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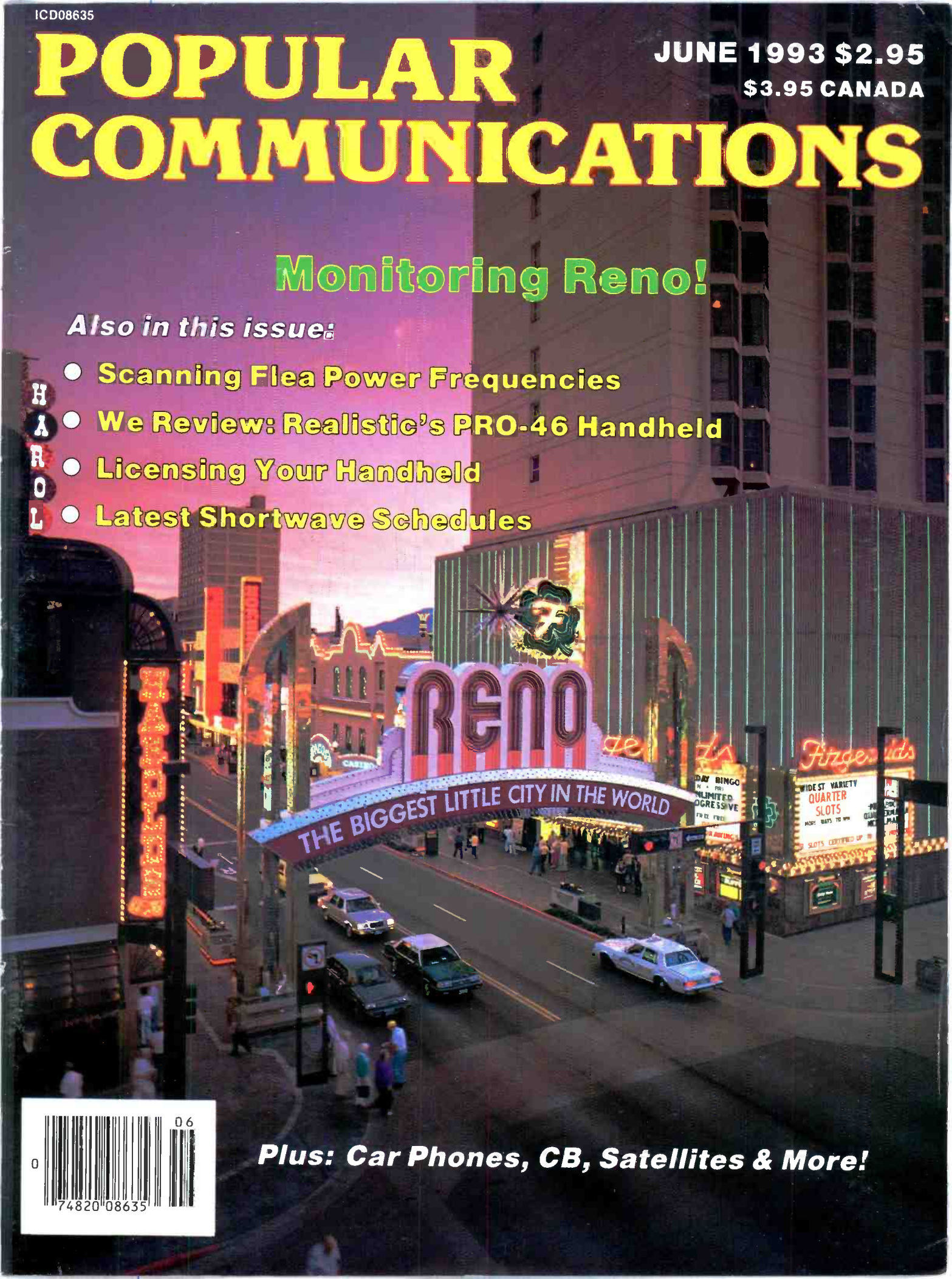
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Monitoring Reno!

