), and can connect the calls to other vessels, aircraft, or land telephones throughout the world. The stations operate every day, on a 24-hour schedule, and utilize USB mode duplex channels throughout the 2 to 23 MHz range. In addition to exchanging telephone traffic, the stations also broadcast weather and traffic lists. All of these services are for the benefit of cruise ships, cargo vessels and tankers, fishing boats, pleasure craft, as well as private aircraft.

Because of their locations and wide selection of frequencies, KMI, WOM, and WOO can communicate with ships operating in any area of the world. Each of the duplex channel pairs used is assigned an international channel designation number consisting of three or four digits, the first one or two digits representing the frequency band of that channel (i.e., Ch. 417 is in the 4 MHz band, Ch. 1611 is in the 16 MHz band). These channels are shared by high seas telephone stations throughout the world. The frequency pairs are arranged with the coast station transmitting on one frequency, and the vessel using a lower frequency.

Generally speaking, the lower numbered channels are used at night and the higher frequencies predominate during daylight hours. AT&T, however, reminds users that good communications practice suggests attempting to establish communications on the highest frequency pair possible that contact can be made.

The three AT&T coastal telephone stations are relatively easy to hear on any equipment that is capable of tuning the 2 to 23 MHz frequency range in SSB mode. The stations apparently receive a considerable amount of mail from listeners seeking verifications (QSL's) of their reception. Many non-broadcast and non-ham stations either ignore such requests, or else respond to them only if a prepared reply card is furnished by the listener. I don't know about the policies of either WOM, but KMI and WOO have responded pleasantly to reception reports with cards of their own. While not actually full-blown "verification" cards, they're still nice additions to any QSL connection.

Moreover, if you've been a listener who hasn't yet tried utility (that is, non-broadcast) station monitoring, maybe these stations are as good a way as any to break the ice with some easy-to-copy stations.
Radio’s Early Days
Thoughts and Perturbations About an Earlier Era

BY ALICE BRANNIGAN

We haven’t ever delved, except in passing mention, into some of the things that the call letters of old timey radio stations stood for, or at least supposedly represented. By the time commercial broadcasting began in late 1921 and early 1922, the concept of the government assigning all of the stations identifying call letters had long been firmly established. American stations had three and four letter callsigns that were distinguished by the fact that the first letter in the callsign was either a “K” or a “W.”

To the federal government, the callsigns represented a way of quickly identifying stations on the air in event of interference or rule violations. Unless a specific un-issued callsign was requested by a station applicant, the government normally issued the callsigns in sequential order. The general rule settled upon “K” callsigns awarded to stations west of the Mississippi River, “W” callsigns east of the Mississippi. One would have imagined that it would have been the other way around, with “W” representing “west.”

In the early days of broadcasting, many stations primarily existed as extensions of the licensee’s stores, factories, or other commercial establishments, or else they were used to promote schools, or even entire cities. The special callsigns requested from the government often reflected these ties. Sometimes, the broadcasters seemed to do it in reverse, inventing slogans that appeared to be uncomfortably force-fit to match up with callsigns that they just happened to get by sheer chance.

Chicago’s WLS, owned by Sears, Roebuck was proud to announce it was the World’s Largest Store, just as WOC in Davenport, owned by the Palmer School of Chiropractic, was pleased to tell its listeners about the Wonders of Chiropractic. The Hotel Lassen, Wichita, took out a license as KFH so listeners would be reminded of Kansas’ Finest Hotel. The Henry Field Seed Company, of Shenendoah, IA used two callsign-based slogans, Known For Neighborly Folks, and also Keep Friendly, Never Frown. A catchy one was used by WAIT in Taunton, MA. They said the letters stood for We Are In Taunton, and most listeners probably figured out that’s why the government issued those initials to the station.

Still, other stations’ slogans were a mix of awkward and just plain awful, and you just know that they were the dismal result of what must have been brain busting in order to figure out a slogan that fit their uncooperative callsigns. There was WAAW in Omaha that might have come up with less of a mouthful had they not tried so hard to push a farming message like Where Agriculture Accumulates Wealth. In Macon, GA, WMAZ, the station of Mercer University announced Watch Mercer Attain Zenith, which sounded awful, but there wasn’t much to be done when fate handed out a callsign containing a “Z.” It was still better than the slogan of WDBO, operated by Rollins College, Winter Park, FL. The best they could come up with was Way Down By Orlando, which probably gave the English Department fits.

WOAN, of Lawrenceburg, TN liked to announce Watch Our Annual Normal. Well, maybe it sounded good at the time, or you had to live there to get caught up in all of its sweeping majesty. It was still more appealing than the enticement offered by Minneapolis station WRHM which intoned, Welcome Rosedale Hospital, Minneapolis. And what about WCBQ, the Nashville station that wasn’t at all dismayed by coming up with a slogan utilizing the tricky letter “Q”? They told their listeners We Can’t Be Quiet!

The listening public (then as well as now) knows or cares little about the why’s and wherefore’s behind the issuance of callsigns to broadcasters. It may be that their perception is that they are merely initials for slogans that were created by the station themselves, like K-Rock, Z-99, and Power 101. Some of those grand oldies like Miami’s Wonderful Isle of Dreams (WIOD) or Shreveport’s K Hill Worry, Keep Healthy (KWKH) had so much charm and fit so well that it would be easy to make that assumption. Actually, the WKH, in KWKH, stood for the owner’s initials.

There are still slogans in use today that are tied to callsign initials, but we wonder how many newly created ones are as corny, clever, contrived, or had as much magic as those thought up in the 1920’s and early 1930’s. Those shown here are only a very
moved in government-imposed frequency upheaval. WJAZ transmitter and had authorizations on Avenue. An early postcard set. The station on the air each Thursday morning at one o'clock, Eastern Standard Time. Be with us, and let us hear from you.

MACON JUNIOR CHAMBER OF COMMERCE
Macon, in the Heart of Georgia.

Macon's WMAZ was a college station that got stuck with a "Z" in its callsign. They did the best they could, which was absolutely awful.


Early Chicago Station
Don Baldwin, of Medford, NJ recalls growing up in Illinois and DX'ing on a crystal set. A reminder of those early days was a postcard Don found dated 1924 that depicted Chicago station WJAZ. It's not a station Don can recall, and he wonders if we can find out something about WJAZ and its eventual fate.

The station went on the air in 1923 on 673 kHz with 20 watts and having the ability to operate under its WJAZ commercial broadcasting license or as Experimental station 9XN. It was owned by the Chicago Radio Laboratories, 332 South Michigan Avenue, Chicago.

A year later, WJAZ was on 1120 kHz. The postcard we have shows it at that point in its career, with two masts supporting a fancy spider web antenna system. The postcard also shows the WJAZ "Crystal Studio" at the Edgewater Beach Hotel in Chicago.

It appears that Chicago Radio Labs was an early name for the Zenith Radio Corporation, for they were the station's owners in 1925, and at nearby 310 South Michigan Avenue. During 1925 and 1926, WJAZ was actually licensed as a portable station, and had authorizations at various times for 160 watts on 930 kHz, also 1500 watts on 1120 kHz.

The year 1928 saw WJAZ become more settled, running 5 kW while dividing time on 1140 kHz with religious station WMBI. The WJAZ transmitter was in Mount Prospect, IL, with the Zenith Radio Corp. offices moved to 3620 Iron Street, Chicago. A major government-imposed frequency upheaval in November of 1928 forced WJAZ on to 1480 kHz where it shared time with WORD, WIBO, and WHT. By 1930, WJAZ had moved to 1490 kHz where its time share stations in Illinois were WCHI and WORD. But that was the beginning of the end, for WCKY in Cincinnati had become the dominant station on the frequency and in a few months, the several other 1490 kHz stations were removed by the government. WJAZ was deleted in December of 1931.

Great Lakes Telegraph
In the early days of wireless, large networks of coastal telephone stations dotted the Great Lakes in order to maintain communications with steamers on those waters. Notwithstanding the severe weather on the Great Lakes that made communications necessary for the safety of life and property, even running the coastal station turned out to be a rather exciting and eventful way of earning a living. This was because there were several highly competitive companies.
Shreveport’s KWKH was a creation of W. K. Henderson, a unique character who thought up just the right slogan to match the callsign and also the flamboyant image of himself and his great station. (Courtesy Larry Fiegle, N4TMW.)

A rare (1909) view of the United Wireless Telegraph Company’s coastal telegraph station in Milwaukee. Using “MK” as its identification, the station contacted vessels on the Great Lakes.

Chicago’s WJAZ had a brief but interesting career. (Courtesy Don Baldwin, NJ.)

all attempting to put one another out of business. Their efforts along these lines ranged from luring accounts (shipping companies) away from other coastal networks to going so far as to deliberately jam the communications in which their competitors were engaged. More than once, even distress communications were jammed, resulting in considerable problems for the vessel seeking help.

One of the first coastal telegraph companies to provide service to Great Lakes vessels was the United Wireless Telegraph Company. They had a tidy little network of shore stations dotting the shoreline of each of the lakes. We are fortunate in having a postcard dated 1909 that depicts their station in Milwaukee, WI. In those days, before federally-issued callsigns, this station used “MK” as its identification.

In our scene, we see MK’s tower to the right atop the Railway Exchange Building. The major thoroughfare running towards the lake is Wisconsin Street, (now called East Wisconsin Avenue), looking east. This is around the area of the present Federal Building.

**From The United Kingdom**

One of our readers in England, Clive Ed- sor, passed along a 1943 photo showing the three towers and operations center described in the photo as the North Regional Wireless Station. We dug into the archives and this station began broadcasting on April 25th, 1931 as station 22Y on 797 kHz. This was a BBC Home Service station situated on one of the most prominent hills of the Moorsland of the West Riding of Yorkshire almost within sight of Lancashire. It could be seen from many parts of Halifax and Huddersfield and from almost every vantage point within twenty miles. The nearest town was Slaithwaite. The masts were 501 feet in height, and the site was 1120 feet above sea level.

In 1936, the station was running 50 kW on 668 kHz, operating 1115 to 0000 UTC (GMT) daily, and 1230 to 2245 UTC on Sundays. A year later, the power was increased to 70 kW.

Records for 1946 show the BBC Home Service North Regional station was still on 668 kHz, but running 100 kW and shown with a location of Moorside Edge. Presently, the Moorside Edge station operates with 200 kW on 909 kHz, 150 kW on 1089 kHz, and 100 kW on 1215 kHz.

**Good Morning, Vietnam!**

Although the war in Vietnam is still fresh in the memory of many, most likely there are a few DX’ers today who can display (or have ever seen) an actual QSL card from the war zone. The problem was solved for us by R.C. Watts, Louisville, KY who shares with us a peek at his 1964 QSL from the Armed Forces Vietnam Network station that ran 50 kW on 540 kHz. The QSL is a multi-station type which could be used for any of the seven different stations listed.
Uniden Corporation of America has purchased the consumer products line of Regency Electronics Inc. for $12,000,000. To celebrate the acquisition, we are offering our largest scanner sale in history! Use the coupon in this ad for big savings. Hurry—offer ends March 31, 1990.

$12,000,000 Scanner Sale

Uniden America Corporation has purchased the consumer products line of Regency Electronics Inc. for $12,000,000. To celebrate the acquisition, we are offering our largest scanner sale in history! Use the coupon in this ad for big savings. Hurry—offer ends March 31, 1990.

Uniden America Corporation has purchased the consumer products line of Regency Electronics Inc. for $12,000,000. To celebrate the acquisition, we are offering our largest scanner sale in history! Use the coupon in this ad for big savings. Hurry—offer ends March 31, 1990.
Checking what information I had available, I was unable to find listings for any of the stations shown on the QSL, so I can't give you information in the way of specific locations. I presume they were all in Saigon, but if someone has better information, we'd welcome same.

**Caribbean Calling on Shortwave**

Edward Bailey, West Haven, CT sent us an extremely pleasant letter accompanied by several great QSL cards that he collected in the 1930's. One that was especially colorful and attractive was from *Radio Martinique*, in Fort-de-France, on the French Island of Martinique, in the Caribbean. This card is dated 1937 and is for reception on 9700 kHz. At 200 watts, this was a good catch. That little power in the 31-meter band sure wouldn't do much for a station these days; would hardly pay to print up QSL cards. But this 1937 card in red, yellow, blue, black, and white is oversized, it is also quite a fancy work of art. Would lead you to believe that they had a lot of reception reports to answer.

This station broadcast in English, French, and German every evening from 2345 to 0045 UTC. *Radio Martinique* remained on the air (and on 9700 kHz) through the years of WWII, although it had increased its power to 1.5 kW by 1948. By the 1950's, the station dropped shortwave coverage and replaced it with a home service on 1500 kHz. In the early 1960's, *Radio Martinique*, itself, was dropped and replaced by the Antilles Guyane Network on 1310 (50 kW), 4895 kHz (4 kW), and 5994 kHz (1 kW). Presently, the station is known as Societe Nationale de Radio-Television Francaise d'Outre Mer on 1310 kHz, also 92.0 and 93.0 MHz FM. The shortwave outlets are gone again.

**Flying Home**

Experimental station W2XBQ was, from...
1928 to 1930, the flying radio communications laboratory of the Pilot Radio and Tube Company, 323 Berry Street, Brooklyn, NY. This company, started by Milton B. Sleeper, later made early FM broadcast tuners and receivers.

The aircraft in which W2XQB was located was a single engine, high-wing type on pontoons. The aircraft was named Pilot Radio (NR-4874), and it made many headlines in April, 1930 when it flew from New York City to Bermuda with a crew of three in order to test the extent to which reliable shortwave communications with a land station could be maintained during an oceanic flight. The land station selected to participate was WHD, the shortwave communications station owned by The New York Times. All communications were CW, and the frequencies used were 1608, 2302, 3076, 4108, 5510, and 6155 kHz. During the flight to Bermuda (800 miles), more than fifty messages were exchanged with a solid copy and no requests for repeats.

The airborne antenna was a trailing wire which could be let out to various different lengths, as determined by the 3rd harmonic of the frequency employed. The major novelty of the communications system is that it was devoid of the usual low frequency transmitting equipment that, until then, aircraft relied upon for over-water flights.

W2XQB was located in this flying laboratory owned by the Pilot Radio and Tube Company.

They proved that shortwave communications and equipment had evolved to the point where aircraft no longer needed to carry long wave transmitters.

Speaking of long waves, that’s what I’m going to have to give you now, with a tear in my eye, until we meet again for the April issue. So, heaps of thanks to those who sent along photos, QSL’s, station directories, postcards and other items relating to old radio and wireless for our use in preparing the column. All are appreciated.

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**KENWOOD:** TS-940, 440, 140, R-5000, 680, 711, 811

**YAESU:** FT-767, 757 GXII, 757 GX, 747, 9600, 736, 212, 712

**JRC:** NRD 525

**COLLINS:** 651 S1

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- Tabular screen display of all the channels stored in memory, along with a full description of each including: MODE (LSB, USB, FM, etc.); eight character alphanumeric description, call sign, sked time, comments. Data files may be sorted by frequency, description, call sign, time, etc.
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**THE MONITORING MAGAZINE**

March 1990 / POPULAR COMMUNICATIONS / 19
Calling All Scanner Owners

Although there have long been frequency directories to inform scanner users, there has been a dearth of general information on the hobby of scanning itself. That problem looks to have been well solved with the appearance of the new book called The Scanner Listener's Handbook: How To Hear More On Your Scanner, by Ed Soomre, N1BFF.

The book begins with an introduction to and explanation of scanners and the hobby of monitoring various two-way communications services operating between 25 and 2,000 MHz. Next, Soomre tells you how to select and buy a scanner to best meet your particular needs; discussing the features of 55 current models, plus 35 scanner antennas, coaxial cables, and accessories. He explains the potentials of and techniques for interfacing scanners with personal computers in order to expand performance capabilities.

Next, the author describes the several types of two-way radio systems encountered on these bands such as simplex, half/full duplex, repeaters, scrambled speech, cellular, and the new trunked 800 MHz systems that have raised so many questions within scanner-user circles. He then presents information on monitoring laws, plus a description of the many radio services encountered on the scanner bands. There is lots of frequency-allocation data here, too, with a listing of which services each of the thousands of assignable frequencies between 25 and 2,100 MHz.

Finally, the author presents several large and valuable reference appendices of scanner manufacturers and dealers, frequency guide sources, and other data that scanner users will find handy in the pursuit of their favorite avocation. Whether you're a beginner, or a seasoned old-timer in the world of scanning, you'll find Soomre's large and well-done book to be thorough and a source of information that you'll doubtless constantly rely upon.

It's good to see that someone has come along to fill this information gap, and has done such a good job of things while doing so. This is a welcome 130-page book that every scanner owner will regard as a close and informative friend.

The Scanner Listener's Handbook, by Ed Soomre, is $14.95 plus $2 shipping/handling to addresses in USA/Canada/APO/FPO from CRB Research, P.O. Box 56, Commack, NY 11725. Residents of NY State add $1.08 sales tax.

Just In Time
For Saint Pat's Day

A book with the odd title of Radio Radio, by Peter Mulryan lets you in on the interesting story of independent, local, community, and even pirate radio in the Republic of Ireland. Let's point out that this book was written and published in Ireland, and wasn't written from afar by someone on this side of the pond who took a fancy to the topic.

Mulryan's 166-page book is filled with photos and exciting text tracing all forms of broadcasting back as early as 1916, with most of the stations covered definitely being on the far side of broadcasting laws and various governmental agencies to one extent or another. There are hobby stations, political protest stations, militant stations, independent networks, stations that lasted for years and others that came and went in little more than a twinkling of a leprechaun's eye. Not that their common bond in broadcasting gave them all sufficient reason to like, or even tolerate one another at times.

It's hard to comprehend from North America, but in the early days when the only legal broadcasting in Ireland was done by the government (which extended to the early 1980's), one of the major election campaign issues was voting in the party that had the best chance of passing new laws that would assure the licensing of local pirate broadcasters! This isn't to say that in earlier days the pirates operated from hidden locations with a paranoid eye towards the roadway to watch for governmental radio enforcement teams. Many of these stations operated right out in the open, promoted their activities with ads and bumperstickers, and defied anybody to show up to close them down. This was possible because the stations had enormous local community support, and served a need not met by government-run stations.

There are plenty of wonderful anecdotes here, lots of colorful characters, and scores of gritty stations arriving and departing in practically every big city and country crossroads.

This book carries a cover price stated in Pounds Sterling (5.95). It was published by Borderline Publications, 38 Clarendon Street, Dublin 2, Ireland. We believe that it might be distributed here by Billboard Publications, Inc., 1515 Broadway, New York, NY 10036. This is a fine book, and lots of fun.

Closer To Home

Latin America by Radio, by Henrik Klemetz, is a 168-page English-language book written by an active Swedish DX'er and published very nicely by a company in Finland. Many DX'ers have been fascinated by the thousands of mediumwave and shortwave broadcasters operating in Central and South America. Henrik Klemetz enumerated among those who never ceased to be intrigued by the local outlets in jungle outposts, the religious and regional stations bringing signals to remote pockets of civilization, as well as the major commercial and governmental networks. These stations can be heard operating in Spanish, Portuguese, and countless Indian dialects.
Eventually, tuning the station on his radio wasn't sufficiently rewarding. Klemetz packed his camera and his radio and went there to visit the stations, discuss their operations and equipment, programming philosophies, local needs they attempt to meet, etc. What emerged was his book, *Latin America by Radio*. It's filled cover-to-cover with photos, QSL's, and information on the stations, including frequency tables, station slogans, local words, station logos, program formats, lists of products sold over the radio, information on music heard, newscast information, national anthems, etc.

There's plenty of information on the best way to DX these stations and, perhaps best of all, how to weasel QSL's out of some of the stations, since local outlets throughout Latin America are notorious for ignoring reception reports. Apparently it's not really all that hopeless, you just have to know the technique, which he classifies as "useful and dirty tricks."

There are so many Latin American broadcasters, Klemetz' book will certainly give you plenty of information you'll find directly useful in DX'ing. Moreover, it's an interesting story. It's like a travel guide to Latin America written for DX'ers. A good idea that we found quite innovative.

*Latin America by Radio* is priced in U.S. funds at $23 from TietoReo Publishing Company, P.O. Box 40, Tlaportti 1 A, SF-002211 Espoo, Finland.

**In Addition**

Evolution and Organisation of Intelligence Activities In The United States is a 318-page overview of the American intelligence gathering community from 1776 to 1975. It's the result of an authoritative report prepared for the 94th Congress Senate Select Committee to study federal intelligence activities.

The book makes for easy and absorbing reading, however, its principal purpose is to be an authoritative source of information concerning intelligence activities. Virtually every aspect and agency is covered with a surprising amount of detail, including how much has been spent. This book is $32.80 plus $2 postage from Agean Park Press, P.O. Box 2837, Laguna Hills, CA 92654. Residents of California, add sales tax.

We received another in a series of books from Australia. This one, by Desmond Ball, is a 151-page volume entitled *Soviet Signals Intelligence (SIGINT): Intercepting Satellite Communications*. This book, as the previous one we received and mentioned several months ago, was sent anonymously with no information regarding price, ordering, or availability.

This heavily illustrated (photos, charts, tables, diagrams) book is concerned with the USSR's SIGINT capabilities and operations with respect to intercepting satellite communications, including those from commercial as well as defense/intelligence "birds." It describes the Soviet ground station capabilities, especially the facility at Lourdes, Cuba. It discusses SATCOM monitoring from diplo posts, and ships at sea. It concludes that the West inadequately appreciates the scope and sophistication of these activities and has therefore not taken adequate security (COMSEC) measures to protect the information being sent via satellites.

*Soviet Signals Intelligence* is an excellent book in every respect. It was published by the Strategic and Defense Studies Centre, Research School of Pacific Studies, The Australian National University, Canberra, Australia. You'll have to inquire from these people if you're interested in obtaining a copy of this information-packed book.

A press release was received announcing Bob Grove's *Scanner and Shortwave Answer Book*. This is a 160-page book consisting of hundreds of questions on monitoring and answers from Bob, as they appeared in issues of *Monitoring Times* over the past eight years. These questions cover everything from equipment selection to antennas, etc.

It's filled cover-to-cover with charts, diagrams, tables, lists of products sold over the radio, information on boss heard, newscast information, etc. There are so many questions on monitoring and answers from Bob, as they appeared in issues of *Monitoring Times* over the past eight years. These questions cover everything from equipment selection to antennas, etc.

It costs $12.95 plus $2 postage (to U.S. addresses) from Grove Enterprises, P.O. Box 98, Brasstown, NC 28902. Looks like a good one.
DX'ing Maritime Communications on the VHF "Low Band" With Your Scanner.

BY CHUCK ROBERTSON

The frequency 31.48 MHz, at first glance, doesn't strike you as anything very extraordinary, at least no more so than any of the other 60-odd channels allocated in the 30 to 50 MHz range for the Special Industrial Radio Service. If, for no other reason than being the frequency used by the Gulf Fleet Marine Corporation's many land bases and ocean-going vessels transporting crude oil and other cargo, it turns out to be one of the most exciting frequencies going. For years I've kept this frequency on tap in my scanner, for no matter which direction is bringing in skip, the action goes full tilt.

There's lots of information on ship positions, sea and weather conditions, cargo status, and routing. There's also no shortage of ship-to-ship chit-chat.

Mostly, the vessels monitored are cruising in the Gulf of Mexico and the Caribbean, although the excellent skip conditions of late have brought in Gulf Fleet vessels located in the Mediterranean and the Pacific who are able to contact the company's "Harvey Base" in Louisiana. Only problem is that this network of stations doesn't have the exclusive use of 31.48 MHz, and during periods when skip is rolling in, the frequency becomes wall-to-wall chatter with other stations located in all areas of the nation. Sometimes, when the pileup gets especially bad, Harvey Base and the vessels have even switched modes from NBFM to SSB in an effort to maintain contact through the wall of signals.

Gulf Fleet vessels are authorized to use 220 watts on FM. Most of these vessels can be discerned because they have the word "Gulf" as part of their name (see our roster). Of course, depending upon the primary language of the ship's captain, you might well hear the name of the vessel spoken in Spanish, Norwegian, Dutch, German, or Portuguese.

Touching Base

There are at least four Gulf Fleet bases, the main one called Harvey Base (callsign...
Table 1 - Some of the Gulf Fleet vessels heard on 31.48 MHz.

<table>
<thead>
<tr>
<th>Name</th>
<th>Call Sign</th>
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<tbody>
<tr>
<td>Apolo del Golfo</td>
<td>Gulf Raven</td>
</tr>
<tr>
<td>Atlantic Sea Horse</td>
<td>Gulf Ruller</td>
</tr>
<tr>
<td>Barbara G. 5</td>
<td>Gulf Saber</td>
</tr>
<tr>
<td>Bering Sea Horse</td>
<td>Gulf Sea Horse</td>
</tr>
<tr>
<td>Bravo</td>
<td>Gulf Seas</td>
</tr>
<tr>
<td>Caribbean Sea Horse</td>
<td>Gulf Star</td>
</tr>
<tr>
<td>Chesapeake Sea Horse</td>
<td>Gulf Storm</td>
</tr>
<tr>
<td>Comoro Uno</td>
<td>Gulf Thunder</td>
</tr>
<tr>
<td>El Mira de Felice</td>
<td>Gulf Titan</td>
</tr>
<tr>
<td>Gulf Ace 2</td>
<td>Gulf Viking</td>
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<tr>
<td>Gulf Breeze</td>
<td>Gulf Wind</td>
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<tr>
<td>Gulf Cajun</td>
<td>Juno del Golfo</td>
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<tr>
<td>Gulf Commander</td>
<td>Jerry G. 6</td>
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<tr>
<td>Gulf Duke</td>
<td>Liberty Service</td>
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<tr>
<td>Gulf Eagle</td>
<td>Lilly Gidfrey</td>
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<tr>
<td>Gulf Falcon</td>
<td>Luke Z. de Felice</td>
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<tr>
<td>Gulf Fever</td>
<td>Matagorda Sea Horse</td>
</tr>
<tr>
<td>Gulf Fleet 302</td>
<td>Mary de Felice</td>
</tr>
<tr>
<td>Gulf Hawk</td>
<td>Martie de Felice</td>
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<tr>
<td>Gulf Joy</td>
<td>Michael de Felice</td>
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<tr>
<td>Gulf Lightning</td>
<td>Mr. Andrie</td>
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<tr>
<td>Gulf Miss</td>
<td>Mr. Mat</td>
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<tr>
<td>Gulf Neighbor</td>
<td>Mr. Roberts</td>
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<tr>
<td>Gulf Pride</td>
<td>Nelly Gidfrey</td>
</tr>
<tr>
<td>Gulf Prince 2</td>
<td>Pacific Sea Horse</td>
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<tr>
<td>Gulf Queen 2</td>
<td>San Mateo Sea Horse</td>
</tr>
<tr>
<td>Gulf Rambler</td>
<td>Saturno del Golfo</td>
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<tr>
<td>Gulf Ramp</td>
<td>Tarot 2</td>
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</tbody>
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Table 2 - Gulf Fleet major bases and transmitter sites.

<table>
<thead>
<tr>
<th>Name</th>
<th>Call Sign</th>
</tr>
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<tbody>
<tr>
<td>Harvey Base—Harvey, LA; KXF841</td>
<td></td>
</tr>
<tr>
<td>Leeveille—Remote transmitter at Leeveille, LA; KQZ242</td>
<td></td>
</tr>
<tr>
<td>Sabine—Remote transmitter at Sabine Pass, TX; WZUB46</td>
<td></td>
</tr>
<tr>
<td>Larose Base—Larose, LA also called “Home Office”; seldom heard.</td>
<td></td>
</tr>
<tr>
<td>Carmen Base—Carmen, Mexico, Gulf of Campeche.</td>
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</tr>
<tr>
<td>HNG Base—Honduras?</td>
<td></td>
</tr>
</tbody>
</table>

unless a vessel is calling and the operator at Harvey Base is temporarily away from the radio.

Larose Base has also been monitored on 31.44 MHz, although I can't find any FCC record for Gulf Fleet Marine on this frequency. Frequency 31.40 MHz even appears to be in occasional use by Gulf Fleet Marine vessels, at least I've heard it used twice during Mayday situations. At those times, vessels were heard shifting between 31.40, 31.44, and 31.48 MHz in an attempt to get help. There might even be other channels to use at 20 or 40 kHz spacing, although I haven't monitored any in use.

A third base is at Carmen, Mexico. This is on the oil-rich Gulf of Campeche. HNG Base is the fourth base, possibly located at Honduras. Both of these stations use English or Spanish. Actually, there are other minor bases on 31.48 MHz, such as Pujon Base (Louisiana?), which is a docking facility utilized by Gulf Fleet Marine vessels. Pujon isn't operated by Gulf Fleet Marine, and has also been noted on 33.38 MHz and mentioning that they were switching to VHF high-band marine channels to relieve congestion on 31.48 MHz.

All Over

Gulf Fleet's vessels turn up on a number of additional low-band frequencies licensed to other port facilities, oil rigs and shipping companies. For instance, the Gulf Fleet 50 has been heard on 44.27 MHz repeater using the King's Wharf in Fyzybad, Trinidad and Tobago. The vessel Apolo del Golfo has been monitored on 32.60 MHz while communicating with offshore oil rigs, possibly in the Gulf of Mexico. Sometimes you'll hear Gulf Fleet vessels mention that they're switching to Exxon or Conoco channels. You'll also hear vessels from several companies that deal with Gulf Fleet Marine operating on their 31.84 MHz frequencies.

Can We Talk?

Fascinating comms come from the Gulf Fleet vessels, like the report from not long ago that was midway between Trinidad and Louisiana when the captain reported that one of the crew members was "freaking out."

Sometimes things get tense when the vessels get close to certain coastlines, like Peru, Nicaragua, or Angola. Like the time the skipper of one of the ships radioed, "I'm going to Nicaragua in the morning. Got my machine gun with me." Maybe he was only kidding, but it still sent a shiver up my spine! Aye, matey! Program 31.48 MHz into your scanner and brace yourself to the mizzenmast for swashbuckling high seas adventure.

Table 3 - Low-Band petroleum operations in the Gulf of Mexico.

<table>
<thead>
<tr>
<th>Name</th>
<th>Call Sign</th>
</tr>
</thead>
<tbody>
<tr>
<td>30.66, 33.28 Kerr McGee Corp.</td>
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</tr>
<tr>
<td>30.70, 48.64 Shell Oil</td>
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<tr>
<td>30.74, 30.78, 30.82 Gulf Oil</td>
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<tr>
<td>30.78, 31.16, 33.18 Chevron</td>
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<tr>
<td>33.20, 33.38 CONOCO</td>
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</tr>
<tr>
<td>33.24 Signal Petroleum</td>
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</tr>
<tr>
<td>33.25 TENNECO</td>
<td></td>
</tr>
<tr>
<td>33.28, 49.16 Cities Service</td>
<td></td>
</tr>
<tr>
<td>33.34, 35.48 Union Oil</td>
<td></td>
</tr>
<tr>
<td>33.36 EXXON</td>
<td></td>
</tr>
<tr>
<td>33.38 Pujon dock</td>
<td></td>
</tr>
<tr>
<td>46.68 Coastal States Gas</td>
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<td>48.82 Texas Eastern</td>
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<tr>
<td>48.98 Getty Oil</td>
<td></td>
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<td>49.04 PENNZOIL</td>
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<td>49.08 Texoma</td>
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<tr>
<td>49.18 Mobile Oil</td>
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<tr>
<td>49.30 Marathon Oil</td>
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</tr>
<tr>
<td>49.34 Sun Corp</td>
<td></td>
</tr>
<tr>
<td>49.50 AMINOIL</td>
<td></td>
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</tbody>
</table>

PC
On occasion someone invents a low cost product that performs a unique and particularly valuable service that nothing else can do and, at the same time, is easy to install and use. Permit me to introduce to you such a creation, the Model SS-45 Search & Store Module for the Realistic PRO-2004 and PRO-2005 programmable VHF/UHF scanners.

Developed and marketed by Key Research Company, the SS-45 adds a new dimension to scanning for owners of these popular receivers. The module introduces hands-off, unattended searching for active frequencies. No longer is continuous operator involvement required to discover those elusive frequencies. The SS-45 completely automates the “Search” and temporary “Storage” of active frequencies! This means that you can program and start a SEARCH band and then go to bed or to work. When the SEARCH function detects and stops on an ACTIVE frequency, that frequency is automatically stored in a “Monitor” channel, the “Monitor” channel number then advances by one, and SEARCH automatically resumes until the next active frequency is found and the process is repeated. This is an automated process that does not require your attention once the Search & Store feature is activated! Later, when you return, the new frequencies can be transferred to the permanent memory channels in the customary manner. The module lets you find new, or rarely used frequencies, that otherwise you wouldn’t have the patience or the time to SEARCH out manually! Unfortunately, the Search & Store Module is not available for scanners other than the Realistic PRO-2004 and PRO-2005. Depending on the marketing success of the SS-45, Key Research Co. might attempt to adapt this neat feature to other scanners.

Electronically speaking, the Search & Store Module performs the very same actions that the operator performs during a conventional “Search” operation. For example, the conventional “Search” Mode halts on an active frequency for the time a signal is present. To temporarily store that frequency, it is necessary to press the “Monitor” button on the keyboard. To resume the “Search” either the “UP” arrow or the “DOWN” arrow must then be pressed. At that time, the “Monitor” channel advances by one to await the next operation. That’s the manual way to fully utilize the “Search” function of the scanner, but the SS-45 will do all this for you electronically.

Drawbacks or disadvantages of the Search & Store module are practically nonexistent, (at least, I couldn’t find any), but there are limitations. For instance, the PRO-2004 and PRO-2005 have only ten “Monitor” channels. Once the SS-45 has stored ten active frequencies, the first one will be erased when the eleventh frequency is found, etc. In other words, the SS-45 can find and store a maximum of ten frequencies. This limitation is imposed by the receiver and an identical constraint is inherent in the standard manual SEARCH process. When the ten MONITOR channels are filled, they will be erased and written over, one by one, with new frequencies if the SEARCH is continued.

Another limitation is that the SS-45 will...
sometimes "hang up" or stop in the middle of its sequence if and when a very short burst of RF signal breaks the Squelch at the moment the "Search" mode scans that frequency. If the RF signal disappears before the Search & Store sequence is completed, (about a tenth of a second), then operation will stop until the squelch breaks again. It could be seconds, minutes or even hours on quiet frequencies before another signal comes in to restart the Search & Store sequence. The operator can, of course, intervene at any time to manually restart the sequence. This limitation, too, is more a function of receiver and external factors than any inherent shortcoming of the SS-45.

Operation of the Search & Store Module is solely from the keyboard (at the touch of a key) and can be activated or deactivated at any time by the operator. All other functions remain normal and intact. There are no external switches or controls. In other words, it is almost as if the SEARCH & STORE feature was provided by the manufacturer as an integral part of the unit! The SS-45 is easily operated as follows:

A. Program and set up a SEARCH routine in the customary manner with HIGH and LOW LIMITS.

B. Depress and hold the DOWN ARROW for about one second.

NOTE: If you just "tap" the "DOWN" arrow key, the "Search" mode will operate normally without the SS-45. It takes a slightly delayed touch of the "DOWN" arrow key to activate the SS-45. The "UP" arrow key does not activate the SS-45. To deactivate or stop the SS-45 function, just press the "scan," "manual" or "program" keys. The SS-45 will remain out of action until the "DOWN" arrow key is pressed again for a second.

The SS-45 circuit board comes sealed, fully assembled and ready to install. To preserve the excellent warranty, do not break or disturb the cardboard and plastic seal around the module. Photo 2 shows what the SS-45 module looks like under the seal wrap. Three integrated circuits, five resistors and three tantalum capacitors make for an extraordinary package of high technology! Installation is incredibly easy with eight wires to solder, and the solder points are very accessible. There are no holes to drill; no wires or circuit patterns to cut; and no controls to install. The whole installation process took me maybe ten minutes, but it took that long because I was very careful and critical of what I was doing! Photo 1 shows the SS-45 in its installed position on the back of the keyboard.

It sells for about $25, and there is a 30-day "no questions" guarantee and a 90-day guarantee against defects in parts or workmanship. The Search & Stores Module (Model SS-45) is available from: Key Research Company, PO Box 5054, Cary, NC 27511.

Review by Bill Cheek.
This van is typical of those used by MSHP district engineers. They have both a trouble shooting and communicating capability.

This mobile EOC is owned by the State Emergency Management Agency. It is normally operated by members of the communications division of MSHP. It has low and high band VHF capabilities and a HF SECURE radio. It is shown here at the Rolla Regional Airport near Vichy during a recent drill. This airport may be used for major air operations following the earthquake.

The New Madrid Earthquake

Don't Even Think About Moving From California To Missouri

BY WILFRED HENRY

It may surprise you that this is not about the gory details of the California earthquake. You may be initially amused by the suggestion of a world class earthquake in Missouri. But Missouri has its own problems. That's right—the land of Ozark mountains, recreational lakes, canoeing streams, folk crafts, and country music is about to fall into a giant sink hole—or something like that.

Missouri has had a history of earthquakes. Back in the early nineteenth century, several monster earthquakes centered near New Madrid, Missouri, rang church bells in Washington, D.C. These three earthquakes were the most powerful ever to occur on this continent. Seismic historians have rated the quakes around 8.4 on the Richter scale. Portions of the Missouri River disappeared in the earth, flowed backwards, or changed course. Noxious fumes and substances were released from deep underground. Much of the topography of southeastern Missouri was radically affected.

The late Professor McNutt of St. Louis
Merkalli VII — about 5.5 on the Richter scale — Everyone is frightened and runs outside. Sand and gravel stream banks cave in. Chimneys and walls crack. Plaster, stucco, and loosened bricks and tiles fall.

Merkalli VIII — about 6 on the Richter scale — Everyone is frightened almost to panic. Persons driving vehicles are disturbed. Branches break off the trees. Sand and mud are ejected from the earth in small quantities. Temporary and permanent changes occur in Springs and wells. Chimneys, columns, monuments, and towers fall.

Merkalli IX — about 6.75 on the Richter scale — There is general panic. Ground cracks conspicuously. Masonry structures are thrown out of plumb. Large parts of well-built masonry buildings collapse. Reservoirs are seriously damaged. Some underground pipes break.

Merkalli X — about 7.3 on the Richter scale — Ground cracks at widths up to several inches. Fissures form up to a yard wide parallel to canals and stream banks. Numerous landslides occur on river banks and steep coasts. Dam dikes, and embankments are seriously damaged. Most masonry and frame structures are destroyed. Buried pipelines are torn apart or crushed. Cracks and broad, wavy folds will open in concrete pavements and asphalt road surfaces.

Merkalli XI — about 8 on the Richter scale — Broad fissures, landslides, and liquefaction occur. Water, sand, and mud is ejected from the earth in large amounts. Dams, dikes, and embankments are greatly damaged. Few masonry structures remain standing. Large, well-built bridges are destroyed. Railroad rails are greatly bent and thrust end wise.

The diagram shows the projected effects on Missouri as the result of a 8.6 (worst case) earthquake anywhere on the New Madrid fault. The roman numerals indicate Mercalli intensity levels.

Shaken by his prophesy, the Missouri State Emergency Management Agency (SEMA) began to get serious about promoting earthquake mitigation and planning. Several major state level earthquake drills have been held and others are on the drawing boards.

Direction & Control

In Missouri, the earthquake response will be directed from a couple stories underground in the State Emergency Operations Center (SEOC) in Jefferson City. One part of the SEOC is a modest communications center. Plans are on the drawing board for a new multi-million dollar SEOC at a nearby prison farm and for an alternate SEOC at a state university in Rolla.

Because the state response to an earthquake might have to be massive, it may not all be controlled from the SEOC. Four District Emergency Operations Centers (DEOC's) will be installed following an earthquake at the Missouri State Highway Patrol (MSHP) headquarters in Willow Spring, Rolla, Jefferson City, and Macon. (MSHP troops in Kirkwood and Popular Bluff could be disabled by the earthquake.) Each headquarters has a classroom which can be turned into an emergency operations center (EOC) and each has emergency power. But none of these DEOC's has all the required communications equipment installed permanently. Current planning calls for all communicating (private and governmental) agencies to bring portable equipment to the classrooms or mobile units to the DEOC's parking lots to support the disaster response bureaucrats. Communications would be maintained with local EOC's within support areas and with command posts (CP's) within the affected areas.

As soon as the state forces can get into the affected areas, command posts will be set up which will communicate with local EOC's in the affected area and with their assigned DEOC.

Well, that is the chain-of-command—and this schematic also provides definition for the major communications trunks which will be required (from SEOC to DEOC's to CP's and local EOC's).

Communications

Public Service: Needless to say, following a major earthquake, whatever communications which survive will be saturated. There will be lots of activity on police, ambulance, and fire frequencies. But the highway department, the Conservation Commission, the Department of Natural Resources, and...
during an earthquake response in Missouri. Some of these frequencies, or their counterparts, may be used by the other six states in which the quake could cause significant damage.

**Amateur Radio Emergency Service**

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Operation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary HF</td>
<td>3.963 MHz, LSB (Missouri Emergency Operations &amp; Weather Net)</td>
</tr>
<tr>
<td>Secondary HF</td>
<td>7.263 MHz, LSB (Missouri Emergency Operations &amp; Weather Net)</td>
</tr>
<tr>
<td>Primary RTTY</td>
<td>3.630 MHz, (Missouri Radioteletype Net)</td>
</tr>
<tr>
<td>Primary CW</td>
<td>3.5850 MHz, (Missouri CW Net)</td>
</tr>
<tr>
<td>Primary VHF</td>
<td></td>
</tr>
<tr>
<td>Packet</td>
<td>145.01 MHz, (Missouri PACKET Net #1)</td>
</tr>
</tbody>
</table>

**Missouri State Highway Patrol**

Point to Point 42.38 MHz.

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Operation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary HF</td>
<td>4.5835 MHz, USB</td>
</tr>
<tr>
<td>Primary VHF</td>
<td>148.15 MHz,</td>
</tr>
</tbody>
</table>

**Military Affiliate Radio System**

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Operation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Army</td>
<td></td>
</tr>
<tr>
<td>Primary HF</td>
<td>4.0235 MHz, LSB (0001Z-14000Z)</td>
</tr>
<tr>
<td>Secondary HF</td>
<td>4.0285 MHz, LSB (0001Z-14000Z)</td>
</tr>
<tr>
<td>Primary HF</td>
<td>7.3585 MHz, LSB (1400Z-2359Z)</td>
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<td>Secondary HF</td>
<td>7.3095 MHz, LSB (1400Z-2359Z)</td>
</tr>
<tr>
<td>Primary VHF</td>
<td>143.990 MHz,</td>
</tr>
<tr>
<td>Secondary VHF</td>
<td>148.650 MHz, (East Central Missouri)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Operation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Navy</td>
<td></td>
</tr>
<tr>
<td>Primary HF</td>
<td>4.4720 MHz, USB (Night)</td>
</tr>
<tr>
<td>Secondary HF</td>
<td>2.0265 MHz, USB (Night)</td>
</tr>
<tr>
<td>Primary HF</td>
<td>7.3700 MHz, USB (Day)</td>
</tr>
<tr>
<td>Packet</td>
<td>4.5150 MHz.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Operation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Air Force</td>
<td></td>
</tr>
<tr>
<td>Primary HF</td>
<td>4.5170 MHz, USB (Summer)</td>
</tr>
<tr>
<td>Primary HF</td>
<td>3.3080 MHz, USB (Winter)</td>
</tr>
<tr>
<td>Secondary HF</td>
<td>7.3050 MHz, USB</td>
</tr>
</tbody>
</table>

MSHP believes that self-supported towers have a better chance of surviving the earthquake than guyed towers. Hope a trooper is not standing under this guyed tower at the Poplar Bluff headquarters when the ground begins to shake.

other networks will be also active. The Missouri Earthquake Plan specifies that all communications agencies work together passing each others traffic on whatever communications resources are left. So, do not be surprised to hear the highway department passing law enforcement traffic or the Water Patrol handling messages for the Department of Social Services.

There is also a communication reserve in Missouri. It will be needed to supplement the surviving telephone network. Much of the communications which routinely would be done via Ma Bell, would have to be done via the communications reserve because of damage to cables and microwave towers. Expect it to be active. Information on it follows:

Amateur Radio Emergency Service: The chairman of the Missouri Earthquake Communications Committee once indicated that hams are the key to reserve communications following an earthquake. There are two reasons for this. First, They have a huge amount of equipment, personnel, frequency spectrum, and "know how." Second, amateur radio operators staff other providers of reserve communications. Hams are everywhere—the communications division of the highway patrol, the radio officers of the Civil Air Patrol, members of the Military Affiliate Radio System, communications personnel in the emergency management agencies, radio operators for the Red Cross, and so forth. There have been state level earthquake drills in which four or five hundred hams participated just on the ham bands.

In Missouri, the major amateur radio HF work will be done in conjunction with the Missouri Emergency Operations and Weather Net. During past drills as many as four side frequencies have been used. But during the real thing, expect additional side frequencies will be dedicated to welfare traffic, support of the Red Cross, support of the Department of Social Services, and so forth.

There has been an emphasis on the use of VHF PACKET to handle large quantities of traffic following a disaster and there has been some success. However, there is only one VHF packet network in Missouri which is operational over a large area. But many digipeaters will be off the air due to structural failures and loss of power. So, much of the digital traffic from the damaged areas to the support areas will probably have to be done on HF. Missouri hams are reluctant to operate HF bands with the popular VHF packet—but necessity will probably rule during the emergency. The Missouri Amateur Radio Emergency Service (ARES) has experimented successfully with airborne packet digipeaters on discrete frequencies. However, it may be difficult for hams to find aircraft on which to fly missions.

Civil Air Patrol: The State Patrol has many frequencies, but most of them will be saturated with their own traffic. During drills, the Patrol's state-wide computer network has been utilized. However, after the quake, the telephone network on which it relies may be badly damaged. Since the Highway Patrol point to point frequency is normally under-utilized, it might be a source for reserve communications.

Civil Air Patrol: The CAP has VHF and HF resources. After the earthquake, their own traffic will increase, but they may also have some reserves. The CAP in Missouri has a couple airborne PACKET digipeaters
State Emergency Management Agency
Primary HF: 5.1400 MHz. USB (fixed) (channel 76)
Other HF Freqs: 2.2360 MHz. USB (interstate) (channel 70)
2.4110 MHz. USB (channel 71)
2.4140 MHz. USB (channel 72)
2.4190 MHz. USB (channel 73)
2.4390 MHz. USB (channel 74)
2.4630 MHz. USB (channel 75)
5.1920 MHz. USB (fixed, interstate coordination only), communications limited to adjacent states of Arkansas, Illinois, Iowa, Kansas, Kentucky, Oklahoma, Nebraska, and Tennessee) (channel 77)
7.4770 MHz. USB (fixed) (channel 78)
7.8020 MHz. USB (day only, fixed) (channel 79)
7.8050 MHz. USB (fixed, interstate coordination only) (channel 80)
7.9350 MHz. USB (day only, fixed) (channel 81)
Primary VHF: 45.1200 MHz.
HF Call Signs: WNBE 830—SEOC, Jefferson City
WNBE 837—EOC, Joplin
WNBE 824—EOC, Jackson
WNBE 829—EOC, Springfield
WNBE 825—EOC, Rockport
? —EOC, St. Charles
? —EOC, Hillsboro

Missouri National Guard
Primary HF: 4.950 MHz. USB
NCS Call Sign: Show-Me Alpha

American Red Cross
Primary VHF: 47.420 MHz.
Secondary VHF: 47.460 MHz. (greater St. Louis area)

Corps of Engineers
Primary HF: 5.015 MHz. LSB
VHF: 163.410 MHz.
VHF: 163.440 MHz.

but few, if any, packet stations associated with emergency management agencies. The hams do—the CAP and the ARES need to be working together. The combination could be a winner.