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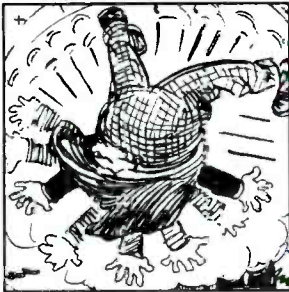
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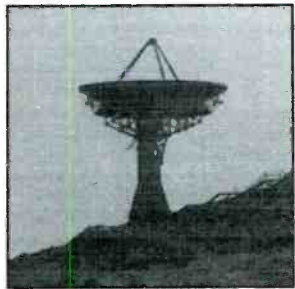
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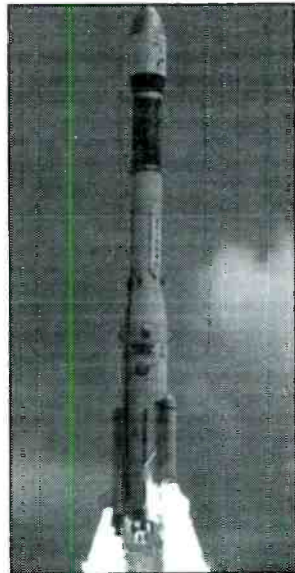
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This month' cover: USA: Reno, Nevada at dusk. Tune in to the casino radio frequency. Photo by Larry Mulvehill.

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CIRCLE 91 ON READER SERVICE CARD

4 / POPULAR COMMUNICATIONS / June 1993

BEAMING IN

BY TOM KNEITEL, K2AES

AN EDITORIAL

The New Communicators

The no-code Amateur Radio license has blessed the hobby communications with an influx of bright new people and personalities. I don't mind telling you that it was about time the hobby got this shot of new vitality. Shortly before the no-code ham license became a reality, the number of new entrants to the related hobbies (ham, SWL, CB, and scanner) were insufficient to ensure a healthy future, and populate the ham bands with enough users to keep them from predator services.

This has inspired new equipment to be designed. It pumped new life into the 6 and 2 meter bands, and even increased the activity on CB. Most folks agree that all of this is good, and lots has been written about every aspect of the benefits.

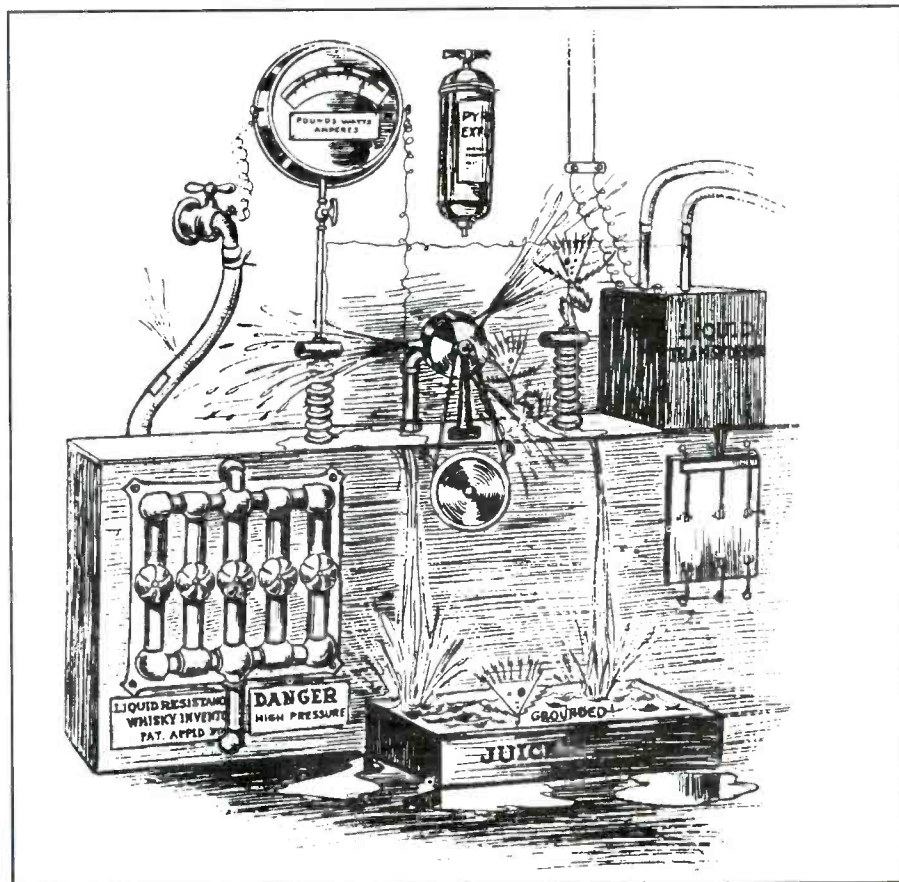
Something occurred to me that I haven't yet heard or read about in connection with all of this.