Military Affiliate Radio System (MARS): Members of this organization are the hams with military licenses who handle the welfare traffic between military personnel overseas and their families back home in the states. Following a disaster, they have a role to support the national guard, other military units and federal agencies. Recently MARS began to get serious about earthquake preparedness. They have one drill under their belt. They are few in number but well trained. In Missouri, most MARS members are associated with the Army.

State Emergency Management Agency: SEMA has a fledgling network on HF. It operates as part of the State Emergency Communications Using Radio Effectively (SECUR) service. The SEOC and only slightly more than half a dozen local EOC's have the SECURE equipment due to its high cost. This service is dedicated to the disaster communications reserve.

SEMA has also been promoting a low band VHF network which utilizes discarded

The New Madrid County Sheriff uses a self-supported tower for his communication center.
More QSO's
More QSL's
More Fun

when you speak their language.
  - Add extra spice to your DX QSO's
  - Let your DX friends know you care enough about them to learn their language. (After all, they've gone out of their way to learn English!)
  - Break the phone pile-up with a few carefully chosen words in the DX station's own language. You'll be amazed at the difference it's like adding 3 dB to your signal.

The Radio Amateur's Conversation Guide by OH1BR and OH35AD gives you the 147 most often used phrases in eight languages: English, German, French, Italian, Spanish, Portuguese, Cyrillic Russian, Phonetic Russian, Phonetic Japanese. Phonetic alphabets and eight-language dictionary included in this rugged spiral-bound manual a MUST for any serious DXer or Contestor. Beat the competition. Order yours today. Only $10.00 plus $2.00 for shipping.

Supplements available in less-used languages: Dutch/Flemish, Danish, Finnish, Spanish, Japanese, Russian, Persian, Portuguese. $4.00 per supplement. Be sure to state which language supplement you need.

New cassette tapes in eight languages

Now you can hear the exact pronunciation of the sentences, phrases and words covered in The Radio Amateur’s Conversation Guide. Each high quality language tape is recorded with proper dialect and usage in one of the languages in the Conversation Guide.

Tapes available in each of these languages:
  - German
  - French
  - Spanish
  - Danish
  - Finnish
  - Portuguese
  - Japanese
  - Swedish

Order the Language Guides and cassette tapes from CQ Book Shop as follows:

CQ Book Shop
76 North Broadway
Hicksville, NY 11801

Order the following:

- $10 per cassette tape
- $4 per supplement
- $1 for postage

Add $2 for postage and handling in North America.

Total

<table>
<thead>
<tr>
<th>Language</th>
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<td>Japanese</td>
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<tr>
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</table>

A major earthquake would put MSHP troops in Kirkwood and Popular Bluff out of commission. MSHP troop headquarters would expand eastward into the damage area. MSHP headquarters in Macon, Jefferson City, Rolla, and Willow Springs would serve as District Emergency Operation Centers. Communications from the affected area in each sector would pass through the sector's DEOC on its way to the SEOC in Jefferson City.

City hall at New Madrid is constructed of masonry. Don't expect much communications from this facility after the quake.

Federal Agencies: The Feds have some resources in Missouri. The Corps of Engineers has an under utilized HF network connecting each of their major projects. They also have some fixed

Conclusions

Well, are you believers now? I have to live in Missouri, but think I'll stay off those double decker interstate in downtown St. Louis.
The letter carrier has been bringing CB Scene some interesting mail, so let's dig into the big stack, starting with a rather ambitious proposal sent in by Brian, who should get a lot of support with his idea. Brian doesn't claim it to be his, but notes that he's coordinating the publicity for the idea on behalf of several clubs in his area.

The basics of the eleven-point idea, which was sent to us in the form of a petition to the FCC, is to have CB Channels 36 to 40 immediately designated for exclusive single-sideband mode use. Further to this, within a few years, upper sideband mode would be the only operation permitted on these frequencies, and manufacturers would no longer be permitted to produce standard AM Class D CB transceivers that could operate on frequencies above Channel 35. From 26.365 upwards to then be re-channeled at 5 kHz intervals.

The petition further pleads for all business users to be off CB channels within a few years, and new provisions be added for allowing remote control of CB transceivers by means of 46/49 MHz cordless telephone type handsets. A person might then sit in their back yard and have access to their base station transceiver located some distance away inside the house.

The proposal also pleads for the FCC to open up 27.410 to 27.970 MHz for hobby CB operation, including legal DX'ing, using 100 watts SSB (USB only) and 30 watt output FM. Channels here would be spaced at 5 kHz increments. The sideband segment of the band would be from 27.410 to 27.695 MHz, with FM from 27.700 to 27.970 MHz.

For those wishing to pursue this concept, we suggest contacting Super Talkers of Pennsylvania, P.O. Box 165, Hatboro, PA 19040-0165.

Our own personal observations are that the FCC has rejected all manner of proposals, plans, and petitions sent in by operators as long ago as the 1970's which sought frequencies designated for exclusive sidebanding use. The agency has also ignored any number of previously submitted concepts that sought to get sky working sanctioned. It should also be noted that the frequencies between 27.540 and 27.995 MHz are allocated (in the U.S.) for federal government use. As such, the FCC would have no authority to grant them as suggested in this proposal, even if it were inclined to go along with the idea (which, history has shown, it isn't!).

Still, what the heck, if you weren't around when many of these things were asked for in the past, and you support these proposals, you are entitled to have your own turn at approaching the FCC and asking. Why not? Maybe this time they'll finally say "yes."

Photogenic

It's a little dark, but we received a photo of the mobile installation of Steve Steffen, KA0TLZ, and SSB Network member SSB-7331A, of Dubuque, IA. This station runs an Azden PCS-2000 2-meter ham FM rig (top) and a Cobra 138XLR AM/SSB transceiver.

From Brenham, TX comes a photo that looks like the operator, Fred, doesn't have to stoke the coal in the fireplace in order to keep the shack warm because the station itself puts out enough heat to thaw out half the county. We can see a Realistic PRO-2020 over on the left, an Astatic D-104 mike, and also a weather radio. In dead center it looks like a Galaxy transceiver perched atop a Golden Eagle afterburner. Say, Fred, looks like the signals from your statio could discombobulate the electronic ignitions in anything but the largest trucks passing by your QTH, as well as any aircraft flying below 15,000 feet. We assume that this good looking, but slightly illegal station isn't presently being used, but is being held in readiness for use the moment Brian's FCC petition is approved, however, we did appreciate Fred's very kind words about this column.

A note for Bill Heine, Jr., SSB Network member SSB-33D, asks us to let all of his friends know that he isn't presently on the air.
A QSL received long way from a QSL of the Month. The card Steve sent came in from Anatol like to hear for CB’ers in the U.S. and Canada, however the only AD we have for him is the one typed on the QSL in Cyrillic, which we can’t translate into anything the post office could ever figure out.

**Helping Hands**

We do want to acknowledge the numerous cards and letters that arrived in the aftermath of Hurricane Hugo hitting South Carolina, as well as the dreadful earthquake problems that hit northern California. There were many individual operators, local AM and SSB groups, as well as many REACT Teams that swung into action for the benefit of the community at large, many times at considerable personal inconvenience and risk to the operators. There were instances where, in the absence of governmental authorities and even ham communications, CB was the only form of communication available until other lines of communication could be set up.

Although there was some amount of chaos on the CB channels, in the Bay Area, REACT Teams stuck to their guns on Channel 9 and coordinated with local authorities to pass along reports of accidents, lines down, fires, roads, and major damage. REACT also informed motorists of passable highway routes, announced the locations of emergency centers, and informed volunteers where to report. They also relayed messages to love ones.

In all, a job well done by REACT as well as many individual operators and local groups which demonstrated that CB’s functions during a state of emergency provide a valuable community service that can’t be duplicated by any other radio service.

For information on becoming active in a REACT Team, write to REACT International, Inc., 242 Cleveland, Wichita, KS 67214.

**Mount Up**

The choice of an antenna location on a car is influenced by such factors as ease of installation, cutting holes in the car body, and overhead obstructions presented by garage. But in terms of electrical performance, there are five basic locations, as illustrated. Consider each of these positions in order of preference:

1. Roof-top. Placed squarely in the center of the car roof, an antenna in this position provides the most signal strength in each direction. Since the roof metal is most equally distributed around the base of the antenna, the pattern is circular or non-directional. There will be little or no “beam” effect. Even if the car is driven in a circle, a distant receiving station hears no difference in the signal level. Another factor in favor of the roof-top mount is that it permits the signal to clear nearby obstructions. Also, there is no blocking of the signal by any other metal surface of the car.

2. Trunk Mounting. Somewhat less an antenna efficiency occurs when the whip is positioned in the center of the trunk lid; for this reason, it is the second-best location. The result of having more metal in front of the car (in the direction of the travel). This increase is at the expense of power transmitted toward the rear of the car.

3. Fender Mounting. This position is on the rear fender, right or left side, next to the rear window. If the right fender is used, the strongest signal is transmitted in the direction of the left front fender. For rear left mounting, the signal is strongest toward the right front fender. The reason for these differences is that the signal tends to be drawn over the longest metal path presented by the car. This is pointed out for the antenna shown. Note how the signal runs diagonally across the car roof in its favored direction. There is a corresponding drop in strength in the opposite direction. These effects are most noticeable at longer ranges. This should be taken into account during an emergency call. By turning the car and taking advantage of these directional effects, it might be possible to get the message through under poor-signal conditions.

4. This mounting point, on the front cowl (either side), produces the same general effects as already described for the rear-fender mount. Now the favored direction is toward the rear of the car, since the largest mass of metal lies in that direction. A similar diagonal effect also occurs; a left from mounting produces strongest signal toward the right rear of the car.
5. This last case is the bumper mount at the rear. Although this can be the easiest point for mounting the whip, it has certain disadvantages. For one, it places the base of the antenna, where most of the signal exists, extremely close to the trunk. This causes some obstruction in the forward direction. But since the forward direction also favors the signal (most metal lies in this direction) there is also some strengthening in that direction. The net result is that a rear left bumper antenna produces the best signal toward the right front fender; the right bumper mount favors the left front. Another factor which works against the bumper mount is that maximum signal power is placed quite low on the car where it may not successfully clear obstructions close to the car.

Since many CB mobile antennas are not mounted on the center of the car roof, they tend to transmit signals more strongly in certain directions than others. This may even occur in roof-top mounting due to unequal distribution of car metal around the base of the antenna.

This inequality can be used to advantage in situations where it is important to obtain communications under poor conditions. Once the direction of the antenna is known, it is possible to position the car accordingly. While this may not be practical on a routine basis, it could prove helpful during a roadside or other emergency.

To discover the best direction of the antenna, you can follow a simple procedure. It requires the assistance of a base station. Drive the car several miles from the base station until your S-reading, read at the base station drops below S-5. (At these levels, differences in signal are more readily seen on the meter.) The car should be in the clear away from overhead power lines and obstacles. There should be sufficient open area to permit you to drive a complete circle, making a tight turn.

Begin by noting the starting point and call the base station and have it take an S-reading. Make the transmission about a half-minute long, to rule out the effects of signal flutter which may occur due to passing cars. Ask the base operator to give you an average S-reading for the half-minute period.

Next, drive the car slowly in a complete circle. Imagine the circle as divided in about eight points. Obtain readings at each point with half-minute transmissions. The complete run will indicate the point, or points, of best signal radiation. For increased accuracy, the car should be driven to another location and the test repeated. This rules out reflections from hills and other obstructions which may give false readings. Once the result is known, you'll know how to point the car for optimum communications.

This column would like your QSL's (your own or those received from overseas stations), station photos, information on coffee breaks, and any thoughts or questions you have on 27 MHz AM or SSB communications.

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March 1990 / POPULAR COMMUNICATIONS / 35
LISTENING POST
WHAT'S HAPPENING: INTERNATIONAL SHORTWAVE BROADCASTING BANDS

I

If things went the way they were supposed
to we should be receiving improved signals
from Radio New Zealand now. After many
years of struggling with antiquated equip-
ment and occasional walks on the edge of
oblivion, the station got the go ahead last
year for a pair of 100 kW transmitters and
the first of these was supposed to have gone
on by January. The new installation is at
Rangitaiki on New Zealand's northern is-
land. An operating schedule for the new
unit wasn't available when this was written,
but it's likely that the same Radio New Zea-
land frequencies will be used, i.e., 9850,
11780, 15150, 15485 and 17705, at vari-
ous times of the day. Radio New Zealand
will welcome reception reports on the new
transmitters. Their address is: Radio New
Zealand International, P.O. Box 2092,
Wellington, New Zealand.

New country watch: The Andaman Is-
lands (actually Andaman and Nicobar) in
the Indian Ocean are now on shortwave
thanks to an All India Radio regional station
at Port Blair. The schedule is still a little
hazy and, in any event, it's likely to be an ex-
tremely tough catch for most of us in North
America. The best opportunity seems to be
at 1230 UTC on 4760. Another new AIR
regional station, at Leh, also uses this spot.

The Cape Verde Islands are back on
shortwave after a considerable silent period.
A European DX'er is hearing Radio Na-
cional do Cabo Verde on 3930 to 2100 sign off.
That, too, will be tough for most of us, al-
though east coasters might have a shot at
this one during the winter months.

If you're unsuccessful with that station
your odds of logging Cape Verde will go
way up when a trio of 500 kW transmitters
go on the air from there in 1991. A French
company is setting up the station and plans
to rent time to international broadcasters
to use as a relay, a la Africa Number One in
Gabon.

We still aren't certain whether the Canary
Islands are back on shortwave or not. Once
an easy log thanks to the Radio Nacional Es-
pana relay there, the relay went off the air
some time back. Now it may have been re-
sumed. Listen on 17715 from 2200-2300.
The Spanish language programming at that
hour carries an ID for the Canary Islands but
no one seems to know whether this is from a
transmitter on the islands or is just a pro-
gram from the islands, which is being broad-
cast over transmitters in Spain.

Other news: Radio Surinam Interna-
tional, which broadcasts over the facilities of
Radiobras in Brazil, was planning a modera-
tate expansion of its service which would in-
clude an increase in the time given to Eng-
lish and the addition of a segment in Span-

ish. Radio Surinam International airs at
1700 Monday through Friday on 17890.
Your chances of logging Uruguay, which
is one of the tougher South Americans to
hear, are somewhat better now with the re-
turn of station SODRE to shortwave.
SODRE's Spanish language programs are
on 9620, a spot also used by the powerful
Radio Yugoslavia. Some DX'ers have picked
up SODRE around 0130.

The BBC has added two more high pow-
er transmitters to its compliment on Ascen-
sion Island. They'll beam mainly to Africa
and Latin America.

The BBC and Radio Netherlands are
planning to put up a joint relay station at an
unspecified Asian location. This one is a
considerable time away.

Italy's private shortwave broadcasters
may have some clouds in their future. A
new communications law is being consid-
ered by the Italian government and the pro-
posed legislation makes no provision for pri-
ivate broadcasting on shortwave. Such sta-
tions as IRIS and AWR might be affected by
such a law.

The government radio in Ecuador is plan-
ing to return to shortwave over its own
transmitters. For now, however, Radio Na-
cional is aired for a half hour each day via
HCJB (at 1730 on 15270). HCJB not only
provides the transmitter but handles the QSL'ing for this broadcast as well!

Radio Antilles in Montserrat, already in
trouble after the loss of Deutsche Welle
funding, was severely damaged by Hurri-

This attractive, multicolor map QSL is from UAE Radio in Dubai, the United Arab Emi-
rates. (Thanks to Larry R. Zamora)

James Higgins of Saugus, MA keeps an ear
on the globe from this shack which includes
equipment that provides wide spectrum
coverage.

Jesse F. Carroll's 3-receiver shack in Chi-
icago, IL.
Illinois is the proud owner of a new R-5000 receiver and says "what a difference" compared to the portable he was using. Tim promises a shack photo one of these days.

Luis A. Rivera of the Bronx, New York is a newcomer to shortwave, although he had a radio for sometime before. He says ever since he tuned in his first station (Radio Sweden) he spends most of his spare time listening. Welcome to the gang, Luis. Your questions will find answers in the great amount of shortwave literature that's available. Read as much as you can and you'll be an expert in no time!

Kevin Story of Midland, Texas checks in, wondering about a number of stations and their QSL policies (or lack of same). One of the things to keep in mind is that the QSL picture is in a constant state of flux. Kevin, a station which replies to everybody now may not answer anyone over the next five years—and there's usually no explanation for such goings on! Thus, you find Radio Baghdad tough now, when a couple of years ago they were pretty good. The only answer is to keep trying. Send a good report, return postage (unless you know it's not required) and be prepared to follow up every few months if need be.

Remember, we are looking for your log reports—double spaced and with your last name and state abbreviation after each item, please. Also wanted are shack photos (preferably with you in the scene), spare (non-returnable) QSL's to use as illustrations, schedules, news clippings and your comments and questions. Even though we can rarely reply directly that doesn't mean your efforts are not much appreciated.

Here are this month's logs. All times are UTC and language is English except where otherwise noted.

ASCENSION ISLAND: BBC relay at 0130 on 6005/15260 (Johnson, IL)

ALBANIA: Radio Tirana, 9500 at 0236 and 0630. (Walbesser, NY) 9630 at 2030. (Reynolds, MO) at 0230. (Higgins, MA) Here and 11825 at 2330. (Johnson, IL)

ANGOLA: Radio Nacional, 9430 at 0235-0310 in PP with talk, music. Woman with ID “...de Luanda” at 0255. (Mierzwinski, PA)

ANTIGUA: BBC relay at 0100 on 5975. (Johnson, IL)

ARGENTINA: RAIE, 11710 at 1000 sign on with multilingual ID, then JJ program. (Zamora, ND) 0405 with ID and address. (Johnson, IL)

AUSTRALIA: Radio Australia, 9580 at 0818 and 11720 at 0844. (Walbesser, NY) 9580 at 0925. (Reynolds, OR) 9580 at 1420-1435 (Mierzwinski, PA) 17795 at 0344 and 21740 at 0429 (Reynolds, MO)

BELGIUM: BRT with “Brussels Calling” at 1230 on 17555. (Reynolds, MO)

BRAZIL: Radio Liberal, Belém, 3325 in PP on 0805-0905, ID at 0903. (Mierzwinski, PA)

Radio Nacional Boa Vista, 4875 in PP at 0935 to 0938 sign off. (Mierzwinski, PA)

Brazil Radio Central, Goiana, 4985 in PP 0010-0035 talk, music, ID. (Mierzwinski, PA)

Radiobras, 11745 or 0826 with Brazilian pops. (Johnson, IL) 0237. (Walbesser, MO)

BULGARIA: Radio Sofia, 11735 at 0300-0340 with news, commentary, mailbag, women’s rights programs.

CANADA: CFCF relay of CECF on 6005 at 1135. (Northrup, CT) 0800. (Hafeli, BC)

CFRX relay CBFR on 6070 at 0004. (Zamora, ND) 0726. (Hafeli, BC)

RCI on 9755/11710 at 2300 with “SWL Digest.”

CHAD: Radiodiffusion Nationale Chadienne. 4904.5 at 0435 with Central African style music, man announce talking with listeners on telephone. All FF. (Johnson, IL)

CHILE: Radio Nacional, 15140 at 0030 with SS ID. (Story, TX) 2335 in SS. (Johnson, IL)

CHINA: Radio Beijing, 9690 (via Spain, editor) at 0328 and 15130 (via Max, editor) at 0355. (Walbesser, NY) 12105 via Xian site at 1145 1215 in CC. (Mierzwinski, PA) 15450 at 1222. (Reynolds, MO)

COSTA RICA: Radio For Peace International, 7375/113660 at 0315. (Johnson, IL) 2940 at 1930 with University of Texas program f/b “WINGS” (Women’s International News Gathering Service) program. (Zamora, ND)

CUBA: Radio Havana Cuba on 11760 at 0343 in FF. (Reynolds, MO) 1120 at 0405 and 15180, in SS. at 1800 sign on. (Walbesser, NY) 11890 at 0405. (Hafeli, BC)

CZECHOSLOVAKIA: Radio Prague, 5930 at 0300. (Reynolds, MO) Here at 0340. (Johnson, IL) 11685 at 0356. (Walbesser, NY) 11990 at 0115. (Hafeli, BC) 2140 at 1450 with address and sign off. (Zamora, ND)

EAST GERMANY: Radio Berlin International, 9730 at 2245 with news. (Johnson, IL) 11890 to Asia at 1020. (Hafeli, BC)

ECUADOR: Radio Nacional Espejo, 4680 in SS at 0218 with talk and ID. (Johnson, IL)

Radio Quito, 4920 in SS at 0401 with ID, mentions of Quito. (Story, TX)

HCJB, 3220 at 0236-0305 in Quechua and Spanish. (Mierzwinski, PA) Here and parallel 6050 at 0430 with ID in SS (Johnson, IL) 15155 at 0329. (Reynolds, MO)

ENGLAND: BBC, 6110 at 2330 with rock program. (Zamora, ND) 7150/71260 at 1800, 9600/9645 at 0700, 15260/17715/17760 at 2100, 15400 at 6000, all World service outlets. (Walbesser, NY) 6175 via Sackville at 0130, 7355/9915 at 0130. (Johnson, IL) 6195 at 0424. (Reynolds, MO)

FINLAND: Radio Finland International, 11755/15185 at 0240. (Johnson, IL) 15400 at 1215. (Reynolds, MO) 2150 at 1420 to North America. (Sunday EC) (Zamora, ND)

FRANCE: Radio France International, 17650 at 1300 with mailbag program. (Zamora, ND)

FRENCH GUIANA: RFI relay, 11995 at 0330. (Reynolds, MO)

GABON: RFI relay via Mogab at 4890 at 0400, ID in FF. (Johnson, IL)

Africa No. One, 15470 at 1900 with African music announcements in FF. (Johnson, IL)

GREECE: Voice of Greece, 9395/9420/11645 at 0130 with news. (Johnson, IL) 9420 at 0338 with news. (Hafeli, BC)

GUATEMALA: Radio Cultural (TGN etc.) on 3300 at 0304 with “Back to the Bible” (Reynolds, MO) 1120 with ID and music in SS. (Johnson, IL)

Radio Texufullan, 4835 at 0147 with ID in SS. (Johnson, IL)

Radio Buenos Nuevos on 4800 at 0100 with ID in SS. (Johnson, IL)

HONDURAS: Radio Luz y Vida, 3249 at 0025-0055 in SS mostly-talk with some music, program schedule given ID. 0233. (Mierzwinski, PA)

La Voz Evangelica, HRVC 4820 at 0335-0345 in SS with ID and music. (Mierzwinski, PA)

HUNGARY: Radio Budapest, 9585 at 0235 in Hungary. (Hafeli, BC)

IRAQ: Radio Baghdad, 9515 at 0135 with news and exotic music. (Johnson, IL)

ISRAEL: Kol Israel, 11605/15615/17630 with music and announcements in presumed Yiddish. (Johnson, IL) Time? 11605/15130 at 0010 with news and features. (Walbesser, NY)

ITALY: RAI at 0107 with news on 9575/118100. (Johnson, IL)

JAPAN: Radio Japan, 6120 via Sackville at 1105. (Northrup, CT) 1151. (Reynolds, MO) 15195/15325 /17826 in SS at 0345. (Johnson, IL)

KUWAIT: Radio Kuwait, 11990/15495/15505 at 2310 with exotic music and talk in AA. 11990 heavily QRM. (Johnson, IL) 15495 at 0530-0545. (Mierzwinski, PA) 15505 in AA at 2020. (Hafeli, BC)

LIBERIA: ELWA on 4760 at 10625-0649, QRM’s by the Mayak outlet on 4764. “Problems of Police” pro-
OMAN. Radio Oman, 17735 at 2100 in AA, all talk with mentions of Oman. Sign off at 2128. (Mierzwinski, PA)

PAKISTAN. Radio Pakistan, 17760 at 0125 with Urdu talks, mentions of Karachi. (Mierzwinski, PA) 21740 at 1610 with ID, news. (Johnson, IL)

PAPUA NEW GUINEA. Radio Milne Bay, Alotau at 1105-1138 with south sea music, announcer with program info, request for letters, song announcements. (Mierzwinski, PA)

Peru. Radio Atlantida, Iquitos, 4790 at 0920 in SS with music, several "Radio Atlantida" IDs, rooster calls. (Mierzwinski, PA)

Radio East New Britain, Rabaul, 3385 at 1045-1105 talk, local language ID at 1100. (Mierzwinski, PA)

Portugal. Radio Portugal, 9660//11840 at 0250 with tourist program. (Johnson, IL) 9705 at 0247. (Reynolds, MO)

SOUTH AFRICA. Radio Orion, 4810 at 0405 in Afrikaans. (Johnson, IL)

Radio Five, 4880 at 0405 with pop and ID. (Johnson, IL)

Radio RSA, 9580//9615 at 0220 with news. (Walbesser, NY) 9615 at 0252. (Reynolds, MO) 11745 at 2225 with SS under heavy QRM. (Johnson, IL)

Spain. Spanish National Radio at 0300 on 9630 with ID, news and talk in SS. (Hatell, BC)

SWITZERLAND. Swiss Radio International, 6135 at 0220 with DX show, into GG at 0230 (Higgins, MA) 9885 at 0110. (Hafell, BC) 12035 at 0404. (Reynolds, MO) 15655 at 0850. (Walbesser, NY)

TAHITI. Radio Tahiti, 15171 at 0430 with island music. (Johnson, IL)

TAWAI. Voice of Free China (via WYZR) 9680 at 0330 and 15345 at 2110. (Walbesser, NY)

TURKEY. Voice of Turkey at 0035 in AA on 9445. (Hatell, BC) 2230 with modern Turkish music. (Johnson, IL)

TUNISIA. RTT Tunis at 0620 on 11550 with Arabic music. (Hatell, BC) 15450 at 0530 in AA with talk, music, ID 0530. (Mierzwinski, PA)

UNIDENTIFIED. 4915 at 2300 in EE ending "Readings From the Koran" and abrupt sign off at 2300. (Ghana? Johnson, IL)

UNITED ARAB EMIRATES. Voice of the UAE. Abu Dhabi, 13605 at 2330 with news. (Walbesser, NY)

UNITED STATES. WYER, 7355 at 0725. (Higgins, MA) 0237. (Walbesser, NY)

WMKL, 9465 at 1140. (Northrup, CT)

BBC via VOA-Bethany. Ohio, 9590 at 0130. (Johnson, IL)

WRNO, 7355 at 0030. (Higgins, MA) 15420 at 2200 with music. (Walbesser, NY)

WCSN on 9455 at 0930 with ID. headlines, letterbox. (Zamora, ND)

KUSW on 9850 weekend frequency at 1158. (Reynolds, MO) 15580 at 2205. (Walbesser, NY)

WWCR on 7375 at 0345, religion. (Johnson, IL)

WHRI at 0520 on 7520. (Hatell, BC)

WIBR on 15295 at 1641. (Walbesser, MO)

Radio Marriott, via VOA transmitter at 1135, SS. (Northrup, CT)

WSHB at 0258 on 9455. (Reynolds, MO)

USSR. Radio Moscow, 9720 at 2200, 15135 at 1750. (Walbesser, NY) 15585 at 1537. (Mierzwinski, PA)

VATICAN. Vatican Radio. 15120 at 1559 in AA. (Reynolds, MO) 21485 at 1212 to Southeast Asia, off 1215. (Zamora, ND)

VENEZUELA. Radio Rumbos. Caracas, 4970 with SS ID at 0400. (Story, TX) 0410-0425 in SS, ID 0425. (Mierzwinski, PA) Here and national anthem. (Johnson, IL)

Radio Continental, Barinas, 0905-0918 and 0935-1005 in SS with some music, IDs in SS. (Mierzwinski, PA)

EOC del Torres, San Cristobal, 4980 at 0357 sign off in SS and national anthem. (Johnson, IL)

WEST GERMANY. Deutsche Welle, 3995 in GG at 0045 with talks, some music after 0115, ID 0128. (Mierzwinski, PA)

YUGOSLAVIA. Radio Yugoslavia, 7215//11735 at 0000 with news. (Johnson, IL)

And a hearty thank you to these good folks:


Until next month, good Listening!
EPI Wideband Active Antenna

The new Electronic Processing, Inc. (EPI) active antenna, Fig. 1, acts as a full quarter wave or longer vertical antenna over most of the VHF/UHF frequency range extending from the FM broadcast band to the 800 M-Hz band. In fact, it telescopes between 14" and 38". Thus the frequency range between the FM band and the VHF/HI band can be made resonant to a specific frequency as a quarter wavelength and at other frequencies a 3/4 wavelength vertical. However, you do as well just extending it fully, because it has an amplifier at its base. For this reason it serves as an all-band VHF/UHF active antenna. It can be used indoors, or it can become a traveling companion. Outdoor mast mounts can be supplied too.

The antenna can be supported with the supplied plastic suction cups, Fig. 2. It does attach well to the inside of a window pane and, the antenna tubing itself is supported 2 5 inches away from the glass.

The amplifier has a gain of 14 db and gives quite a boost to a weak signal. However, there is no gain control and you must make certain your receiver does not overload easily, or that you location is too close to the antenna system of a local broadcast station. Often this situation produces troublesome intermodulation distortion components on the low frequency shortwave broadcast bands and on the broadcast band.

The amplifier supplies signal to a 15 foot length of coaxial cable that is attached to a power coupling unit. A short length of cable links the signal to the receiver. The coupling unit supplies power to the same cable for application to the antenna preamplifier. A 50-foot extension cable is available and is ideal for setting up an outdoor installation. In this application the antenna does very well because higher signal levels can be intercepted.

The good preamplifier permits reasonable reception on the lower frequencies such as the SWB bands. In fact, the installation shown did fine on the SWB bands up to the 31 meter band. Nighttime reception was acceptable on the lower frequency SWB bands as well and even on the broadcast band.

Adding Additional Length

It is possible to improve reception on the SWB bands by adding some additional length. In a typical example, an 11 foot length of #22 insulated wire was added to the top of the antenna. One end of the wire was bared, looped and twisted tightly beneath the ball of the antenna top. Wire was stretched out across the room and tacked to the top of the door at the other end. It made a marked improvement in the lower-frequency signal levels. At night, the band was filled with strong signals up to the 49 meter band. Results were spotty on the lower-frequency SWB and on the BCB bands because of the birdies from the local AM broadcast station and its transmitting antennas within several miles of my location.

In a final test, I positioned the antenna horizontally on the filing cabinet and extended the antenna fully. The end of my indoor long wire was clipped on to its end.

This set up a long wire antenna, plus preamplifier for all-band reception. On those frequencies where I had no difficulty with the local AM station there was a decided improvement in signal level. If you have a good location there is no reason why the antenna would not do well on all frequencies.

If SWB/BCB reception is your specialty when you travel you can always take a rolled up length of #22 hook-up wire with an appropriate alligator clip attached. In fact, a good plan is to carry two or three wires of differing lengths depending upon the bands you wish to favor.

(Continued on page 42)
### POP’COMM’s World Band Tuning Tips

**March, 1990**

This Pop’Comm feature is designed to help you hear more shortwave stations. Each month this handy, pull-out guide will show you when and where to tune to hear a wide variety of local and international broadcasters currently active on the shortwave radio bands. Note that the languages used will not always be English and that broadcasts may not necessarily be beamed to North America. Keep in mind that stations frequently make changes in broadcast times and frequencies. Changes in propagation conditions may also make certain broadcasts difficult or impossible to receive at times.

All times given are in UTC.

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<td>VOIRI, Iran</td>
<td>0130 SS</td>
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<tr>
<td>13815</td>
<td>Kol Israel</td>
<td>0400 Hebrew</td>
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<tr>
<td>13815</td>
<td>R. Beijing, China</td>
<td>0230 SS</td>
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<td>13815</td>
<td>WHRI, Indiana</td>
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<td>13915</td>
<td>R. Pyongyang, N. Korea</td>
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<td>13940</td>
<td>R. National, Chile</td>
<td>2300 SS</td>
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<td>13945</td>
<td>HCJB, Ecuador</td>
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<td>13965</td>
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<td>13970</td>
<td>R. Tahiti</td>
<td>0300 FF</td>
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<td>13980</td>
<td>R. Mirns, Byelorussian SSR</td>
<td>2350 Byelorussian</td>
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<td>13985</td>
<td>R. Kiev, Ukraine SSR</td>
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<td>14015</td>
<td>R. Kazakhstan</td>
<td>1230</td>
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</tbody>
</table>

**Notes:**
- **UTC** denotes the time in Coordinated Universal Time (UTC).
- **Notes** include additional information such as sign on, off, and specific programming details.
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SATISFACTION GUARANTEED

(from page 39)

Fig. 3. RFA-20 Signal Intensifier.

#22 hookup wire 80' overall

Three connection methods
(see details in July Popular Communications)

In an installation of this type you can always change over quickly to scanner operation by removing the clip attached to the antenna. If you are not a scanner fan, there is an alternative. The EPI- RFA-20 signal intensifier, Fig. 3, does very well on the frequencies up to 200 MHz. You can use several different lengths of wire with banana plugs attached for connecting to its input.

B. Freeman wrote in to ask about an indoor loop antenna. I had covered one in a previous issue. Basically, it is a complete horizontal loop positioned along the baseboard of the apartment. Use #22 insulated hook-up wire. Start the wire off on one side of your receiver and return on the other side, Fig 4. It can wind around a bit and it need not be a perfect square or rectangle, but keep it as open as you possibly can.

Provide a means of connecting it in each of three ways as shown. Experiment with it so that you can select the best one of the three connections for each band, or, choose the one position that gives you the best overall results if you don't want to set up a switching arrangement. I've been pleased with the way my own operates.
CLANDESTINE COMMUNIQUE
WHAT'S NEW WITH THE CLANDESTINES

You can always count on the world of secret broadcasting to be a constant source of odd and inexplicable goings on and here's an item that surely fits into that category. According to a story in September 3 (1989) edition of the Washington Post the anti-Angolan government station A Voz do Resistência do Galo Negro (Voice of the Resistance of the Black Cockerel) has deliberately interfered with the broadcasts of the Voice of America. That's ironic. It's true, since the UNITA rebels which operate the station are supported by the U.S. government and some reports say their radio station gets CIA support. Anyway, the story says that UNITA may have used its transmitter to jam a VOA broadcast which contained a speech by the Angolan president. On other occasions the UNITA station is accused of cutting in on VOA broadcasts in Portuguese to Africa on 7130 and 9700—two frequencies also used by the Black Cockerel station. In the past both UNITA and the Angolan government have accused the VOA of bias in its reporting on the Angolan situation. UNITA has denied any attempt to interfere with the VOA but says it's possible the interfering signals were coincidence. The VOA said it was going to monitor both its program and the UNITA station. Thanks to Michael C. Lewis in Virginia for forwarding this interesting item!

New developments in the clandestine situation in Sri Lanka. There's a report which indicates the Sri Lankan government is now operating a station calling itself The Independent Voice (or Voice of Freedom) which, according to a Media Network report is operating at 0100-0130 and 1300-1330 on 4360. An additional Sunday transmission is at 0330-0400 on 7010. Radio JVP, broadcasting against the government, is operating Tuesday, Thursdays, Saturdays and Sundays at 0130-0145 and 1330-1415 on 4432. The Indian government has also gotten into the act with the Voice of the Tamil Movement on Saturdays and Sundays from about 0130-0230 and 1030-1110 on a frequency varying between 7100 and 7150. It's a shame that none of the Sri Lankan clandestine activity can be received in North America.

Vietnamese Resistance Radio has surfaced again, or at least a report that it is active. It's said to be broadcasting on 7300 between 0200-0300, 0600-0700, 1000-1100, 1400-1500 and 2200-2300. The station is said to be operated by something calling itself the National Front for the Liberation of Vietnam. The station went on the air back in 1984, but our information indicates it was not active for a very long time and that, despite occasional reports of a schedule for this one, it has not been active, at least based on the bits and pieces that have filtered into our files in the past. If active with any kind of power the 1000 and 1400 broadcasts would offer some possibility of reception in North America.

Several clandestines focus on the Kurdish people but are not hearable in North America. There's a newly reported station which just may be within our reach, however. It identifies as the Voice of the People of Kurdistan and is reported active in Arabic from 1600-1730 on 15046, a fairly better time/frequency combo for our purposes.

The station supporting democracy in China—Radio Democracy—which we told you about last month continued its activity well into the fall, according to Tetsuya Kondo of Japan, reporting to the DX Spread newsletter. Kondo notes the station was silent between the 10th and 21st of September last year, when typhoon #19 hit Taiwan. Kondo's extensive monitoring indicates the station is active periodically between 1000-1600 (except Tuesdays and Wednesdays) on 7126.1. Broadcasts last around 10 minutes and are in Chinese. US DX'er Bob Hill in Massachusetts recently logged this station on 7125.8 at 1025. So far we've seen no reports of any clandestine broadcasting by the pro-democracy Chinese exile groups.

The Voice of Democratic Kampuchea, which had its broadcasts suspended for a time, has returned to the air. The station transmits from Chinese government facilities and the temporary closedown was thought to be because China wanted to use the transmitters for jamming purposes during the democracy crisis last spring. VODK now broadcasts at 0400-0500 on 15110 and 1760, 0900-1000 on 11780, 11870 and 17533, 1300-1400 on 6025 and 9400 and 2330-0030 on 7350 and 9400. The pro-Khmer Rouge broadcasts can often be heard in North America.

Clandestine fan Robert Ross in Canada reports reception of Radio Venceremos at 0236-0250 on 6460 with an ID "esta es Radio Venceremos, voz oficial de FMLN". He also heard Radio Venceremos on 6240 at 0153 and suspects this may have been a pirate playing a tape. Bob picked up the ELM's Radio Patria Libre on 6758 to 0057 sign off, identifying as "Radio Patria Libre, la voz de Colombia." Bob had Iran's Flag of Freedom Radio in Farsi at 90500 on 15560 with many mentions of Iran and Khomeini. Thanks for the fine logs, Bob!

One of the steadiest clandestine performers—frequency, schedule, strength and even QSL-wise—is La Voz de Cuba Independente y Democrática, easily heard days and evenings on 9940, slightly variable. Robert Fletcher of New York sends a bumper sticker he received with his QSL from La Voz del CID. He notes the address as: Apartado 3130, San Jose 1000. Costa Rica.

Please let us have your clandestine broadcasting news—whether in the form of actual loggings, schedules, QSL and address info, material received from the groups which operate stations or any relevant news clipping you may run across. As Always, you identity can be protected if you wish.

Thanks. And until next month, good hunting!

CUBA INDEPENDIENTE Y DEMOCRATICA
 ¡LA RESISTENCIA ES EL CAMINO DE LA VICTORIA!

An attractive red, white and blue bumper sticker sent by anti-Castro broadcaster La Voz del CID. (Thanks: Robert Fletcher)
After the January column, in which we spoke of the GTE Airfone air/ground telephone system, quite a number of readers wrote to ask about why GTE Airfone wasn’t set up to operate within the cellular networks, especially since it appears to be utilizing frequencies in the same general (800 MHz) frequency range.

For one thing, cellular phones use FM mode while GTE Airfone doesn’t. Because of something called “capture effect,” which is inherent in FM operation, FM isn’t as well suited to airborne operation as is AM mode. This is why AM is still used for aeronautical communications in the 118 and 225 MHz bands. Fact is, cellular telephones aren’t even allowed to be used in airplanes, but for a different reason.

Cellular handheld and mobile phones run low power in order to deliberately restrict their transmitting range. If these stations had more than a very limited range, it would defeat the operational concept of how a cellular system works. Each communications cell is designed to cover only a relatively small area. If a mobile station pushed more signal than was adequate for basic coverage, its signals could possibly cause interference to operations in cells other than the closest one to the mobile or handheld unit.

On the other hand, even a stock, low-powered handheld, or mobile unit, would have a greatly enhanced signal coverage potential once taken aloft in an aircraft. Flying at only 5,000 feet, a person with a cellular would access all cellular systems for 100 miles in all directions from the aircraft. In a commercial jet airliner, systems 250 miles (or more) in all directions would be accessed. In either case, placing or receiving a call would be difficult or altogether impossible, and the signals from the aircraft would wreak havoc on the ground-based systems within range that were accessed.

As a sidelight to all that, recently I had to take an airline flight to a destination where I felt my transportable cellular phone would come in handy during my stay. My only luggage consisted on a carry-on bag, so I thought it best if I telephoned the airline the morning of the flight, to ask if there would be any problems with bringing the cellular aboard. Airline security people are (understandably) wary of people attempting to carry electronics equipment on board airliners. They explained to me that I wouldn’t be allowed to use it while in flight, but mostly they told me that I’d have to agree to having the cellular opened up and its innards inspected prior to boarding. I agreed, and they suggested that I show up at the airline security screening area with a few minutes extra to spare.

When I arrived at the airline ticket counter, I told the agent about the cellular and was advised that sometimes the security personnel want to look inside the units, but that they won’t harm the equipment. Showing up at the security gate, I again announced that I had a cellular telephone in my carry-on. I might as well have said I had a salami sandwich, they placed the suitcase on the conveyor belt, it went through the X-ray, they handed it back to me without any further checking or questions. They simply couldn’t have cared less! The suitcase was never opened, the cellular was never seen except on the X-ray.

If any readers have had “experiences” one way or the other among these lines, we’d like to hear about them. It does seem that it would probably be wise to check in advance, and then assume that it might be necessary to allow the cellular to be inspected. Either I didn’t look like a terrorist to the airport security people, or else security isn’t as thorough as it should be at my local airport.

A Clever Idea

In Bowling Green, KY there’s a small company that’s hit upon a rather clever idea. They furnish portable cellular phones for placement in motels and car rental agencies where they can be offered for daily rental. Called Travel Phone, The units can be taken anywhere for business or recreational uses. Rates charged are standard roaming rates. The first motel that signed up for making Travel Phone available was the Best Western Motel in Erlanger, which is adjacent to the Cincinnati Metro Airport. It seems that I’m not the only person who would like to have the use of a cellular while spending a few days away from home base. It’s less hassle than flying with your own phone.

This company also has a sister operation called TravelFax that makes FAX machines available to guests in motel rooms. Makes it convenient for exchanging all sorts of information with a distant home or office.

Both Travel Phone and TravelFax are divisions of Pay Phone Enterprises, Inc., 1004 State Street, Suite 200, Bowling Green KY 42102. We appreciate their letting us know about their innovative services.

On-The-Go-Accessory

While we’re discussing being on the go, we’d like to let you know about the Cellabs Datajack data adapter. This small device allows transmitting FAX and laptop computer data through cellular and non-cellular (IMTS) cars, also through full duplex SMR mobile radios. It provides the user with an RJ11 (standard telephone line) jack for connections to the FAX and/or computer.

The small unit provides loop current that many FAX machines require in order to operate, as well as automatic silencing of the
mobile telephone or two-way handset so as not to interfere with FAX or data transmission. Connection is accomplished by simple manual dialing or answering of a call.

The DataJack can be used with most mobile and transportable cellphones and also most IMTs and SMR radios. Professional installation isn't required and no modification of the cellular phone is required.

For more information on this interesting and useful device, contact Cellabs, 6433 Tophill Canyon Blvd., Suite 152, Canoga Park, CA 91303, or call 105 on our Readers' Service.

Lightweight Portable

Hitachi Sales Corp. of America just brought out their Model CR 2121H handheld cellular. It can be cradled in a stationary unit in a car for total hands-free operation, or it can be easily carried in a jacket pocket, purse, or a briefcase. This model has a dual antenna system that permits reception even if the main antenna isn't extended.

Other improvements over earlier models include increased ringer volume, and louder earpiece volume. All pushbuttons have been recessed more deeply in order to decrease the possibility of misdialings and other problems that occur when buttons are accidentally depressed during normal carrying and handling of a small handheld portable.

Other features include 100-minute talk-time and 16 hours of stand-by time on a single charge of the battery. There's 30-number alphanumeric dialing memory, 36-character display for message and number, a muting button, scratch pad memory, DTMF over dialing, illuminated keypad and display, electronic lock, airtime display, and security key.

The Hitachi CR-2121H weighs less than 21 oz., is less than 8 in. high, 1.5" thick, and a sliver over 2" wide. The MSRP is $1295. To learn more about the Model CR 2121H, contact Hitachi Sales Corp. of America, 401 W. Atreaus Blvd., Compton, CA 90220, or circle 106 on our Readers' Service.

Milestone

Cellular service has been around in the United States for six years, just in case you weren't aware that last October was the official anniversary. It was in October of 1983 that Ameritech Mobile Communications launched commercial service in Chicago.

Present industry stats report that new cellular subscribers are being activated at a rate of nearly 77,000 per month, with 70% of existing users having started within the past 18 months. There are now 2.7-million cellular users in North America, and that number will double this year. Some 50 countries now have cellular service.

Many new customer services are being added to cellular services, or are just on the horizon. Look for breakthroughs such as the development of an "intelligent vehicle" that provides map and traffic info, provides local entertainment updates, allows users to control security and other systems in their homes, provide parking availability data in high density areas, and even warn owners when their vehicle is being broken into.

Perhaps one of the most appealing new aspects of cellular is the beginnings of what may be a movement to reduce air-time costs. Reader Edgar F. Chapelle, Byron, NY, let us know that the Geneseo Telephone Co. and Rochester Tel Mobile Communications (in New York) have both sliced their rates. Rates ranging between 14 and 17.5 cents per minute (including for peak hours) are among the lowest in the nation. Certainly, these are the kind of rates that will attract many who have held off on getting cellular phones.

This column seeks input from our readers, questions, suggestions, new uses for telephones on-the-go, new products, etc. Got an interesting story on your own experiences with a portable or mobile phone? Tell us!
As a professional emergency communicator, you will find that the news media will be looking over your shoulder to glean some additional information about the event you are providing communications for. They are looking for a story. They are looking for any angle. They are taking notes on everything you say, and everything they hear, over your radio set-up.

As a professional emergency communicator, it's important to consider your role with the news media. Does your organization have a public information officer (PIO)? If so, it is the responsibility of the PIO to handle any questions asked by the news media, and to disseminate statements made to the media. If you indeed have a PIO, let them do the talking—not you.

If you are the only one around providing communications, it's up to you to watch what you say. Never divulge information about another party—this is usually confidential, and is privileged information to those injured by the disaster, or anyone else that you may be helping with your radio set-up. And there are some things you simply don't want to tell the news bureau at all. Let me give you an example of a ham radio operation that went sour when the news media caught on that ham airwaves may also contain a few loonies.