Amateur Radio operators have been around since the earliest days of spark gap

communications, and that means just after the turn of the century. The term Amateur Radio was used then, and has come down through the years. Amateur Radio operators have traditionally been members of a noble and proud group of dedicated experimenters willing to use our special expertise out in any emergency. Hams have grown comfortable with being known as Amateur Radio operators.

Still, I can't help but wonder if, after about 90 years of use, the term "Amateur Radio" has now outlived its accuracy, as well as its usefulness to hams. Yes, hams are "amateur," in the sense that we are not professional operators. However, these days the word "amateur" has a tarnished image. *Webster's New Universal Unabridged Dictionary* gives one meaning of "Amateur" as, "a person who does something more or less unskillfully."

What does the average person think
(Continued on page 74)



Some members of the public still relate the term Amateur Radio to quaint machines like 1910-era steam-powered quenched rotary spark dischargers, or whatever those infernal contraptions were.

“ The R8 is a highly sophisticated receiver. We'd call it professional grade, or about as close to it as receivers get these days. **”**

*Staff review
Popular Communications*

“ The R8 is like a breath of fresh air, with its ground-up engineering and up-to-date digital control from the front panel. I am very pleased to see a quality HF receiver of American manufacture that should successfully compete on the world market. **”**

*Bill Clarke
73 Amateur Radio Today*



“ Overall, the Drake R8 is simply the best radio we have ever tested for quality listening to programs... There's nothing else quite like it. **”**

*Lawrence Magne
Monitoring Times*

“ The best of the best for high-quality listening to news, music and entertainment from afar.

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CIRCLE 142 ON READER SERVICE CARD

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 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 N. Broadway, Hicksville NY 11801.

Whatzit Signals

There are now so many different types of digital signals to be heard on shortwave that the selection is astounding. My updated-version decoder brings in ASCII, Wefax, SSTV/FSTV, Sitor, Amtor, Navtex, Packet, Fax, RTTY, ARQ, and many others. In truth, I haven't a clear image in my mind of what each and every one of these

modes sounds like when picked up by my receiver. I spend a lot of time fiddling around with adjustments trying to bring various digital signals through my unit when I really don't know what I'm hearing, or what to listen for. CW is obvious, and straight RTTY signals are readily identifiable, but there are so many others in use now, it's getting confusing. Life would be so much easier for me (and I suspect, many other monitors) if someone would bring out an audio cassette tape demonstrating what each of the digital signals actually sounds like, offering descriptive commentary about each mode, what it is used for, and perhaps listing a couple of typical bands or specific frequencies where it might be tuned. I would buy a tape like this in a minute.

Anthony J. Lomenzo, KD2LP,
Fort Ann, N.Y.

This is an excellent suggestion, Tony. Maybe your letter will inspire the creation of such a reference tape.—Editor

Who Cares How Anybody Got Started?

Everybody has had enough of reading about how people got started already, really! Readers would be much more and far better served with a useful feature pertaining to antennas contained in the same space used for *How I Got Started*.

Sol Hoffman,
Beverly Hills, Calif.

Good of you to have taken upon yourself the heavy responsibility of stepping forward to present us with the wishes of "everybody." By "everybody," do you mean all inhabitants of the known universe, the world, or merely in North America? "How I Got Started" was first included in the magazine at the request of our readers. Based upon the substantial amount of mail the feature continues to receive each week, our feeling is that "How I Got Started" generates a lot of reader interest. If it becomes apparent to us that readers have lost interest in any regular features, the material would be dropped without the need for our being prodded into doing so. Joe Carr's bi-monthly antenna column has the information you seek.—Editor.

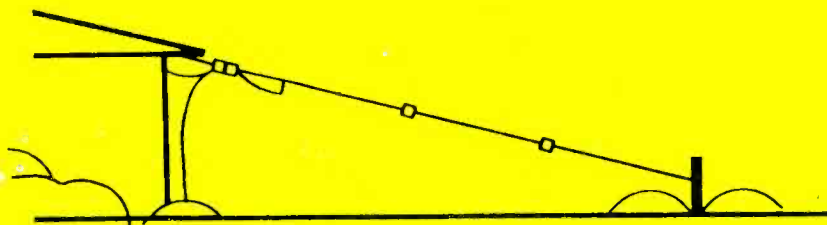
Being Neighborly

My cousin lives in Santiago, Cuba, and is a very active SWL. So far as I know, POP'COMM has never mentioned that there are SWL's in Cuba. I regularly send my cousin copies of your magazine, which he tells me he enjoys and shares with his friends.

P.A.,
Florida

The only other SWL activity in Cuba we know about is the huge electronic spy station just outside Havana. It was built in 1974 by the what is now the former USSR. The facility was built to eavesdrop on communications traffic in this country. Last year, Cuba and the new Russia signed an agreement to ensure the continued operation of the facility.—Editor.

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42.58	MHz	Nevada Gaming Control Agents	463.70	MHz	Housing Authority of Reno
42.70	MHz	Nevada Highway Patrol car-to-car	463.725	MHz	Cheers Hotel
42.88	MHz	Nevada Highway Patrol dispatch	463.825	MHz	El Dorado
151.775	MHz	El Dorado	463.925	MHz	Harrah's
151.805	MHz	Harrah's	463.975	MHz	Pioneer
152.36	MHz	Reno Air Racing Assn.	464.125	MHz	Sundowner Hotel
154.515	MHz	Ramada Inn	464.05	MHz	Reno Spa
154.54	MHz	Sands Motor Inn	464.20	MHz	Fitzgerald Hotel
154.57	MHz	Fitzgerald Hotel	464.375	MHz	Holiday Inn
154.625	MHz	Ramada Inn	464.525	MHz	Peppermill Inn
		Carda Hotels	464.575	MHz	Bally's Grand
154.725	MHz	Washoe County Sheriff	464.625	MHz	Hilton
154.86	MHz	Washoe County Jail	464.85	MHz	El Dorado
154.95	MHz	Washoe County Sheriff			Sahara
155.01	MHz	Washoe County Sheriff	464.875	MHz	Harrah's
155.13	MHz	Washoe County Sheriff	464.925	MHz	Horslow Hotel
155.205	MHz	Search & Rescue Teams	855.8125	MHz	Horseshoe
155.25	MHz	Washoe County Sheriff	857.9125	MHz	Gold Dust Inn
155.37	MHz	Washoe District Attorney	859.9125	MHz	Bally's Grand
155.43	MHz	Juvenile Authorities			
155.94	MHz	Reno City Government			
155.985	MHz	Washoe County Sheriff			
453.05	MHz	Reno Fire Dept.			
453.10	MHz	Washoe County Government			
453.25	MHz	Reno Fire Dept.			
453.30	MHz	Nevada Gaming Control Agents.			
453.35	MHz	Reno Int'l. Airport Police			
453.50	MHz	Reno Int'l. Airport Police			
453.575	MHz	Reno Police car-to-car			
453.60	MHz	Reno & R.I. Airport Police			
453.65	MHz	Reno & R.I. Airport Police			
453.70	MHz	Reno & R.I. Airport Police			
453.75	MHz	Reno Fire Dispatch			
453.8125	MHz	Reno Int'l. Airport Operations			
460.075	MHz	Reno Police			
461.125	MHz	Circus Circus			
461.225	MHz	Bally's Grand			
461.30	MHz	Plaza Hotel			
461.325	MHz	Peppermill Inn			
461.70	MHz	Hilton			
461.85	MHz	Hilton			
		Sahara			
461.90	MHz	Circus Circus			
461.925	MHz	Bally's Grand			
462.175	MHz	Comstock			
462.75	MHz	El Dorado			
462.775	MHz	Hilton			
462.80	MHz	Holiday Inn			
462.825	MHz	Bally's Grand			
462.875	MHz	Harold's Club			
463.25	MHz	Harvey's			
		Circus Circus			
463.30	MHz	Circus Circus			
463.575	MHz	Circus Circus			



Scanning Flea Power Frequencies

Most Scanner Owners Pass Them By. But, Wait—!

BY CHUCK ROBERTSON

We live in a world where bigger is better. We want the largest car with the most horses 'neath the hood. We like to live in a big house and watch the largest screen TV set made. Big is what we understand and what attracts us. Little things often go unnoticed, lost in the razzle-dazzle of the big things we like so much. But little things can mean a lot.

Ignored by many scanner users are little frequencies that are used only for low-powered communications. These frequencies are worthy of a listen!

Wake Up & Smell The Coffee!

The FCC has designated numerous frequencies in various frequency bands for 2 watt (or less) communications. Many people have come to think of these frequencies as the exclusive domain of fast-food restaurant drive-up window comms. Not

true, however. While they do enjoy such use, there's more there than burgers, fries, and hot coffee.

These frequencies manage to turn up all sorts of strange, unexpected, and outright weird stuff. Handheld transceivers are king here. Private detectives, security guards, malls, industrial sites, utilities, and even local governmental agencies turn up with regularity. So do average citizens.