Hurricane Hugo and the great San Francisco earthquake most recently pulled emergency communicators together, making emergency command posts in the stricken areas. In both disasters, emergency communicators came from several different radio fields:

- Amateur radio
- GMRS
- Citizens Band
- Red Cross radio
- Land mobile communications

The best part of the communications scenario was the ability of radio communications to GET THROUGH. Luckily, radio waves are unaffected by spinning hurricanes, and work just as well into earthquake-shattered areas as they do to a modern radio set-up with no damage at all.

The radio communicators were the heroes.

The news media gathered around to interview one of these radio operators, but unfortunately, they picked a radio operator that had no common sense.

"Sure, we can get through on radio, if only the jammers and hecklers would get off our frequencies. You know, our ham radio service now sounds like Citizens Band with all these jammers interrupting our emergency communications..." comments a ham radio operator with no street sense.

As expected, reporters homed in on this glitch in radio communications, and many headlines focused on how poorly the radio communications were going, rather than how well emergency communications were saving the day.

If your emergency communications are being disrupted by a jammer, tuner-upper, or illegal operator blowing his nose or burping on the airwaves, change to another frequency. Make no mention of the interference. And above all, don't let the news media, looking over your shoulder, detect that there may be one rotten apple out of a complete stack of healthy apples, carrying on with the emergency communications.

Once you acknowledge a jammer on the air, or in the press, your troubles will multiply. Jammers and radio disrupters are looking for attention. Scream at them, and you have made their day. Talk about them in the press, and now they are further heightened by their illegal operation. They'll track your

---

**Emergency communicator using packet to handle San Francisco quake traffic lists. (Photo by Dan Fort)**

---

**Typical packet message sent during San Francisco earthquake.**
invites. The use anyison rules communications.
diately, have emergencies, your news Radio Use deling shots letter
about the ham, that you to break dio gauge are not amateur coming over your sions bureaus tape-record operator, in action
Rather, the news media trying to a
Don't acknowledge them completely ignore them.
jammer disrupted. Let your best offense against jammers
is that ham
might star-but don't. However, during your routine conversation with the other ham, if that ham gives you the information about the disaster area, this is fine—as long as it is not directed specifically for news gathering purposes.
You may wish to tear out the following letter that might be sent to your local news bureaus. This lets them know, ahead of time, where to go to get the latest action shots of your radio station in action, handling emergency communications:

**Use Live Ham Radio Broadcasts**

The amateur radio service can provide your news department with instant coverage to local and distant disasters, local emergencies, or widespread destruction. There are over one-half million licensed amateur radio operators, called ham, who have the capabilities to go on the air, immediately, assisting with emergency radio communications.

The Federal Communications Commission rules permit your news department to use any and all amateur radio communications. The local amateur radio community invites you to "look over their shoulders" and pick up the information LIVE as it's coming in over the airwaves, or over our radio computers and amateur radio television links.

You will hear and see the excitement as it is actually happening, thousands of miles away, or just down the street. We are not allowed to be hired for news reporting, nor is our amateur radio service allowed to be regularly engaged in news gathering—but, however, the amateur radio community encourages you to cover the news from our vantage point, and you are invited to call us anytime there's a major news story that amateur radio operations may be involved in.

**YOUR LOCAL AMATEUR RADIO CONTACT:**

Name:
Station Location:
Hot Line #:

We appreciate your coverage of how amateur radio operators may provide public service communications in times of disaster, emergencies, or widespread destruction—or for that matter, a bicycle race, telethon, or even a parade . . .

73 (Best regards in ham lingo)

---

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CIRCLE 43 ON READER SERVICE CARD
I

If you've tuned up past the high end of the AM broadcasting band, you might have noted the recent addition of a new signal on 1660 kHz. This isn't a pirate, but a 400-watt station licensed to operate under the callsign KA2XXB. The licensee of KA2XXB is none other than the National Association of Broadcasters. If you've monitored this station, you could be hearing history in action.

Station KA2XXB, located in Maryland near Beltsville, is using an experimental directional antenna system intended to improve local signal coverage of mediumwave stations while also reducing long-distance skywave transmissions. The antenna system requires a 295-ft. tower, but also has a horizontal element made up of a length of wire running between the tower and one of the tower's supporting guy wires. The phase and current of this horizontal element is precisely tuned to reduce skywave radiation without cutting into local groundwave coverage.

The antenna system, designed by engineer Ogden Prestholdt, is now being given signal measurements to see how well it does what it is supposed to do. Many broadcast stations might be able to adapt to this new system at minimal additional expense (would need an extra feed system) and then be able to operate at night without cutting their power or having to switch over to directional antennas that reduce skywave signals, but also degrade their local signal coverage in the process.

KA2XXB is using a solid state transmitter on loan from Nautel Maine Inc., while the tower (worth $28,000) was supplied by LDL Communications of Laurel, MD. The NAB has put more than $75,000 of its funds into the project, in addition to the expensive equipment furnished by manufacturers including those mentioned plus Delta Electronics, Low Power Broadcasting, Cablewave Systems, Potomac Instruments, and Kintronic Laboratories.

The NAB staff engineer in charge of the project is Kelly Williams. The address of the NAB is 1771 N Street, N.W., Washington, DC 20036. If you happen to receive KA2XXB, you might wish to send Mr. Williams a detailed reception report.

Quick Change

A note from CE Dave MacAdams, and Assistant Engineer Pete Kodis (N1EXA) of WCTK (98.1 MHz) in New Bedford, MA arrived at our desk. They noted that in the October column we had mentioned some format shuffling that took place in eastern New England when Boston's WBOS dropped its country music format and several other area stations stepped in to fill in the gaps. They pointed out that, although we didn't mention it, theirs was one of those stations.

It was a quick change, as they say. The format was switched so fast that the employees didn't even know about it until they showed up for work and were told that there was a new format in effect. The station had been known as WMYS and spent five months in the highly competitive "easy favorites" (soft rock, etc.) format without gaining the audience share they wanted.

The switch to country music was made so quickly that the new call letters (WCTK) hadn't had time to process through the FCC. All of the soft rock music was loaded into more than 700 cardboard boxes, and it was "instant" Hank Williams, Jr. and The Judds as the station plunged into its new format. The new call letters came through a week later.

MacAdams and Kodis told us that WCTK runs 50 kW and has its antenna atop a 600 foot tower. This gives the station coverage of eastern MA, all of RI, as well as eastern CT. Look for them on 98.1 kHz. Wonder if they've got a copy of Euphoria, by the Holy Modal Rounders in their record library. Wonder if they take requests? We appreciate hearing from the WCTK gang!

Action On 95 Indecency Complaints

The FCC said that it is taking action on a backlog of 95 indecency complaints. This action dispenses all documented indecency complaints pending at the FCC. The complaints were filed over a period of more than two years.

The Bureau instituted enforcement actions against eight stations for broadcasting indecent material.

Four of the eight stations subject to enforcement action were issued notices of apparent liability for monetary forfeitures. These are WIOD, Miami, FL ($10,000); WZTA-FM, Miami ($2,000); KLUC-FM, Las Vegas, NV ($2,000); and KFI-AM, Los Angeles, CA ($6,000).

Four other stations have been mailed inquiry letters seeking their comments on the
### AM Facilities Changes Requested

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<th>GM</th>
<th>City</th>
<th>New Frequency</th>
<th>Old Frequency</th>
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<td>KDFT</td>
<td>Ferris, TX</td>
<td>540 kHz</td>
<td>Incr. to 250 w. nites.</td>
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<td>KFRS</td>
<td>Sumner, WA</td>
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<td>Incr. to 10 kW days</td>
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<td>KMTI</td>
<td>Manti, UT</td>
<td>1590 kHz</td>
<td>Incr. to 10 kW</td>
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<tr>
<td>(new) Nashua, NH</td>
<td>900 kHz Move to Lancaster, MA,</td>
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<td>Incr. to 1.6 kW nites.</td>
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<td>WBSO</td>
<td>Clinton, MA</td>
<td>650 kHz Move to Lawrenceville, GA</td>
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<td>WBUJ</td>
<td>Trenton, NJ</td>
<td>1260 kHz</td>
<td>Incr. to 5 kW days</td>
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<td>WDLB</td>
<td>Springfield, TN</td>
<td>1590 kHz</td>
<td>Reduce to 710 w.</td>
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<tr>
<td>WGNR</td>
<td>Lawrenceville, GA</td>
<td>1360 kHz Move to Grayson, GA.</td>
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<tr>
<td>WPGC</td>
<td>Morningside, MD</td>
<td>1580 kHz</td>
<td>Reduce to 400 w. nites.</td>
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### FM Frequency Changes Requested

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<td>101.7 MHz</td>
<td>Move to 101.5 MHz</td>
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<tr>
<td>KDNX</td>
<td>Denver City, TX</td>
<td>107.1 MHz</td>
<td>Move to 97.5 MHz</td>
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<td>KGWX</td>
<td>Wahpeton, ND</td>
<td>107.1 MHz</td>
<td>Move to 106 9 MHz</td>
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<td>KNIQ</td>
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<td>Move to 93.9 MHz</td>
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<td>WVOO</td>
<td>Glasgow, KY</td>
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<td>Move to 105.3 MHz</td>
<td></td>
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<tr>
<td>WXTQ</td>
<td>Athens, OH</td>
<td>105.5 MHz</td>
<td>Move to 105.7 MHz</td>
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### FM Frequency Changes Approved

<table>
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<tr>
<th>Call</th>
<th>GM</th>
<th>City</th>
<th>New Frequency</th>
<th>Old Frequency</th>
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</thead>
<tbody>
<tr>
<td>KASH</td>
<td>Modesto, CA</td>
<td>1360 kHz</td>
<td>Reduce to 950 w. nites.</td>
<td></td>
</tr>
<tr>
<td>KNIM</td>
<td>Maryville, MO</td>
<td>1580 kHz</td>
<td>Incr. to 1 kW days</td>
<td></td>
</tr>
<tr>
<td>KNOB</td>
<td>Frazier Park, CA</td>
<td>1050 kHz</td>
<td>Incr. to 10 kW</td>
<td></td>
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<tr>
<td>WBER</td>
<td>Desert Hot Springs, CA</td>
<td>880 kHz</td>
<td>Incr. to 3 kW/900 w.</td>
<td></td>
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<tr>
<td>WCHC</td>
<td>Terre Haute, IN</td>
<td>1230 kHz Move to 640 kHz</td>
<td></td>
<td></td>
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<tr>
<td>WCHG</td>
<td>Houghton Lake, MI</td>
<td>1290 kHz</td>
<td>Reduce to 4.9/4.6 kW.</td>
<td></td>
</tr>
<tr>
<td>WJDD</td>
<td>Chicago, IL</td>
<td>1160 kHz</td>
<td>Reduce to 5 kW nites.</td>
<td></td>
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<tr>
<td>WJTO</td>
<td>Bath, ME</td>
<td>730 kHz</td>
<td>Change to 10 kW/500 w.</td>
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<tr>
<td>WKNV</td>
<td>Dublin, VA</td>
<td>810 kHz</td>
<td>Reduce to 600 w.</td>
<td></td>
</tr>
<tr>
<td>WMNE</td>
<td>Menomonee, WI</td>
<td>870 kHz</td>
<td>Move to 680 kHz reduce to 210 w. nites.</td>
<td></td>
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<tr>
<td>WMOG</td>
<td>Brunswick, GA</td>
<td>1490 kHz</td>
<td>Reduce to 600 w.</td>
<td></td>
</tr>
<tr>
<td>WMUJ</td>
<td>Freeville, SC</td>
<td>1260 kHz</td>
<td>Incr. to 5 kW.</td>
<td></td>
</tr>
<tr>
<td>WNYX</td>
<td>Canton, NY</td>
<td>750 kHz</td>
<td>Reduce to 2.5 kW days.</td>
<td></td>
</tr>
<tr>
<td>WNOX</td>
<td>Evanston, IL</td>
<td>1590 kHz</td>
<td>Incr. to 3.5 kW days.</td>
<td></td>
</tr>
<tr>
<td>WNIZ</td>
<td>Westland, MI</td>
<td>690 kHz</td>
<td>Use 690 kHz (5 kW) days</td>
<td></td>
</tr>
<tr>
<td>WREV</td>
<td>Reidville, SC</td>
<td>1220 kHz</td>
<td>Incr. to 10 kW days.</td>
<td></td>
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<tr>
<td>WSDS</td>
<td>Ypsilanti, MI</td>
<td>1480 kHz</td>
<td>Move to Canton, MI, incr. to 750 w.</td>
<td></td>
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<tr>
<td>WYLO</td>
<td>Jackson, WI</td>
<td>540 kHz</td>
<td>Incr. to 400 w.</td>
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<td>WZAL</td>
<td>McDonough, GA</td>
<td>1540 kHz</td>
<td>Incr. to 2.5 kW</td>
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### New FM Call Letters Assigned

<table>
<thead>
<tr>
<th>City</th>
<th>Call</th>
<th>GM</th>
<th>City</th>
<th>Call</th>
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</thead>
<tbody>
<tr>
<td>Silverton, CO</td>
<td>KQZZ</td>
<td>KEBK</td>
<td>Bennington, NE</td>
<td>KROK</td>
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<tr>
<td>Spencer, OK</td>
<td>KROU</td>
<td>KCZE</td>
<td>Lafayette, LA</td>
<td>KRRQ</td>
</tr>
<tr>
<td>Bennington, NE</td>
<td>KRRK</td>
<td>KCVQ</td>
<td>New Boston, TX</td>
<td>KTBR</td>
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<tr>
<td>Salem, SD</td>
<td>KSM</td>
<td>KRLR</td>
<td>A. Hl.</td>
<td>KTSS</td>
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<tr>
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<td>KSMN</td>
<td>KRB</td>
<td>New London</td>
<td>KQAZ</td>
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<tr>
<td>Corrales, NM</td>
<td>KSVA</td>
<td>KHRH</td>
<td>Joe</td>
<td>KVNO</td>
</tr>
<tr>
<td>Payson, UT</td>
<td>KTC</td>
<td>KJET</td>
<td>Washington, MO</td>
<td>KTM</td>
</tr>
<tr>
<td>Bakersfield, CA</td>
<td>KTIE</td>
<td>KJMA</td>
<td>Mount Vernon, MO</td>
<td>KTJX</td>
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<tr>
<td>Mount Royal</td>
<td>KJUL</td>
<td>KJUL</td>
<td>New Boston, TX</td>
<td>KLV</td>
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<tr>
<td>Redwood, WI</td>
<td>KZD</td>
<td>KJWW</td>
<td>Evanston, IL</td>
<td>KTS</td>
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<td>WCAT-FM</td>
<td>KJAF</td>
<td>Evansville, IN</td>
<td>KJAY</td>
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<td>Athol, MA</td>
<td>WCNH</td>
<td>KJBP</td>
<td>Mount Vernon, MO</td>
<td>KWY</td>
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<td>WGUF</td>
<td>KJBD</td>
<td>Beverly, MA</td>
<td>WKF</td>
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<td>Marco, FL</td>
<td>WGOY</td>
<td>KJBI</td>
<td>Beverly, MA</td>
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<td>KJBL</td>
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<td>WHL</td>
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<td>WHBC</td>
<td>KJBL</td>
<td>Buffalo, NY</td>
<td>WHL</td>
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<td>WHMU</td>
<td>KJEM</td>
<td>Bayboro, NC</td>
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<td>KJEN</td>
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<td>WNC</td>
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<td>KJKE</td>
<td>Hazard, KY</td>
<td>WJMD</td>
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<td>KJKE</td>
<td>Hazard, KY</td>
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<tr>
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<td>KFF</td>
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<tr>
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<td>WKQC</td>
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<tr>
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<td>Portage, PA</td>
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<td>Hazard, KY</td>
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### New AM Call Letters Assigned

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<tr>
<th>City</th>
<th>Call</th>
<th>GM</th>
<th>City</th>
<th>Call</th>
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<tbody>
<tr>
<td>Coburg, OR</td>
<td>KRQY</td>
<td>KCHR</td>
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<td>KRQZ</td>
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<td>KWNT</td>
<td>KCHR</td>
<td>Seattle, WA</td>
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<td>Santa Fe, NM</td>
<td>KWNW</td>
<td>KCHR</td>
<td>Seattle, WA</td>
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<td>WARH</td>
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<td>Laurel, DE</td>
<td>WMPP</td>
<td>KCHR</td>
<td>Seattle, WA</td>
<td>KDPX</td>
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</table>

**Country 98.1 WCTK**
complaints. These stations are KCCL-AM/FM, Paris, AR; KSD-FM, St. Louis, MO; WWWE-AM, Cleveland, OH; and WXRF-FM, New York, NY.

In letters to 51 complainants against 40 stations (34 TV and 6 radio), the Bureau explained that it currently lacks enforcement authority against indecent material broadcast after daytime hours due to the D.C. Circuit Court's decision in Action for Children's Television v. FCC 852, F.2d 1332 (D.C. Cir. 1988). The Commission recently concluded that it was forced to vacate a pending action against a station's broadcast of apparently indecent material at 8 p.m., Order Vacating Proceeding (KZK/C(TV)), FCC 89-261 (released September 6, 1989).

Fourteen complaints involving 14 stations were dismissed as defective, because they lacked certain elements required to make a prima facie case of indecency (i.e., identification of the station, the date and time the allegedly indecent material was broadcast, or a tape, transcript of significant excerpt of the material). The Bureau informed complainants that a re-submitted complaint during the deficiency would be promptly re-evaluated.

One complaint was dismissed as moot because the complaint was withdrawn and the station's license was renewed earlier this year.

The remaining 21 complaints were dismissed because they did not meet the requisite legal standards for indecency as formulated by the federal courts.

### Action Regarding Felony Drug Conviction Of AM Licensee's Principal

The FCC took the first step that could lead to revocation of a radio license by requesting comment on whether it should initiate a revocation proceeding against an AM licensee whose principal has been convicted of drug trafficking. The Commission's action involves Williamsburg County Broadcasting Corp., licensee of WKSP(AM), Kingstree, South Carolina.

The Commission stated that the felony conviction for drug dealing raises character qualifications questions under its 1986 Policy Statement on Broadcast Character Qualifications.

This issue came to the Commission's attention during the course of an on-going comparative proceeding for a new FM station in Kingstree, South Carolina. One of the applicants for that FM station is the licensee at issue here, Williamsburg County Broadcasting. In that proceeding, the Administrative Law Judge added an issue regarding the felony drug conviction of Williamsburg's principal, Gregory Knopf. FCC 89M-387, released Feb. 7, 1989.

This column seeks AM and FM station bumperstickers, photos, news items, etc.
Your Bible for Shortwave Listening Worldwide

North America’s best-selling guide to shortwave listening is now on sale at EEB the Electronic Equipment Bank

The completely updated 1990 Passport To World Band Radio covers shortwave listening from nearly every conceivable angle: by frequency, by country, and hour-by-hour. For DXing, there are Passport’s exclusive Blue Pages, which provide you with innumerable details for every transmitter—from Afghanistan to Zaire—known to be on the air.

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PERSONAL COMMUNICATIONS
76 NORTH BROADWAY
HICKSVILLE, NEW YORK 11801

FREE READER SERVICE CARD
ENTER MONTH AND YEAR OF THIS ISSUE:

<table>
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<td>36</td>
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</tr>
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</table>

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Company Name ______________________

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City __________________ State ______ Zip ____________

THE MONITORING MAGAZINE
March 1990 / POPULAR COMMUNICATIONS / 51

Request for AM Call Letter Changes

Current Seeks
KFRS KZIZ Sumner, WA
WBBG WGCC Gastonia, NC
WDBS WKVQ Easttown, GA
WJTX WBCP Urbana, IL
WPVA WSTK Colonial Hts., VA
WYDK WDIK Upland, NC

Requests for FM Call Letter Changes

Current Seeks
KATD KYAY Los Gatos, CA
KCI B KXNN Central Valley, CA
KEPC KTLC Colorado Springs, CO
KFRD KFRC Rosenberg, TX
KMYX KKUR Ojai, CA
KNIS KRWR Carson City, NV
KQLH KFRG San Bernardino, CA
KSTZ KSSP St. Genevieve, MO
KTLF KEPC Colorado Springs, CO
KZBA KWBC-FM Boone, IA

Changed AM Call Letters

New Old
KBAD KLYD Bakersfield, CA
KCMG KRFI Mtn. Grove, MO
KDBN KMEZ Dallas, TX
KFWR KFZK Englewod, CO
KFVR KEYF Dishman, WA
KFXX KSOG Oregon City, OR
KFGO KSO Des Moines, IA
KHBI KYOI N. Marianas Isl. (SWBC)
KITH KOZK Apple Valley, CA
KJUS KWIC Beaumont, TX
KKGD KWWS Rifle, CO
KKJZ KKGQ Hesperia, CA
KKYR KSOL Texarkana, TX
KLAU KNZS Capitola, CA
KNOW KSJN St. Paul, MN
KNTS KQFX Abilene, TX
KNZS KJCD Montecito, CA
KRNO KCBN Reno, NV
KSCO KLPS Santa Cruz, NM
KSKY KDOK Talent, OR
KSMI KGDP Occult, CA
KSSR KSVX Santa Rosa, NM
KSUR KJJZ Soledad, CA
KTUS KILE Galveston, TX
KUTR KEXM Salt Lake City, UT
KWES KCBS Colorado Springs, CO
KXTX KISK Reno, NV
KZKL KNUS Albuquerque, NM
KZKZ KACY Greenwood, AR
WEDE WWMO Eden, NC
WEXI WZIP Jupiter, FL
WFAB WRRE Calva, PR
WFBN WWSS Lynne Haven, FL
WINR WSSG Goldsboro, NC
WFRG WPIG Rome, NY
WGOD WIBA St. Thomas, VI
WIBS WBBA Guyama, PR
WILL WFLB Syracuse, NY
WMNN WBEE Harvey, LA
WOMX WBJW Orlando, FL
WPHE WYIS Phoenixville, PA
WQMC WFIG Sumter, SC
WRNB WRSN Prattville, AL
WRRR WRFB Juncos, PR
WRZS WSPB Sarasota, FL
WVJO WXKK Blowing Rock, NC
WWCL WCOJ Lehigh Acres, FL
WWOF WJFK Camp Lejeune, NC
WZAC WBBB Madison, WV
Remote Computer Scanning System

Systems & Software International (SASI) will begin shipping the IBM version of their Remote Computer Scanning System (RCSS™). RCSS™ provides computer based intelligent control over the ICOM™ R7000 radio, plus frequency database support.

The RCSS™ runs on any IBM compatible computer with 640K bytes of RAM, EGA or VGA graphics card and monitor, and one available RS-232 communications port. RCSS™ supports operation over COM1 through COM4. The RCSS™ runs under Microsoft Windows and provides complete control via mouse or keyboard.

The Macintosh version of the RCSS™ has been available since August of 1987 and has enjoyed tremendous international success among hobbyists, professional users, corporations, and several government agencies. Custom versions are currently being developed.

Product Description

The Remote Computer Scanning System (RCSS™) is designed to enhance control over the ICOM™ R7000 radio. The RCSS™ provides fully automated control over all receiver microprocessor functions including: frequency tuning, mode of operation, intelligent scanning, and memory.

Upon start-up, the user is presented with an image on the computer screen identical to the face of the ICOM™ R7000 radio. By using a mouse, the user manipulates the controls on the radio image just as if the radio itself were being operated. This approach allows ICOM™ radio users to become proficient at using the RCSS™ software with minimal effort.

RCSS™ enhancements to the R7000 functions include several modes of intelligent scanning and automatic storage and retrieval of frequency (transmitter) information in the database. Via computer control, the R7000 can be set to automatically scan between any two user supplied frequencies in search of active broadcasts. When the computer detects a broadcast (a hit) it automatically stores the frequency, date, and time of day of the beginning and end of the broadcast into the database. If the frequency has previously been detected and stored, the RCSS™ updates the database by incrementing the hit counter as well as updating the date and time of day of the beginning and end of the most recent broadcast.

RCSS™ can also be set for unattended operation in any of its scanning modes, includes the ability to automatically monitor a specified frequency at a specific time (and companion frequency) for recording on a cassette deck or other recording device.

The user can add additional information to each frequency in the database such as companion frequency, location, callsign, class of service, type of transmitter, and any other personal comments the user wishes displayed when activity is detected again on this frequency. The specification of a companion frequency enables the user to either scan or listen to half duplex communications that use separate frequencies for receiving and transmitting.

Features

- Automatic detection and storage of active frequencies and other information while scanning.
- Scan any frequency range with a user supplied increment from 10 Hz to 100 MHz.
- Scan by "Mode," Class of Service or Type of Unit
- Specify companion frequency for monitoring half-duplex communications.
- Scanning resumes upon loss of carrier with user supplied delay for each frequency.
- Storage of unlimited banks of frequencies (each bank holds up to 1000 frequencies).
- Database record fields: channel, mode, primary frequency, companion frequency, number of scans, number of hits, time latest hit began, time latest hit ended, class of service, type of unit, scan delay, city, state, country, callsign, comments, automatic monitor date, time on, and time off.
- Unattended operation
- Mouse or keyboard driven
The IBM version of RCSS™ costs $239 and includes software, user manual, external interface, and all necessary interconnecting cables. A runtime version of Microsoft Windows can be supplied at the customers request. The package is warranted for one year with no charge for maintenance releases to registered users. Enhancements will be distributed to users for a nominal fee.

For further information you can contact Systems & Software International, 4639 Timber Ridge Drive, Dumfries, Virginia 22026; 703-680-3559, or circle 103 on our Readers’ Service.

Turn, Turn, Turn

The Orion OR-2300 antenna rotator using a worm gear drive method is rated at 35 square feet. Special compact design allows mounting in most popular crank-up and stacked towers. Control box has large, easy-to-read direction indicator with variable speed.


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- Stable 10 Watts Of Output Power—The IC-1275A puts out a full 10 watts on high power and one watt on low power.
- Noise Blanker—The IC-1275A includes an advanced noise blanker circuit to eliminate pulse type noise and provide clear reception.
- 99 Memory Channels—Featuring 99 memory channels, the IC-1275A allows you to store all your favorite channels.

Versatile Scan Functions—The multiple scan functions include memory scan, selected mode memory scan, memory skip scan and programmed scan.

The IC-1275A is a superb transceiver for serious 1200MHz explorers. This 1200MHz transceiver also includes a CI-V bus for computer control and is great for satellite operation. For more info, contact ICOM America, Inc., P.O. Box C-90029, Bellevue, WA or circle 101 on our Readers Service.

Feeling Left Out?

Have your favorite communications (Police, Fire, etc.) moved to the 800MHz band? Are the scanners available which access this band too expensive? If you are like many scanning enthusiasts, this can be a real dilemma. For those of you who are still in a futile search for 800MHz coverage on your handheld scanning radio, GRE America, Inc. has a product for you. Introducing the newly developed Super Converter™ II which has all of the features that you have come to enjoy in our Super Converter™ 8001 (810-912 MHz, etc.), and more.

The Super Converter™ II has a convenient switch which allows for an instant return to normal scanning frequencies without disconnecting the unit. It is also equipped with BNC connectors for easy adaptability to your handheld scanner.

Introducing the Super Converter 8001™ from GRE America, Inc. The Super Converter 8001™ once attached allows any UHF scanning or monitoring receiver to receive the 810 to 912 MHz band.

It has been our experience that most scanning radios suffer from a lack of sensitivity due to antenna and power limitations. Introducing the GRE Super Amplifier™. The Super Amplifier™ is a compact pre-amp designed to work with scanners and it amplifies the reception of the VHF/UHF bands (from 100MHz to 1GHz) as high as 20db.

The Super Amplifier™ has an adjustable gain which is controlled from the back of the unit and allows amplification of up to 20db through all frequencies, equipped with a bypass switch to return to normal scanning frequencies. As with all other GRE products, you will find the quality and design of the Super Amplifier™ to be of the highest standard.

Wide range frequency (up to 1GHz) antenna is exclusively available from GRE America, Inc.

For more information, or a dealer near you (new dealers are welcome), contact GRE America, Inc. at the address below.

GRE America, Inc.

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Belmont, California 94002
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Outside CA: (800) 233-5973
Fax (415) 591-2001
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Scottish pirate station Weekend Music Radio makes occasional test broadcasts on 15043, variable and has been heard by a number of US and Canadian listeners, including Steven Rogovich in Virginia who provides a copy of his WMR QSL.

Pirate radio activity continues to be quite high—to the point where it seems there's at least one new station every week. Certainly this is a prime time to be scouting around the unusual frequencies in search of some action.

Hope Radio 16—is a new pirate reported by several people this month. James G. Malta in New Jersey heard this one at 0300 on 7400, also announcing 1610 and 1620 kHz and giving a power of 100 watts. James says the station is looking for a mail drop. Thomas Martin in Virginia says they're announcing as being 15 miles east of Portsmouth (New Hampshire). Thomas and others heard a talk on how pirate stations can make their broadcasts more appealing and a political "diatribe" on constitutional law. The announcer invited listeners to contact him on 3900 after the broadcast then arrange for QSL's. Ben Fuller, Jr., Massachusetts (who also sent me a tape of the broadcast—thanks!) noted a Bill Cosby record played, readings from this column and mention made of "maritime radio." Nick Grace in Massachusetts had them on 7377 at 0159 announcing 110 watts. Nick notes that the political views of the announcer seemed very oriented to the 1960's. David A. Grubbs of New York had a log, too, and a reference to maritime mobile operation. The station is encouraging reports to this column and that's fine—but as has been noted before—I can't guarantee to print your report and neither POPCOMM nor does this column act as any kind of maildrop. David notes there was post-broadcast activity on 3900, though the couple of hams who made contact with the station operator didn't give their calls. Art Kleiner in New York logged the station on 7358 at 2345 and Bob Doyle in Connecticut heard them at 2028 during what the station said was it's premier broadcast (I guess I should have placed your report first, then, Bob!)

Free Radio One continues fairly regular activity and was heard by Robert Ross in Ontario at 0300-0320 on 7415. It was the first pirate log ever for Raymond Witt in Illinois who found them at 0205.

WBST is another new one, found by Pat Murphy in Virginia. This was on 7488 at 0403, suffering interference from a numbers station. Announced as "660 on your dial, WBST, Salem, Massachusetts" and played rock songs and several monster type songs and bits. Address given as Box 40554, Washington, DC 20016. Off at 0456.

The Voice of Doomsday was logged by David Strubbie in Ohio on 7400 at 0501-0511. The program featured Jimi Hendrix music and an announcer who called himself "Gangus John". No address given. David notes that the audio was very difficult to understand.

Radio USA was also heard by David Strubbie. This was at 0403-0415 on 7417 and featured modern rock and woman who said the transmitter was a Heath DX60b. Also a mention of the (now defunct) Hilo, Hawaii maildrop and a siren sound effect just before sign off.

United World Radio was logged by Ross on 7415 at 0303-0320 with rock music, ID, the Tabar-Stonybrook NY address and an offering of a free pennant to anyone who sent them a cassette recording of the broadcast.

The Voice Of The Graveyard—WTNU was another Ross log, on 7416.7 upper sideband at 0356-0358 with a test. Then, at 0405, it was found on 7400.12 with rock, poor audio, ID as the "Voice of the Graveyard—WRNU" and mention that it was a test. Power announced at 100 watts. Another one logged by Bob, on 7395 5 at 0416-0450, ID'ing as "WTHP—the Voice of the Hipster" and giving the Beaver Falls Pennsylvania address. Also mentioned pirates WENJ and WKZP.

WLAR was heard on 1620 kHz at 0137 by Nick Grace. Nick says this is a local Massachusetts station. He's talked to the operator who says power is 10 watts, which he hopes to increase to 50.

East Coast Pirate Radio was also logged by Nick, at 040 on 7475 where it suffered severe interference from RTT Tunis on the same frequency. The DJ said this was a test transmission using 100 watts. James Malta also had this one, at 2125 on 7410. Jim caught an announcement to the effect that the station intended to use 26.048 at a later date.

WBRI was logged by Grace on 7482 at 0049-0059 with a man announcing giving out the FCC's Washington, DC address.

The Voice of Stench was another Ross logging recently. This one was heard on 7415.5 at 2225-2239. Address was given as P.O. Box 628, Slanesville, WV 25444. The announcer said the broadcast was part of a marathon. Very appealing station name, wouldn't you agree?

Radio Free Massachusetts was logged by Ross on 7415.5 at 0320-0350 giving the Slanesville, WV address.


Art Kleiner says he recently had reception reports to Radio Clandestine, Radio Morocco and WART Radio returned after sending to the Kingston, New York maildrop. Art wonders if there's a new and workable address for these stations yet. Does anyone have any news on this?

Nick Grace says that Falling Star Radio has a new address—it's now Box 1367 Gracie Station, New York, NY 10028.

As I said at the beginning, these are great times to be scanning for pirates, so I hope you are spending time doing just that and will report your results to this column. And here's another reminder to pirate station operators to send us information about your station—programming, technical and future plans. Pirate radio fans like to know what you are all about!
Primary communications for Shuttle flights are conducted through the Tracking and Data Relay Satellite (TDRS) system. This three satellite geo-stationary system was completed with the successful launch of TDRS-4 (TDRS-3 was lost on Challenger) in March of 89'.

Before TDRS, all manned space missions used a series of ground stations around the world to relay data and voice communications back to Kennedy Space Center and mission control at Johnson Space Center. The network of ground stations is known as the Spaceflight Tracking and Data Network (STDN). There were not enough stations in the network to provide continuous communications with the astronauts. For this reason, and the fact that satellites are more economical than manned ground stations, NASA developed the TDRS system.

The NASA Communications Network (NASCOM) of Goddard Spaceflight Center in Greenbelt, Md. is responsible for all voice, data and TLM from our manned spaceflights. This includes NASA and military ground stations and satellites. Providing these communications links is no small task. Goddard, Johnson, Kennedy, White Sands and Wallops Is., VA all receive voice TLM and data from the Shuttle.

There are 14 stations in the STDN. In addition nine DOD support stations, run by the US Space Command, and numerous other military communications centers and space sensor facilities, assist NASCOM in collecting Shuttle data. NASA's 14 ground stations each have an 85, 30 and 14 foot dish antenna. These are used for S-Band voice and TLM and C-Band (ranging) radar. The DOD stations use a single 60 foot dish for both S and C bands.

All of these antennas require accurate navigation information in order to track the space Shuttle as it orbits at 17,000 mph at just under 200 miles high. An additional network of computing stations makes these antenna pointing calculations for each ground station and then distributes this information, real-time to STDN. Goddard, White Sands, Vandenberg AFB, Wallops Is. and the Air Force Satellite control facility at Colorado Springs supplies this computer support.

There is an additional navigation system on board the shuttle. It's called TACAN. It is a distance and bearing beacon system that the Pilot and Commander listen to. The tone beacon signal is uplinked to the Shuttle between 962 and 1263 MHz.

Redundant systems have always been a part of NASA's safety provisions for manned spacecraft. This thinking also applies to the communications system. If, for example, mission control at Johnson Space Center should become inoperative for any reason, the White Sands, NM facility could take over their responsibilities. Should White Sands fail, Goddard could take control.

Many of the names of NASA's facilities are no doubt familiar to the space enthusiast. There is, however, a NASA control center for engineering data which may not be as familiar as Kennedy or Johnson. It is called the Huntsville Operations Support Center (HOSC) and is a part of the Marshall Spaceflight Center.

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Military Support Stations
Cape Canaveral AFB  Antigua Is.
White Sands N.M.  Mt. Lemmon Az.
Vandenberg AFB  Point Pillar Calif.

Shuttle Frequencies

**Shuttle Frequencies (UHF)**
- 279.0 MHz
- 259.7 MHz
- 296.8 MHz

**STDN Frequencies (S-Band)**
- 2106.4 MHz Uplink
- 2041.9 MHz Uplink
- 1831.8 MHz Uplink
- 1775.9 MHz Uplink

**TDRS Satellites Frequencies**
- 3.860 MHz
- 7.185 MHz
- 14.295 MHz

**WA3NAN Shuttle Audio**
- 21.395 MHz
- 28.650 MHz
- 147.45 MHz

**VHF Support Frequencies**

<table>
<thead>
<tr>
<th>Kennedy Operations</th>
<th>Aircraft</th>
<th>Ships</th>
<th>Edwards AFB</th>
</tr>
</thead>
<tbody>
<tr>
<td>117.8 MHz</td>
<td>117.8 MHz</td>
<td>148.5 MHz</td>
<td>120.7 MHz</td>
</tr>
<tr>
<td>121.9 MHz</td>
<td>118.4 MHz</td>
<td>149.1 MHz</td>
<td>121.8 MHz</td>
</tr>
<tr>
<td>126.4 MHz</td>
<td>120.7 MHz</td>
<td>162.0 MHz</td>
<td>126.0 MHz</td>
</tr>
<tr>
<td>148.4 MHz</td>
<td>126.3 MHz</td>
<td>162.6 MHz</td>
<td>164.1 MHz</td>
</tr>
<tr>
<td>162.6 MHz</td>
<td>127.8 MHz</td>
<td></td>
<td>318.0 MHz</td>
</tr>
<tr>
<td>170.1 MHz</td>
<td>164.8 MHz</td>
<td></td>
<td>348.7 MHz</td>
</tr>
</tbody>
</table>

Data Communications to Processing Center Via TDRS

and flight of the Shuttle NASA and contract engineers and scientist man consoles which provide them with real-time data on the Shuttle propulsion systems. This includes the engines, external tank and solid rocket boosters. This information is transmitted directly from the Shuttle to Huntsville. The information is processed by computer and displayed on screens and other specialized instruments at 15 stations in the engineering console room. During their busiest 10-hour period of a Shuttle launch the center will

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THE MONITORING MAGAZINE
assess more than 11-million measurements of the propulsion system. The center is staffed by over 150 specialist. There are 25 direct communications links between Huntsville, Kennedy and Johnson space centers.

Launch

Just prior to lift-off, shuttle communications switch from intercom to UHF, air-to-ground. During ascent, three UHF ground stations provide voice, TLM and data channels. The stations are located at Merritt Island, Ponce de Leon, Fla. and Bermuda Island. For the first minute and 20 seconds of flight, communications are relayed to other NASAS facilities through Merritt Is. At this point, the exhaust from the solid rocket boosters, which consists of super heated chemicals, block radio communications out completely. The communications are then picked up by the station at Ponce de Leon, which is located 30 north of the launch site. This station will maintain communications for two minutes before Merritt Island again relays for an additional minute and 20 seconds. Approximately six minutes into the flight, Bermuda takes over these responsibilities for an additional 5 minutes. TDRS-East located at 41 East will then take over. (TDRS-Central is located at 79 and TDRS West is at 171 W). After the Shuttle reaches orbit, TSRS satellites will relay all communications to ground stations. On re-entry communications will again revert to UHF air-to-ground.

With the success of TDRS, NASA has closed three stations in the STDN. These are Chile, Havana and Ascension Is. In addition, the Senegal, Africa station is scheduled to be closed this December (90). Three other stations in the STDN, Gladstone, California, Canberra, Australia, and Madrid, Spain, have become part of the Deep Space Network which is managed by the Jet Propulsion Laboratory (JPL). These stations could be pressed into service again should the need arise.

The TDRS control center and ground terminals are located at White Sands, New Mexico. This station was chosen because of its year round low cloud cover. White Sands provides all network links for the TDRS spacecraft data to the NASCOM, DOD and NOAA systems.

TDRS is a large spacecraft 42 by 57 feet. Each satellite has seven antennas. Two of these antennas are 16 feet across and is plated with 14K Gold. This satellite uses frequencies in the 2, 14 and 15 GHz range.

On re-entry, the Shuttle switches back to UHF air-to-ground. The Ames-Dryden flight research facility and the Gladstone facility of the Deep Space Network provide

<table>
<thead>
<tr>
<th>Aircraft</th>
<th>NASA</th>
<th>Ships</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.693</td>
<td>9.131</td>
<td>6.740</td>
</tr>
<tr>
<td>6.896</td>
<td>10.780</td>
<td>6.896</td>
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<tr>
<td>6.983</td>
<td>11.205</td>
<td>6.983</td>
</tr>
<tr>
<td>7.461</td>
<td>13.170</td>
<td>7.675</td>
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<tr>
<td>8.891</td>
<td>15.015</td>
<td>8.993</td>
</tr>
<tr>
<td>9.043</td>
<td>18.200</td>
<td>9.315</td>
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**NASA-Controlled Tracking Stations**

<table>
<thead>
<tr>
<th>Location</th>
<th>Equipment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ascension Island</td>
<td>S-band, UHF A/G</td>
</tr>
<tr>
<td>Bermuda (BDA)</td>
<td>S-band, UHF A/G</td>
</tr>
<tr>
<td>Goldstone (GDS)</td>
<td>UHF A/G</td>
</tr>
<tr>
<td>Guam (GWM)</td>
<td>S-band, UHF A/G, TV</td>
</tr>
<tr>
<td>Hawaii (HAW)</td>
<td>S-band, UHF A/G, TV</td>
</tr>
<tr>
<td>Merritt Island</td>
<td>S-band, UHF A/G, TV</td>
</tr>
<tr>
<td>Santiago (AGO)</td>
<td>S-band, UHF A/G, TV</td>
</tr>
<tr>
<td>Ponce de Leon</td>
<td>S-band, UHF A/G, TV</td>
</tr>
<tr>
<td>Madrid (RID)</td>
<td>S-band, UHF A/G, TV</td>
</tr>
<tr>
<td>Canberra (CAN)</td>
<td>S-band, UHF A/G, TV</td>
</tr>
<tr>
<td>Dakar (DKR)</td>
<td>S-band, UHF A/G</td>
</tr>
<tr>
<td>Wallops (WFF)</td>
<td>C-band, UHF A/G</td>
</tr>
<tr>
<td>Yarragadee (YAR)</td>
<td>UHF A/G</td>
</tr>
<tr>
<td>Dryden (DFR)</td>
<td>S-band, UHF A/G, C-band</td>
</tr>
</tbody>
</table>

The Canberra, Goldstone and Madrid stations are part of the Deep Space Network (DSN) and come under the management of NASA's Jet Propulsion Laboratory, Pasadena, California.

Personnel: Tracking Stations: 1, 100 (500+ are local residents)
Goddard Space Flight Center; 1,400

**HF Support Frequencies (MHz)**

**Location**

**Ascension Island (ACN)** (Atlantic Ocean)
**Bermuda (BDA)** (Atlantic Ocean)
**Goldstone (GDS)** (California)
**Guam (GWM)** (Pacific Ocean)
**Hawaii (HAW)** (Pacific Ocean)
**Merritt Island** (Florida)
**Santiago (AGO)** (Chile)
**Ponce de Leon (PDL)** (Florida)
**Madrid (RID)** (Spain)
**Canberra (CAN)** (Australia)
**Dakar (DKR)** (Senegal, Africa)
**Wallop (WFF)** (Virginia)
**Yarragadee (YAR)** (Australia)
**Dryden (DFR)** (California)

**Equipment**

S-band, UHF A/G
S-band, UHF A/G, TV
S-band, UHF A/G
S-band, UHF A/G, TV
S-band, UHF A/G
S-band, UHF A/G, TV
S-band, UHF A/G
S-band, UHF A/G, TV
S-band, UHF A/G
S-band, UHF A/G, TV
S-band, UHF A/G

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THE MONITORING MAGAZINE
March 1990 / POPULAR COMMUNICATIONS / 59
### Trajectory Sequence of Events

<table>
<thead>
<tr>
<th>Event</th>
<th>MET (d/h/m/s)</th>
<th>Relative Velocity (fps)</th>
<th>Mach</th>
<th>Altitude (ft.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Launch</td>
<td>00/00:00:00</td>
<td>165</td>
<td>.15</td>
<td>627</td>
</tr>
<tr>
<td>Begin Roll Maneuver</td>
<td>00/00:00:09</td>
<td>374</td>
<td>.33</td>
<td>2,898</td>
</tr>
<tr>
<td>End Roll Maneuver</td>
<td>00/00:00:17</td>
<td>833</td>
<td>.75</td>
<td>11,854</td>
</tr>
<tr>
<td>SSME Throttle Down to 65%</td>
<td>00/00:00:34</td>
<td>1,260</td>
<td>1.2</td>
<td>26,037</td>
</tr>
<tr>
<td>Max. Dyn. Pressure (Max Q)</td>
<td>00/00:00:52</td>
<td>1,499</td>
<td>1.49</td>
<td>38,681</td>
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<tr>
<td>SRB Staging</td>
<td>00/00:01:01</td>
<td>4,316</td>
<td>3.91</td>
<td>153,873</td>
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<tr>
<td>Negative Return</td>
<td>00/00:02:04</td>
<td>6,975</td>
<td>7.48</td>
<td>317,096</td>
</tr>
<tr>
<td>Main Engine Cutoff (MECO)</td>
<td>00/00:06:27</td>
<td>24,560</td>
<td>22.41</td>
<td>366,474</td>
</tr>
<tr>
<td>Zero Thrust</td>
<td>00/00:08:33</td>
<td>24,596</td>
<td>22.17</td>
<td>368,460</td>
</tr>
<tr>
<td>ET Separation</td>
<td>00/00:08:45</td>
<td>24,596</td>
<td>22.17</td>
<td>368,460</td>
</tr>
<tr>
<td>OMS 2 Burn</td>
<td>00/00:39:48</td>
<td>4,316</td>
<td>7.48</td>
<td>317,096</td>
</tr>
<tr>
<td>Galileo/IUS Deploy (orbit 5)</td>
<td>00/06:21:36</td>
<td>157 x 39 nm</td>
<td></td>
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</tr>
<tr>
<td>Deorbit Burn (orbit 81)</td>
<td>05/01:45:00</td>
<td>161 x 161 nm</td>
<td></td>
<td></td>
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<tr>
<td>Landing (orbit 82)</td>
<td>05/02:45:00</td>
<td>177 x 161 nm</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Apogee, Perigee at MECO:**
- 157 x 39 nm
- 161 x 161 nm
- 177 x 161 nm

---

### TDRS Spacecraft

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**TRAJECTORY SEQUENCE OF EVENTS**

<table>
<thead>
<tr>
<th>EVENT MET (d/h/m/s)</th>
<th>RELATIVE VELOCITY (fps)</th>
<th>MACH</th>
<th>ALTITUDE (ft.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Launch</td>
<td>00/00:00:00</td>
<td>165</td>
<td>.15</td>
</tr>
<tr>
<td>Begin Roll Maneuver</td>
<td>00/00:00:09</td>
<td>374</td>
<td>.33</td>
</tr>
<tr>
<td>End Roll Maneuver</td>
<td>00/00:00:17</td>
<td>833</td>
<td>.75</td>
</tr>
<tr>
<td>SSME Throttle Down</td>
<td>00/00:00:34</td>
<td>1,260</td>
<td>1.2</td>
</tr>
<tr>
<td>SSME Throttle Up</td>
<td>00/00:01:01</td>
<td>1,499</td>
<td>1.49</td>
</tr>
<tr>
<td>SRB Staging</td>
<td>00/00:02:04</td>
<td>4,316</td>
<td>3.91</td>
</tr>
<tr>
<td>Negative Return</td>
<td>00/00:03:54</td>
<td>6,975</td>
<td>7.48</td>
</tr>
<tr>
<td>Main Engine Cutoff</td>
<td>00/00:06:27</td>
<td>24,560</td>
<td>22.41</td>
</tr>
<tr>
<td>Zero Thrust</td>
<td>00/00:08:32</td>
<td>24,596</td>
<td>22.17</td>
</tr>
<tr>
<td>ET Separation</td>
<td>00/00:08:45</td>
<td>24,596</td>
<td>22.17</td>
</tr>
<tr>
<td>OMS 2 Burn</td>
<td>00/00:39:48</td>
<td>4,316</td>
<td>7.48</td>
</tr>
<tr>
<td>Galileo/IUS Deploy</td>
<td>00/06:21:36</td>
<td>157 x 39 nm</td>
<td></td>
</tr>
<tr>
<td>Deorbit Burn (orbit 81)</td>
<td>05/01:45:00</td>
<td>161 x 161 nm</td>
<td></td>
</tr>
<tr>
<td>Landing (orbit 82)</td>
<td>05/02:45:00</td>
<td>177 x 161 nm</td>
<td></td>
</tr>
</tbody>
</table>

**Apogee, Perigee at MECO:**
- 157 x 39 nm
- 161 x 161 nm
- 177 x 161 nm
primary communications for the approach and landing at Edwards AFB.