Listeners have reported the darndest things on these frequencies, including wireless microphones. Room bugs have also been reported. The 8th Edition of Kneitel's *Top Secret Registry of U.S. Government Radio Frequencies* lists two of these frequencies (457.5625 and 467.7875 MHz) as having been reported being used for electronic surveillance.

Monitoring all flea-powered signals is a challenge. A good outside antenna, aided by a signal preamplifier, will help. Although 2 watts can travel a lot farther than you

might think (with line of sight transmission), it does not guarantee that you'll get a copy on every single transmission. That's part of the adventure of low-power scanning.

Looking For Treasure

Most frequencies allocated for low-power business radio comms are located in the so-called scanner sub-bands. For example, there's a high-power radiopaging band from 462.75 to 462.975 (in 25 kHz steps). This band conceals seven low-power voice comms frequencies located midway between the radiopaging frequencies (that is, 12.5 kHz offset from the paging freqs.).

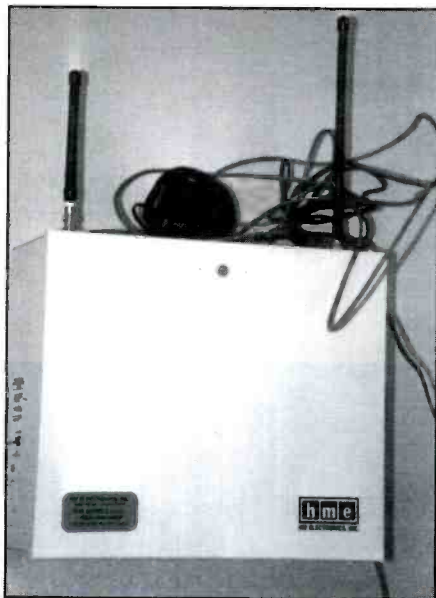
Most base stations in the 460 to 465 MHz range are actually repeaters paired with control stations and mobile operations exactly 5 MHz higher in the 465 to 470 MHz range. However, there are low-powered business frequencies sprinkled at 12.5 kHz offset points from the control station



Explore the odd world of low-power communications channels.



This antenna was spotted installed at a fast-food restaurant. Turned out to be used with the establishment's low-power 35.02/154.60 MHz communications system.



This is a fast-food restaurant comms system. The antenna at the right transmits on 33.40 MHz. The other antenna receives the transmissions from employee headsets on 154.57 MHz.

and mobile frequencies between 465 and 470 MHz.

If you are near any large harbors, monitor 457.525, 457.55, and 457.60 MHz. These frequencies are designated for use aboard ships, or for docking and cargo handling use at the dock. Repeaters aboard ships are sometimes with outputs in the 467.525 to 467.60 MHz band.

Keep a watch on 469.9875 MHz. Although the FCC does not list it as a viable frequency, it is nevertheless licensed for low-power use by stations in many areas.

Low-power frequencies are designated for police, medics, fire, and industrial uses, too, they are in the 12.5 kHz offsets of the higher-powered bands.

Here, There, Everywhere!

Frequencies 154.57 and 154.60 are easily the two most popular and widely used low-power business frequencies. Tens of thousands of stations operate on these channels, probably many of them unlicensed. Equipment for these and several other low-power frequencies can be purchased over-the-counter at automotive, sporting goods, and many other stores serving the general public.

There are also five low-power frequencies in the 30 to 50 MHz band, including 33.40 MHz, where stations may not use more than one-half watt. Our chart offers a listing of the frequencies and bands where you can find the low-power channels in the USA.

Don't be quick to pass these by. You may be missing out on communications you would like to be in on!

Low-Power Business Frequencies & Scanner Bands

30.84 MHz
 33.14 MHz
 33.40 MHz
 35.02 MHz
 42.98 MHz
 154.57 MHz
 154.60 MHz
 457.5125-457.6125 MHz (12.5 kHz steps)
 460.6624-462.1875 MHz (25 kHz steps)
 462.5625-462.7125 MHz (25 kHz steps)
 462.7625-462.9125 MHz (25 kHz steps)
 463.2125-464.9875 MHz (25 kHz steps)
 465.6625-467.1875 MHz (25 kHz steps)
 467.7625-467.9125 MHz (25 kHz steps)
 468.2125-469.9875 MHz (25 kHz steps)