**Support Operations**

Specially equipped EC-135 aircraft are deployed before every shuttle launch. They are called Advanced Range Instrument Aircraft (ARIA). Based at Wright-Patterson AFB in Ohio, these planes relay launch data on both the Shuttle and any spacecraft it may deploy. They are used for back-up, missile and SDI tests. They can use any frequency in the HF, VHF, UHF band and satellites. (See Jan 89 issue for close-up).

Throughout Shuttle operation, you can find a variety of support communications from chase aircraft, safety ships and more. NASA even has its own fleet of ships to cover Shuttle launches and recover the solid rocket boosters. When looking for this traffic, check known frequencies (see the list provided) and search for new ones in the same portions of the bands as the known frequencies. Let me know your finding.

Live video from the Shuttle is sent to Johnson Space Center through Satcom F-2R located at 72 W NASA feeds are found on transponder 13 (3,960.0 MHz), vertical polarization in monaural audio at 6.8 MHz (audio sub-carrier). A schedule for these broadcast is updated daily during Shuttle missions. This information is yours by simply dialing (202) 755-1788.

Live audio feeds from the shuttle can be heard in the Ham bands. The Amateur Radio Club of Goddard Spaceflight center. There call sign is WA3NAN. I have provided a list of frequencies they use. Be sure to check out this unedited, live audio feed of Shuttle voice communications . . . See you Next Month.

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The winter mailbag has been dragging through the snow because it's so heavy. Let's check to see who's been writing.

From Chicago, Illinois, Tony Canale writes to inquire about modifications he made to his Realistic PRO-2021 scanner. He clipped diodes D44 and D45 to add 68-88 MHz and 806-960 MHz coverage, but he says he is not hearing anything on these bands, even in the Chicago area where he lives. He says that he can enter the new out-of-band frequencies, but it's zippo on the receiving end. First of all Tony, don't expect to hear anything on the 800 MHz band on your scanner. It just can't handle frequencies that far out of band. Your radio's circuitry was designed to cover only VHF low and high, as well as UHF. The receiver was not designed to cover 800 MHz, which is an entirely different ball game when it comes to receiver design. Your radio probably can cover the 800 MHz band because that portion of the radio's circuitry also was designed to be used in another radio that has the "guts" to scan 800 MHz. But you'll never hear 800 MHz on your unit. If that's what you want to hear, unfortunately, you'll have to invest in a radio that actually can tune in 800 MHz. As far as the 68-88 MHz band coverage on your radio, that's a modification that will allow the radio to be sold in Europe, where 68-88 MHz, known there as "mid-band," covers a lot of two-way radio communications. However, in the United States, that band is used for TV broadcasting, with the exception of the 72-76 MHz band. On this portion, there are paging transmitter links, some industrial use, as well as some aviation use. It's not used too much because of the potential of interference to TV sets receiving on the adjacent frequencies. Although you may be able to punch in these frequencies on your PRO-2021, it's likely the radio would also need to be realigned to properly tune in the 68-88 MHz band. Without this realignment, your radio still is tuned to 30-50 MHz band for proper reception. So without proper alignment, forget tuning in 68-88 MHz, which by the way, would be worthless anyway considering what's on that band. Hope we've steered you straight, Tony.

George Coombs checks in from Henderson, Kentucky, to say he has a Cobra SR925 and a Uniden Bearcat 100XL handheld. George is using only the antennas supplied with the radios, however, he is able to receive 454-MHz mobile telephone signals also in the 470-512 MHz band. He's wondering why this is happening. The simplest way to explain this might be: Your receiver in the scanner actually must mix frequencies together to come out with the frequency you are hearing. Bearcat scanners have what we call an intermediate frequency (IF) of 10.8 MHz (while pre-Uniden Regency products and some other manufacturers have an IF of 10.7 MHz).

Very simply, if you double the IF, you get 21.6 MHz with an IF of 10.8 MHz. Let's say there is a mobile telephone transmitter near you that is on 454.400 MHz. If you add 21.6 to 454.400, you get 476.00 MHz. Thus, you could also hear the 454.400 MHz signal on 476.000 MHz, with some degradation of signal strength. There's nothing wrong with your scanner; it's just something they all do for those folks who have scanners that won't tune in the 406-420 MHz federal government band, if you add 21.6 (or whatever the proper IF of your receiver is, doubled) to the frequency you want to hear, you'll still hear the signal. Thus, you might be able to hear Air Force One's phone patch channel of 415.700 on the IF of 437.3, or even 458.9 (if you double the IF and add it twice). Try it; it may breathe some life into an old programmable scanner. George also expresses interest in finding out how to become a registered monitor and obtain a distinctive call sign, such as my own, KP3ZCA. For details on the registered monitor program, write CRB Research, P.O. Box 56, Commack, N.Y. 11725.

David Toner of Jacksonville, North Carolina, comments he has heard that the police department in his town plans to start encrypting their communications. He wonders why places with more crime, such as the big cities, don't encrypt their communications, while his town, which uses 155.730 MHz, plans to scramble their calls. Good question, but there's no right answer. In some towns, like LeMars, Iowa, which we reported about here in POPCOMM, the police chief gets permission to spend a bunch of taxpayers' dollars and he or she buys an unnecessary play toy. The best bet, David, might just be to raise a stink about it in your town. After all, there's a lot to be said about an informed citizenry.

From Reseda, California, checks in Philip Cegelski with some interesting military aircraft frequencies:

362.6—Mamar "Paddles" for left runway (24 left).
366.8, 253.1, 322.0, 363.6, 325.2—Mamar Naval Air Station ground controller approach.
320.4, 348.0, 255.1, 354.9—El Toro Marine Corps Air Station ground controller approach.
276.5—Air-to-air refueling over W-291 operating area.
354.4—Air-to-air refueling over Edward Air Force Base area.
273.1, 301.1, 308.1, 354.9, 359.5—Beaver control FAC/FS FAC "discreet" frequencies, used for mock dogfights "Top Gun".
344.1—"Discreet frequency for Beaver
control, usually given to S-3 aircraft for antishubmarine warfare exercises.

118.65, 120.85, 266.9, 289.9, 285.7, 314.7—Beaver control check-in frequencies.

272.6—Beaver control check-out frequency.

295.1—Edwards Air Force Base area “Red Flag” frequency, also heavy dogfighting.

270, 294.6, 289.4, 262.5, 267.9, 274.2, 290.6, 291.8—Edwards Air Force Base area frequencies for aircraft testing, spin training and air-to-air tactical training. Phillip goes on to say he uses a Realistic PRO-2004 and has been monitoring the UHF aircraft band in southern California for three years. He’s still looking for the frequencies for the following: “Strike,” Old Salt” and “Mother,” as well as frequencies used by aircraft carriers to talk with their aircraft. Anyone have any ideas? If so, let us know, and we’ll tell everyone.

Gene Peters, KB8EJ, of Riverview, Michigan, reports that his town’s police department is using some of the new frequencies that are now available in the United States along the Canadian border. Riverview police are using 423.450 as Channel 1 as channel 1 and 423.525 as Channel 2. Gene says he volunteers for the Salvation Army emergency response team (which uses 463.375 MHz), as well as Wayne County Skywarn (145.330) and ARES-RACES (147.140).

Dave Rakos, KC8NQ, of Kent, Ohio, says that he can hear the McDonald’s drive-through windows in Twinsburg, Stow and Streetsboro, Ohio, on 154.570, even up to 11/2 miles from the Stow McDonald’s.

Meanwhile, the Cuyahoga Falls, Ohio, McDonald’s can be heard on 154.600 MHz. Dave notes that it’s interesting to tune in these frequencies because when there are no cars in the drive-through, the workers can be heard conversing among themselves. Dave notes that the conversations often are more exciting than cordless phones. Meanwhile, Dave says Kent police, Kent State University police and Grimsfield, Ohio, police share 155.310, with a private frequency of 154.890. Kent fire uses 154.235 MHz, Dave uses a Uniden Bearcat 175 XLT in the house and a Realistic Pro-34 handheld.

Doc Quickmatch of Rockford, Illinois, reports some interesting communications. First, he heard Army war games on 31.70 MHz. As Doc says, no callsigns were used, but “the action was interesting.” Then, on 30.67 MHz, Doc heard what he described as a “Middle Eastern prayer chant. Could it have been Arabic, Farsi or Pee Wee in a horn-mo reed?” I don’t know either. Any ideas, readers?

We’d like to hear from you here at POP- COMM. We welcome your frequency lists and updates, comments, questions, as well as photos of your listening posts and antenna farms. Write to: Chuck Gysi, N2SUP, Scanning VHF-UHF. Popular Communications, 76 North Broadway, Hicksville, N.Y. 11801-2909.

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THE MONITORING MAGAZINE
March 1990 / POPULAR COMMUNICATIONS / 63
For at least two years, RTTY hobbyists have reported something peculiar in the TASS and Prensa Latina TTY broadcasts from Havana, Cuba, on 14901 kHz. Various ideas were tossed about as to why the transmissions were garbled, or certain letters, such as "E" were constantly being dropped from words. 

Then I read a short news item recently in "Insight" newsmagazine that may offer an explanation about the bad transmissions. It seems that the island's telecommunications system had deteriorated through the years since Fidel Castro took power in 1959, with little maintenance being done. The story was in reference to Cuba's telephone cable system, which was to be replaced by a fiber-optic cable system, along with new telephone lines and more telephone exchanges. It seems likely that if the telephone system was allowed to become rundown, then maybe shortwave radio transmitters and teletyping equipment were neglected, too.

We need lots and lots of loggings to help fill out the interceptions section of this column. The more you send to us the better these pages will be. Share your accomplishments with your fellow readers and find yourselves rewarded when you see them in print. Whether you're a novice or a pro, your information is always welcome.

First-time contributors should know that it takes POP'COMM a few short months to be published between the time the columns are written to when it appears on magazine racks and in your mailboxes. Therefore, please keep a steady supply of loggings coming in to us without waiting to see if we'll use them. We will, just be sure to have as much information as possible about what you saw. Basic information includes the frequency (the center frequency, not that of USB or LSB), callsign, station name and location, a description of what was transmitted, the TTY speed/shift/polarity setting, and the UTC time of transmission.

Don't forget to put your name and state on each logsheet, so that if the sheets become separated I'll still know who the sender is. And double check to see that all the requested basic information has been entered. Some contributors have been forgetting to list times of reception, and a couple have used only the callsigns without the station ID's or locations, expecting me to fill in that information for them. After a while, it becomes a nuisance and greatly adds to the time it takes to prepare this column.

Here are a couple of hints to add to your monitoring experience. Forget what the books say about when the best time is for monitoring certain frequencies. Many distant stations have been found on the 14 MHz and 16 MHz bands, and even higher ones, during the wee hours of the morning here in the U.S., and on low ones, such as the 6 MHz and 7 MHz bands, during the late mornings and early afternoons. Many stations, including embassies, can be found operating on Saturdays, so try to do some monitoring then. Interesting intercepts have been found occasionally on Sundays, too.

There's lots of stuff out there for you to find, so—go get 'em! Then please send the results of your monitoring experience to me, c/o Popular Communications, 76 N. Broadway, Hicksville, NY 11801.

Received a nice letter from Ronnie Rome of Louisiana, a first-time contributor this month. In it he says, "I'm glad I saved all of my old POP'COMM's. Much valuable info is in there. One never knows when this info will be needed.

"After following your column for a while I decided to get into RTTY monitoring." He brings up an interesting point. One of the many benefits to be gained from reading POP'COMM is that every month you have a miniaturized logbook of what can be monitored, whether you're interested in shortwave radio broadcasters, satellite users, pirates and clandestine stations, Morse Code and voice utility stations, or RTTY and FAX stations.

Some readers have told me that every month they copy the information out of the RTTY Intercepts section into their personal notebooks, thereby keeping a ready reference at hand while they're actively monitoring. This way they don't have to wait for publication of the annual frequency guidebooks to see what's been happening.

Others like Ronnie save all their POP'COMM's to research as needed. If you're missing any back issues of POP'COMM or would like to build a collection of past issues from scratch, you'll find a back issue order form elsewhere in the magazine. Back issues cost $2.50 each.

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**Abbreviations Used In The RTTY Column**

- **AA**: Arabic
- **ARG**: SITOR mode
- **BC**: Broadcast
- **EE**: English
- **FEC**: Forward Error Connection mode
- **FF**: French
- **foxes** "Quick brown fox..." test tape
- **GG**: German
- **ID**: Identification
- **MFA**: Ministry of Foreign Affairs
- **nx**: News
- **PP**: Portuguese
- **RYYY** "RYYY..." test tape
- **SS**: Spanish
- **Tx**: Traffic
- **w**: With
- **wx**: Weather

---

While David Trachtenberg of Burke, VA, is in the shower, his daughter, Kara Rachel, seeks out new RTTY stations for his logbook.
REPORT STATION WPD
4250 W. ALVA ST.
TAMPA, FL 33614
28 AUGUST 1989

A J CARMODY

DEAR MR. CARMODY:

REF UR NOTE DATED 24 AUG CONCERNING HURRICANE BULLETINS, THIS
STATION INCLUDES N.O.A.A. WX INFORMATION IN ITS BROADCAST SKEDS
BELOW.

BROADCASTS INCLUDE WARNINGs SUCH AS TROPICAL DEPRESSIONS, GALE
STORMS AND HURRICANES PRECEDING FORECASTS FOR SOUTHWEST
ATLANTIC, STRAINS OF FLORIDA AND THE GULF OF MEXICO.

IN SITR Mode (RTTY) ON 7700.5 KHz at 1300 and 2200 UTC.
In C.W. Mode ON 420 6615.5 13051.5 KHz at 1400 and 2300 UTC.

ADDITIONAL FREQUENCIES IN RTTY MODE ARE BEING INSTALLED FOR USE IN
THE NEAR FUTURE.

GOOD LUCK, BEST REGARDS

DON BERGER, MANAGER (WACO)

(QSL letter received by A. J. Carmody, New York State, from WP D, Tampa Radio, FL)

14471: NBA, USN, Balboa, Panama, w/RYRR, SGGSG, & Now is the time...
ISO 575/50 R at 1424 (J. M. K)

14591: S00259B, PAP, Warsaw, Poland, w/CQ in FEC at 1747 (Ed.)

14612: PWX33, Un-IB Brazilian Naval site, route messages to RPNF, 750/50 at 0120. PWX33 also can be found on 2442/2k at around 1320 (Hetherington, FL). Dallas Williams found PWX33 on 20792, calling RPNF at 1335. So here's three freqs for the as yet to be ID'd sta--

14638: VOA, Greenville, NC, w/QRA/standing tape, 75 band at 2010 (Rome, LA)

14700: REB24, TASS, Moscow, USSR, w/nx in FEC at 1827 (Ed.)

14719: OST650, 850/75 R, Belgium, w/tcl list, sports results, lotto winning nos., "joker" results, i.e. JOKER 3, 13,743, Was FEC, 0329/0334 (Ed.)

14760: BAT93, Xinhua, Beijing, China, w/nx in EE, 350/50R at 0340 (Ed.)

14901: CLN451, TASS, Havana, Cuba, w/nx in EE, 50 band at 1545 (Rome, LA).

15710: RED25, TASS, Moscow, USSR, w/nx in FF, 425/50R at 1715 (Ed.)

15752.7: CNM66/X2, MAP, Rabat, Morocco, w/RYRR & Xmsn schedule, 425/50R at about 1145 (Carmody, NY)

15751: SUNA, Khartoum, Sudan, w/nx in EA, 170/50/75 at 1730 (Ed.)

15752.5: CNM66, MAP, Rabat, Morocco, w/nx in FF, 1733, 425/50R (Ed.)

15934: PW232, Rio de Janeiro, Brazil, w/RYPW & SSQG to YWM, 850/75R at 2205, then msgs 2300-2308 (Ed.)

1601: 2. RPT11, Portuguese Navy, Horta, Azores, w/faxes & RYPW, 0925-0930, 575/50 (Ed.)

16622: 9. ARQ, Los Angeles, CA, w/APU/nx, 2006, FDM 85/75. Faster xmsn speed than that of BC on 14387 R.

16626.5: TLO, ASCENA, Bangui, Central African Republic, w/a service msg at 0002, ARQ-E 405/72 (Hetherington, FL)

16302: D726, MFA, Belgrade, Yugoslavia, w/nx in SC, 425/75 at 1530-1538 (Ed.)

16260: REM57, TASS, Moscow, USSR, w/nx in FF, 245/50 at 1557 (Ed.)

16970: NFM, USCBC, Boston, MA, w/CQ and wnx in FEC at 1700 (J. M. K)

17209: FDCX, Lyngby R, Denmark, w/FEC tcl in Danish at 1135 (Sundstrom, NJ)

17207.5: WCC, Chatham R, w/a FEC wnx BC at 1659 (Rome, LA)

17435: YV27, ADN, Berlin, GDR, w/nx in EE at 1900, 425/50, (Hetherington, FL)

17456: MFA, Berlin, GDR, w/nx in GG, 425/50R at 1955 (Ed.)

17492: SOR249, PAP, Warsaw, Poland, w/nx in EE at 1700, 425/50 (Hetherington, FL)

17529: EBA, Madrid Navidad, Spain, w/TXT DE EBA, foxes, counting, & RYRR, 850/75R at 1820 (Hetherington, FL)

18215: VOA, Greenville, NC, w/nx in EE at 1822, 75 band (Rome, LA)

18554: CLP4, MFA, Havana, Cuba, w/circs for CLP4, Bissau, Guinea-Bissau, at 1824, 50N/50 (J. M. K)

18930: V2V38, ADN, Berlin, w/nx in EE at 1518, 425/50N (Ed.)

19105: RPT34, TASS, Moscow, w/nx in FF at 1253, 425/50R (J. M. K)

19225: FDFY, French Air Force, Orleans, France, w/RYRR at 2033, 425/50R (Ed.)

19529: IMGS, Tokyo-Meteo, Japan, w/plaintext wnx in EE, including warnings for typhoons Angela & Coleen. Was 850/45 at 1445 (Ed). Same w/coded wnx at 0325, 50n (Randall Reese, Thailand)

19729: CAZE, Paris, Aéro, Easter Island, w/RYPW at 0015, 850/50 (David Judkins, K0RSV, CA)

19821.5: 412U, UC, Geneva, Switzerland, w/ARQ tcl in EE at 1930 (Hetherington, FL)

19860: GYA, Royal Navy, London, England, w/test msg at 1415, 850/75R (Ed.)

19865: V2J9, Tanjung Batur, Belgrad, Yugoslavia, w/nx in SS at 1405, 425/50R (Ed.)

19915: VOA, Tanger, Morocco, w/nx in EE, 425/75 at 1305 (J. M. K)

THE MONITORING MAGAZINE
March 1990 / POPULAR COMMUNICATIONS / 65
Your First Week on the Air

How many of you hams remember your first few QSOs? If you've been a ham for a while, your memory might be a little rusty. I was paging through my first log book the other day, and I was amazed at how many of the QSOs were strongly etched into my memory. With a little prodding, the excitement of my first solo contact (a ham in Minnesota), and my first DX QSO (DA1KV, an American stationed in Germany) came pouring through.

This month's Ham Column is written by Bob, Washington, ham (and POP COMM reader) who is a relative newcomer to Amateur Radio. It's the story of his first few weeks on the air. And it brought back a lot of memories.

It took three weeks to fill up my first log pages, and my Technician-class ticket arrived in the mail. That page is a major triumph for me in many ways, because it represents not only many exciting QSOs with other hams, but the culmination of years of waiting.

I was introduced to Amateur Radio almost 30 years ago by a relative who was an active ham. He taught me the jargon and started me on the road to mastering the theory. (Remember tubes? Selenium rectifiers? Command sets?) For one reason or another, I never got around to getting a license. At that point in my life, it seemed as though everything began to conspire to keep me away from radio. College, girls, grad-school, marriage, career, and family, more or less in that order, kept me off the air.

Then, last spring, I realized that the time had come to do something about my dream. I began studying again in earnest, having missed most of the solid-state revolution. I bought an ancient Yaesu transceiver at a hamfest (it has nothing but tubes!) Selectivity on CW is marginal, but it was good enough to get me started.

I thought I'd never make the 5 WPM Morse code requirement. But I did, at least on paper. (On the air it was something else.) When it came time to take the test, though, I found I could easily copy the perfectly sent, recorded code test. The written tests were so easy, I didn't stop until I had passed the elements for Technician class.

The license took forever to arrive, but I'll never forget that first day. I came in the house and fired up the rig, waiting a full hour to allow everything to warm up! I listened carefully on 15 meters, which was in chaos at the time, and tried responding to some CQ's. I sent my best code on the hand key, but came up empty. It would be almost a week before I learned that my old set had such a wide passband that every signal comes through twice, on either side of zero beat! To tune the other guy at just the right offset is no simple trick!

My first QSO was with an N4 who answered my CQ. At precisely the same moment, my two boys, who had been watching TV downstairs, came into my shack (formerly my study) to have a knock-down, dragout fight. I managed to dig a name (Clay) and a QTH (Lexington, Kentucky) out of the background din before shutting down.

The radio stayed on all the next day to ensure it would be warmed up when I could get back to it. My second QSO was with a K90 in Missouri named Bob. The contact was actually inadvertent. I had intended to run a quick test of the rig to find out which TV channels were about to be wiped out. I signed off and was startled to hear Bob coming back to me! I kept the notes on that exchange: lines like “FB JOHN SO LN PY MOROK UR 599 QTH G RDE." My CQ copy obviously needed some work. Bob was an encouragement, though. I got “U DO FIN JOB," and "KEEP UP THE GUD WORK ON UR CW." That was precisely what I needed to hear.

My first DX QSO came about a week later. Okay, so it was PY1AL. I know everybody else has Brazil already, but at the time it was an absolutely heart-stopping event for me. My adrenalin was definitely pumping. My fist turned spastic and I could hardly crank out my own call, let alone understand what the op at the other end way saying. But I got the data in the book. After spending most of my life as a communicator—writing and public speaking is my thing—I was a little surprised at my own state of fright and my inability to come up with anything to say.

The next night there were about a million Japanese stations on 15 meters. I picked out a slower one, but still couldn't make out much except my signal report.

I started practicing QSO's with deadly seriousness. I learned to use the RIT to tune around QRM. I spent most of my time listening, copying the code, and learning procedures. A week later I was back on with a vengeance.

I found that much of the routine of operating was becoming automatic. Tuning no longer took all my intelligence. The format of a normal QSO started to make sense. Even the code started sounding like something meaningful! It shocked me a few days ago when I noticed, in the midst of a contact, that I was writing down characters without translating them in my head. Instead of "dah-dah-dit", I was saying, that's a "C." It was as though the headphones were connected directly to my fingers and the characters just flowed through.

More and more information found it's way—incant—onto my scratch sheet. On my next JA (Japan) QSO, I got everything! It was J1JICY, Kout, in Kyoto. He prefers to exchange QSL cards through the "BURO," (which I now know is not a small mule, but an abbreviation for QSL bureau).

I just now worked a fellow in Kentucky who was just starting out. It was his second QSO and he needed everything sent three times, slowly. When he sent "TNX FER QRS ES ENCOURAGEMENT." I choked up. "FB OM ES KEEP UP GUD WORK" I sent back; "WELCOME TO HAMMING."

There's no question I have a lot to learn—but I feel I am on my way. There's a contest coming up next weekend, and I'm planning to be on the air. I've got a new filter coming in the mail, and I'm collecting parts to build a keyer. The antenna farm could use some cultivation!

Holy smokes! I'm a Ham!—John McMath, N7NOG, N3710 Dowdy Road, Spokane, WA 99204

Well, it's that time of the year again—time to put out the call for interesting topics you'd like to see covered in The Ham Column. I'm open to suggestions. Drop me a line in care of ARRL, Department PCN, 225 Main Street, Newington, CT 06111, and let me know the kind of things you'd like to see. PC
We lead off the column this month with some very enlightening information which provides the answer to the mystery of the sweeping signals heard by your Editor and reported by many POP’COMM readers. S. R. Hays, FL, advised “The sweep sound heard by Mr. Hubbard, Guam (Oct 89 Communications Confidential) passing through the bands at regular intervals is from a Chirpsounder. This instrument transmits a signal starting at 2 MHz sweeping up to 30 MHz at a linear rate with a sweep time of about 5 minutes. The transmitter power is 10 or 100 watts.

The receiver is synchronized with the transmitter, it measures the amplitude and phase of the incoming signal and displays it on a CRT as a spectrum analyzer.

Enclosed is a list of stations (see Tables 1 & 2) that are on the air 24 hours a day. The Operating Segments refers to the number of minutes after the hour the process starts and how often it is repeated. Start Delay is the number of minutes and seconds added to the Operating Segments. Therefore Norfolk, VA will transmit every 15 min. starting at 1 min. 50 sec., 16 min. 50 sec., 31 min. 50 sec., 46 min. 50 sec. after the hour. As the list shows, no two stations start transmissions at the same time.” Many thanks to Mr. Hays for his detailed report.

A note from Alain Charret indicates he has moved back to France from the FRG. Alain offered a clarification for the unidentified language heard by George Oser on 3325 kHz (POP’COMM 07/89) Alain identified it as being Czech. “The ten numbers (0-9) are: nula (null), jedna, dva, tri, ctyri, pet, sest, sedm, osem, devet. The same language was heard by contributor McDonald on 4883.5 kHz (POP’COMM 08/89). Another Czech frequency is 5450 kHz.” We appreciate the clarification Alain.

Bill Such, PA wrote asking for information on schedules and frequencies to be used by the participants in the Around-the-World Yacht Race which commenced September 2, 1989 from Great Britain and is scheduled to end there at the end of May 1990. I had nothing on the subject, so I queried Simon Mason, England and he came through as he always does and sent some interesting background details which I passed on to Bill. See Figure 1 for the itinerary.

The article about the race did not however contain any schedule or frequency data. It is quite possible that the ship/shore communications may be conducted on the following International Simplex Voice frequencies:

8294.2, 12429.2, 12432.3, 12435.4, 16587.1, 16590.2, 16593.3, 22104.0, 22127.1, 22130.2, 22133.3, and 22136.4 kHz.

As a footnote to the foregoing, an item in the Washington post indicated that Alexei Gryshenko, skipper of the Russian entry, Fazisi, hung himself near Punta del Este, Uruguay. The Fazisi had finished in 6th place out of 23 boats for the first leg (England to Uruguay) of the race. Suicide notes left by Gryshenko gave no reason for his action.

Simon Mason, England also forwarded comments relating to a YL/GG “Numbers” transmission he observed which appeared to be an out-of-normal-sequence schedule. Here is what he wrote: “I often listen to the...
utility bands at various times during the night. Recently, at 0550 on 3820 kHz, I heard a YL/SS with 5F groups. Nothing strange about this except that this particular station has a very rigid schedule normally with broadcasts at 2000, 2100, 2200, and 2300. The YL says a 5F group followed by "trembling" (separation) and then a 2F group. This schedule is a direct repeat of broadcasts on 3215 kHz as shown by the following:

<table>
<thead>
<tr>
<th>Freq</th>
<th>Schedules</th>
</tr>
</thead>
<tbody>
<tr>
<td>KHZ</td>
<td>1</td>
</tr>
<tr>
<td>3215</td>
<td>1800</td>
</tr>
<tr>
<td>3820</td>
<td>2000</td>
</tr>
</tbody>
</table>

These skeds were considered 100% predictable, so it was very unusual to hear this 0550 transmission. I think perhaps it was a test broadcast?"

A particularly intriguing item was received from William Walbesser, NY who wrote: "I am a recent subscriber to POP/COMM but have been an avid SWL'er since 1964. I use a Sangean ATS-803A receiver and for an antenna I have a trap-dipole.

Although I will probably be contributing more to Gerry Dexter's 'Listening Post' column, I have been running into a number of broadcasts which may be of interest to "Communications Confidential" readers so I am forwarding a short list of recent loggings. Note the one heard on 7527 kHz. This YL/SS broadcast commenced at 0800 with a callup of Atenicio 95302 which was repeated until 0802. Then 0225 repeated until 0803 and into 5F groups. At the end of the message, 'Final' was repeated several times at 0907. The carrier remained on the air. Within a minute of the termination of the broadcast,"
broadcast, there were several static clicks followed by a USB transmission by a OM/EE with an American or possibly Canadian accent—"IS IT READABLE? IS IT READABLE? (pause) OK. Very strange indeed." We were joined by first-time contributors D.P., NC who uses a Yaesu FRG-88 with a 55' longwire; Paul Haskins, OH who monitors with a DX-440 connected to a 60' longwire; and Jim Deardorff, OH whose setup consists of a Kenwood R-2000 and a 8' copper rod for an antenna. "Perhaps a crude one but I've managed to pick up Navy MARS Station NNN0ICE at McMurdo Station in Antarctica." And from Gifford Mead, FL, another first-time contributor, we received this note: "I have been reading POPCOMM for about two years but I have never submitted anything until now. My intercepts were made using a Sony ICF-PRO70 and a 25' (approx) longwire hung out of a second story window, so it goes to show that you don't need a room full of exotic equipment to hear some interesting things on the SW bands." For the monthly update of USN activity we turn to Andy Gordon, CT who advises that the USS Midway (CV 41) MARS station (NNN0CQQ) was up for the first time in years. New MARS callsign assignments are: NNN0CAR for the USS Carr (FFG 52) and NNN0CBU for the USS Klakring (FFG 42)." Andy continued his report "Unidentified callsigns MADHATTER, LONGWOOD, MAILTRUCK, BIG DITCH and FANG TOOTH were heard with quite a bit of 'Green' (scrambler) traffic intermixed with 'Red' (plain) radio checks on 7535 kHz. There was so much activity that Norfolk SESEF, who had been working with USS Ponce (LPD 15), callsign NSBJ, had to secure its transmissions for the continuance of the secure 'Green' traffic." "Calls TR 841, Snapper 841, Foreclose, Range Rover, Range Master, MV Deer Island, and Monol were all observed in connection with Autec Operations. Each unit reported its hourly position to Autec Ops using local time instead of UTC time." To expand on the Autec information, your Editor checked several references and found that Autec is the abbreviation for "Atlantic Underwater Test and Evaluation Center" in the Caribbean for the Naval Underwater Weapons Research and Engineering Station, Newport, R.I. My information which is dated 1987 shows that the Deer Island was acquired on March 15, 1982 and classified as YAG 62 and retained her commercial name. The craft is used for sound testing by the David W. Taylor Naval Ship Research and Development Center (NSRDC), she was based at Port Everglades, FL. The Monol may be the Monob One (Mobile Noise Barge) YAG 61 which is assigned to Port Canaveral, FL and is used for acoustic trials of Navy ships.

At the conclusion of his report, Andy stated he now has logged a total of 400 USN ships and had QSL'd 275.

209: Beacon SYS, Somerset, PA at 0231. (Ed.)

216: Beacon CLB, Wilmington, NC at 0232. (Ed.)

258: Beacon YAR, Earlton, Ontario Canada at 0236. (Ed.)

265: Beacon AG, Atsugi, Japan at 1017. (Hall, Japan)

278: Beacon LW, Atsugi (Chigasaki), Japan at 1018. (Hall, Japan)

While stationed in England, Robert Combs, CA received this QSL from time signals station OMA.
289: Beacon TG, Tsugaru Saki, Japan at 1021. (Hall, Japan)

313: Beacon TM, Shioya Mtski LS, Japan at 1304 (Hall, Japan)

327: Beacon CBE, Cumberland, MD at 0237. (Ed.)

341: Beacon YUY, Kapuskasing, Ontario, Canada at 0239. (Ed.)

379: Beacon ORG, Newark, NJ at 0240. (Ed.)

401: Beacon DF, Zama, Japan at 1034. (Hall, Japan)

426: Beacon IZS, Montezuma, GA at 1015. (Ed.)

429: Beacon COG, Orange, VA at 0248. In June 1988 this was tuned for 206 kHz. (Ed.)

500: Coastal sta JNV, Nigata, Japan in CW at 1318 clg and PRC vessel. (Hall, Japan)

2094: Stations AX, G, & others w/radar tracking ops & VHF ECHO. Station 4F at 0008 v/flight BEEFSTEAK-702. USB at 0455. (Sabo, CA)

2714: NHTE, USS Idaho, FFG-55 (off freq) clg Charleston Navy Tug Control at 0855. NSVN, USS Nicholas, FFG-47 using call "Inbound Navy Unit", clg Charleston Navy Tug Control at 1015; NNAC, USS Or- tolon, ASR-22, Pigeon class Sub Rescue ship using call "Navy Unit 22" clg Charleston Navy Tug Control at 1045; NMVO, USS James Madison, SSBN-627 using ZERO LIMA FOXTROT & clg FOUR QUEBEC FOUR (Canaveral Control) at 0930. US Merchant Ship Bouven- gure, WRA-4560 (contracted by US Navy) carrying supplies to Norfolk w/Call Bermuda Control & Navy Tug Puller TB-801 at 0915; FISHER (usual call for Cape Radio) making radio check w/Canaveral Control at 1010. It is rare that FISHER uses Cape Radio as call, usually opting for the lesser known FISHER callsign, NGMV, USS Semmes, DDG-18 clg Mayport Tug Control at 1040. Mayport however doesn't monitor HF, only VHF bridge-to-bridge. (Gordon, CT)

3039: Stations FW, G, J, and P in USB at 0326. Similar to activity noted on 2094 kHz. (Sabo, CA)

3345.4: In here on high speed xman which stops, then by hand sent CW. Heading QRA DE A1 F P 101000 Z OCT 79 GR 40 BT. Then into text of 5L grps. (Ed.)

3461.4: Unid sta exchanging signal reports. Noted calls AWA, QJE, BPE, YYA CW at 0008. (Ed.)

3487.8: XEC, Veracruz, Mexico in CW at 0401 sending w/s in SS for various locations in Mexico. (Ed.)

4000: NNNMID, USMC MARS, Camp Pendle- ton, CA notifying RTTY facucp. USB at 0402. (Sabo, CA)

4027.5: YL/SS in AM at 0505 w/095-01, then 195 kHz into 5F grps. YL/SS w/5F grps on 4950 at same time but not /.. (Sabo, CA)

4066.1: USS John Young, DDG-975 w/partty through San Diego CSS-1 in USB at 0122. QSK 4360.5 kHz. (Sabo, CA)

4096.1: USN, USS Okinawa LPH-3 attempting patch through San Diego CSS at 0120. (Gordon, CT)

4143.6: USNS D Tiber w/calls to NATIVE ECHO at 0318 but answered by 12 OSCAR who relayed from NATIVE ECHO. Believing "D" suffix means "deployed", but can't find vessel USNS Tiber in any reference book although have prev hrd them her and on 4481.5 kHz. NATIVE ECHO prev hrd wkg other similarly until ships on this channel also. Possibly some Naval Reserve units. All USB mode. (Sabo, CA)

4369: WLC, Rogers City, MI in USB at 1415 wkg Tug Tomery Burton. (Syracuse, NY)

4588 KIDDY CAR31, 40, 1964 c/l another clg each other for rdo checks. Only plaauname refers to "Florence Re- peater." KC311 is mobile. Net control is KC40 w/who clos- ed the "South Carolina Wing Net" at 0029. (D. P., NC) This is a CAP net. (Ed.)

4625: Pulse every 3 sec. No ID on the hour just a- lternating tone on the 59th min. VEBZ rptd here at 0201. USB (Scotio, PQ, Canada)

4627: CAP Gulf Coast hurricane net. MAGNOLIA 30, Louisiana is net control. Also hrd was BLUECHIP 39, Tennessee. SSB at 0012-0300. (Meed, FL)

4637.5: Offshore petroleum units OM's talking about CG inspection in USB at 0308. (Halifax, ON, Canada)

4670: YL/SS w/4F grps in AM at 1119. (Ed.)

4675: RAF w/Brithsh aero w/x in USB at 0252. (Hamil- ton, NY)

4695.4: Unid calls WAE, PDN, NTP, exchanging QSA reports. Status in SS and noted several ref to practice ic.

4818: Three note rising scale 1900-1905. Then YL/ GG w/Achtung x2 and into 5F grps rptd twice. At 1908 Ende x2, Achtung x2 and rptd 5F text. (Mason, England)

5063.5: 9MB, Georgetown, Pinang 1, Malasia in auto CW at 1051 w/5L grps. Completes msg then mdr of VVV 9MB 613 16 19 VVV. (Ed.)

5080: W4F to PLEAD Control at 2323 (Pt. Mugu NAS, CA) w/advisory re entering PTMC Zone and re- quest for playground & alligator parameters, fol by D2H to PLEAD Control w/encrypted ic. On another even- ing, PLEAD wkg GOJ at 0410 w/ instructions to stay on circuit & notify when transit of PMR complete. All USB (Sabo, CA)

5228.7. Unid CW (hand sent) sta at 2318 w/SS texts. Per msg contents this is Argentina Gendarmeria Na- cional. Org is primarily a Frontier Guard Force & is under the jurisdiction of Commander-in-Chief of the Arm- y. (Ed.)

5257.8: CMU967, Santiago de Cuba, Cuba clg UCNX, under Soviet vessel in USB at 0644. (Ed.)

5310: CW sta w/EDF 2000-2005. Then 3 long dashes and into 5F (cut bins) using AUV465NDBT. (Mason, England)

5500: YL/EE gmng 298 oblige zero zero (actually told oblique). At 0015 then off. Same voice as 3F which says 3F "stitch" zero zero. Also exists RR version which has sent a msg, unlike EE and GG which have not. (Mason, England)

5544: Boyeros Radio hrd in USB at 0350 wkg Cu- bana 479 who is reporting his position over JESSE. Then at 0351 Boyeros wkg another Cuban flight (Cu- bana 471) who gives a Havana ETA at 0648. Havana & Camaguey w/x given. All in SS. This is Cuban LDCC freq. (Halstead, WV)

5553: CQ DE KAU19Q Name is Danny AAA in Rin- dge, NH (Ed.) I don't think he belongs here.

Vince Rey, NY shares another QSL from his collection.

Dear Mr. Rey:

This will verify your report of our weather broadcast made on 4-15-75 at 0120 hours Greenwich Mean Time on frequency 6652 KHZ. The following information may be of some interest to you:

Gender Radio is a Canadian International Aeradio Station, set up primarily to provide communication services for aircraft flying North Atlantic routes.

One of the services provided is the broadcast of weather forecasts, and actual weather for a number of Canadian International Airports. These broadcasts are made simultaneously on four frequencies - 3001 KHZ, 5652 KHZ, 8968 KHZ, and 13272 KHZ. The times of the broadcasts are hour plus 20 to 30 and hour plus 50 to 60.

Thank you for your interest.

Yours truly,

for C.J. Anstey

TELECOMMUNICATIONS AREA MANAGER

THE MONITORING MAGAZINE
March 1990 / POPULAR COMMUNICATIONS / 71

Abbreviations Used For Intercepts

AM Amplitude Modulation mode
BC Broadcast
CW Morse Code mode
EE English
GG German
ID Identifier/identification
LSB Lower Sideband mode
OM Male operator
PP Portuguese
SS Spanish
TIC Traffic
USB Upper Sideband mode
W with
WX Weather report/forecast
YL Female operator
4F 4-figure coded groups (i.e. 5739)
SF 5-figure coded groups
SL 5-letter coded groups (i.e. IGRXJ)
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11323 A/c 6185 wkg Trenton Military in USA at 2000 re tactical ops and pps to Goddard. Ops re landing schedule at Trenton. 6185 later Fd’d at AF/Force 6298 (Fernandez, MA).
11243 PUSCHART (Ops OM/EE) in USA at 1848 in alphanumeric msg cbt (Fernandez, MA).
11246 NOS at 11246 & 18019 wkg MacDill advised move to 18019 as they having trouble copying. They QSY’d to 18019 kHz where passed info re Hurricane Hugo to Nat’l Hurricane Center. (Hastings, OH) CG 1718 to MacDill AFB w/request for pp to Clearance. This same A/c had l/hr same night in Charleston, SC and seen on network news report unloading relief supplies. USA at 2018 (Meel, FL).
11267 THREE UNIFORM NOVEMBER and other similar calls in USA at 2038. This was a tracking net (Fernandez, MA).
11491 YL/SS in AM at 1837 w/5/fgps (Fernandez, MA).
11949 Anti-squalling ops at 1740 in USA w/ GHOST RIDER and OMAHA 81. Station INDIANA w/practice alpha-numerical net at 0509, upon completion advised NOVEMBER to QSL. This is SAC channel (Ed.) (Sao, CA).
15035 EDMN/MACG USP w/attempted landing in USA at 1144 w/Alpha-numeric w/kg MacDill, USA at 0502. This landing was attempted at 1144. (Sao, CA).
Popular Communications invites readers to submit stories, including interesting, amusing, or otherwise unusual. Entries will be judged taking into consideration if they tell a story that is especially interesting, amusing, or otherwise unusual. We reserve the right to make any necessary syntax, spelling, or grammatical corrections, or minor wording changes to improve style.

The winner for March is Roger W. West, of Amery, WI. Roger's tells us: "I began monitoring 17 years ago with a 7-band tuner that had a VHF police band. It was almost impossible to locate my local police department's main channel. One evening there was a robbery followed by a 20-hour manhunt. They called in outside law enforcement agencies for help, and many additional frequencies were in use. I got lett out in the cold. The next day I went out and bought a scanner. Today I own four scanners (PRO-2020, -2021, -2004, -2005), a preamp, and a discone. I still own my first 10-channel crystal-controlled scanner."

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Roger says he doesn't miss any of the action. He has an AC adapter on his tractor so that he mount his PRO-2020 on the hood to keep an ear on things while he's doing yard work. This is a guy we can sympathize with!
Illegal CB Equipment
Seized In Mississippi

The U.S. Marshal's Service, with the assistance of staff from the FCC's Atlanta and New Orleans Offices, seized an estimated $75,000 worth of electronic equipment from Andy's Place, aka A&M Wholesale Supply. A&M is owned by Andrew H. McAdams, Jr. and is located in Pass Christian, Mississippi. Mr. McAdams is facing criminal prosecution. Willful and knowing violations of the Communications Act and FCC Rules are misdemeanors for first time offenses and felonies for subsequent violations. Maximum penalties include fines of up to $100,000 and imprisonment for up to one year.

The seized equipment consisted of non-type accepted CB transceivers and CB linear amplifiers. The transceivers were capable of operating on unauthorized frequencies with excessive power. Some of the linear amplifiers were capable of increasing CB power to over 2,000 watts. CB stations are limited to 4 watts of power.

The search warrant was applied for by the FCC in cooperation with the U.S. Attorney, George Phillips, Southern District of Mississippi. The case is being handled by Jay Golden, Assistant U.S. Attorney, Biloxi, Mississippi.

Convicted For Selling
Illegal Radio Equipment

Richard Harrison, owner of COM-TEK, an electronics store in Manassas, Virginia, was convicted of willfully and knowingly offering for sale and selling illegal radio equipment. He was selling CB linear amplifiers and non-type accepted CB transmitters.

Mr. Harrison was found guilty by a six-member jury in the United States District Court for the Eastern District of Virginia, Alexandria Division. He is scheduled for sentencing on January 16, 1990. He could receive fines of up to $100,000 and/or one year in prison.

The marketing of CB linear amplifiers and non-type accepted radio devices is prohibited by the Communications Act and the Commission's Rules and Regulations.

New York Pirate Station
Shut Down

U.S. Marshals, with the assistance of staff from the FCC's New York Office, seized radio equipment in the Borough Park section of Brooklyn, New York. The equipment was used to operate an unlicensed broadcast station on 91.9 MHz. The callsign used was "WJPL."

This is part of the continuing effort by the FCC to shut down pirate radio broadcast-
and an application has been submitted to the Commission stating the frequency the applicant expects to use.

Currently, applicants are prohibited from operating until the Commission completes the application process and grants a license. This process takes approximately 20-45 days. The Commission believes that the concept of conditional authorizations will be in the public interest because it will allow license applicants with immediate communications needs to commence operations upon filing with the Commission a properly completed and coordinated application.

Investigation Into Illegal Satellite Descramblers Leads FBI To Escaped Convict

In 1988, FCC San Diego accompanied U.S. Marshals in the execution of a search warrant against United Satellites, Las Vegas, Nevada, for selling devices used for the unlawful interception (piracy) of satellite pay TV programming. The owner of record of United Satellites was Susan E. Hawkes. Another principal involved in the operation of the business was Michael Connors. Michael Connors fled Las Vegas after the search warrant was executed.

On October 30, 1989, the FBI arrested Michael Connors in Phoenix, Arizona, on the satellite piracy charges. His true identity and a past criminal record was discovered after he was arrested and fingerprinted. He was identified as escaped convict Richard N. Nickl. In 1961, Nickl was convicted and sentenced to a life sentence plus thirty years for the murder of a deputy sheriff and the wounding of another officer near Milwaukee, Wisconsin. Nickl escaped on July 25, 1974, after serving 13 years at the Wisconsin Federal Correctional Institute.

On October 27, 1989, Susan E. Hawkes was sentenced in U.S. District Court, Las Vegas, to a $2,500 fine, three years probation and 200 hours of community service work.

As a result of the United Satellites investigation, 26 additional search warrants have been executed by the FBI in Las Vegas in a number of new investigations concerning satellite piracy.

The marketing of technology or devices intended to be used for the unauthorized interception of satellite pay TV programming violates federal statutes. Violators are subject to criminal prosecution, imprisonment, fines and/or civil suits.
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Approval: All ad copy is subject to Publisher's approval and may be modified to eliminate references to equipment and practices which are either illegal or otherwise not within the spirit or coverage scope of the magazine.

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CIRCLE 5 ON READER SERVICE CARD

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THE THEATING MAGAZINE

March 1990 / POPULAR COMMUNICATIONS / 79
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Optional Accessories
R-2000:
• VC-10 VHF converter
• DCK-1 DC cable kit for 12 volt DC use.
R-5000:
• VC-20 VHF converter
• VS-1 Voice module
• DCK-2 for 12 volt DC operation
• YK-88A-1 AM filter
• YK-88SN SSB filter
• YK-88C CW filter
• MB-430 Mounting bracket.
Other Accessories:
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• HS-5 Deluxe headphones
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Optional Accessory
• PG-2N Extra DC cable