Other Frequencies Where Low-Powered Stations Show Up

151.625 MHz
 154.54 MHz

Unofficial Color Codes Often Used to ID Channels

151.625 MHz= Red
 154.57 MHz= Blue
 154.60 MHz= Green
 464.50 MHz= Brown
 464.55 MHz= Yellow
 462.575 MHz= White
 462.625 MHz= Black
 462.675 MHz= Orange
 467.85 MHz= Silver
 467.875 MHz= Red
 467.90 MHz= Gold
 467.925 MHz= Blue

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CIRCLE 86 ON READER SERVICE CARD

This Was Radio

Tuning In On Decades Past

BY ALICE BRANNIGAN

Readers to the rescue! In February, we ran a photo taken about 1938 showing WEEI, Boston, Mass. The photo had been snapped by reader Jack Browne, W6TTD, of Palm Desert, Calif., when he was just starting out as an engineer. His first job was at WEEI. Working part-time for \$12.50 per week, he lugged WEEI's two very heavy amplifiers around on the subway, then he set them up at night clubs for live remotes. When the remote was over, Jack would drag the equipment back to the studio.

Retired now from a career in engineering, Jack sent the old photo to us. He wondered if the building in the picture still exists. Readers came up with the answer, and more!

Richard Amirault, N1JDU, responded that the building is still there, near Malden, Mass. Except for a few trees that had grown up around the structure, things looked very much the way they did in the 1938 photo. The large call letters were no longer on the front of the building, though. Because there were no recent footprints in the snow when Richard was there, he assumed that the equipment there was operated by remote control.

That was fine information, expanded upon by a letter we received from Frank Kelley, Jr., of Holliston, Mass. Frank is a former WEEI engineer who confirmed that the building in the photo is there and in use by WEEI. Frank reports that the building was constructed in the late 1920's by the former owners of WEEI, the Edison Electric



Jack Browne's photo of WEEI that he snapped in 1938.

Illuminating Company. Today, this structure is used only as the transmitter site. The equipment there is remotely controlled from the former Schrafft's candy plant in Charlestown, Mass.

When the WEEI staff cleared out the old studios on the 44th floor of the Prudential Building, they discovered many old photos. Frank was kind enough to send us several from the earlier days of this venerable New England station.

WEEI went on the air on September 29th, 1924. It first ran 500 watts on 630 kHz, then went to 860 kHz where it became known as "The Friendly Voice." By 1928, WEEI had moved to the Hotel Touraine, 39 Boylston Street, Boston, changed to 590 kHz and upped its power to 1 kW. The transmitter building was



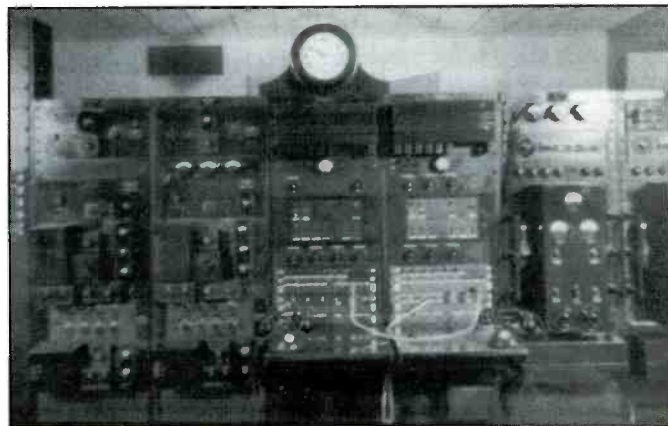
Wally O'Hara had a jazz program over WEEI several years ago. (Courtesy Frank Kelley, Jr., Mass.)

erected on Mystic Valley Parkway, Medford, Mass.

Later, the station's offices moved to Tremont Street. By the late 1940's, WEEI was owned by CBS and had started running 5 kW. Today, still on 590 kHz and operat-



The WEEI transmitter building as it looks now. (Courtesy Richard Amirault, N1JDU.)



The early transmitting gear at WEEI (From Frank Kelley, Jr., Massachusetts)

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CHARLES W. BURTON
SUPERINTENDENT OF BROADCASTING

39 BOYLSTON STREET

June 21, 1930

Mr. Jos Hueter
1610 North 18th St.,
Philadelphia, Pa.

Dear Listener:

This is to verify your reception of WEEI, on June 14th.

We regret to say that we have discontinued issuing Ekko stamps, otherwise we would be happy to send you one.

Thank you for writing to us and we hope that you will write to us again in the near future.

Very truly yours,

Georgina Maher
Broadcasting Department.



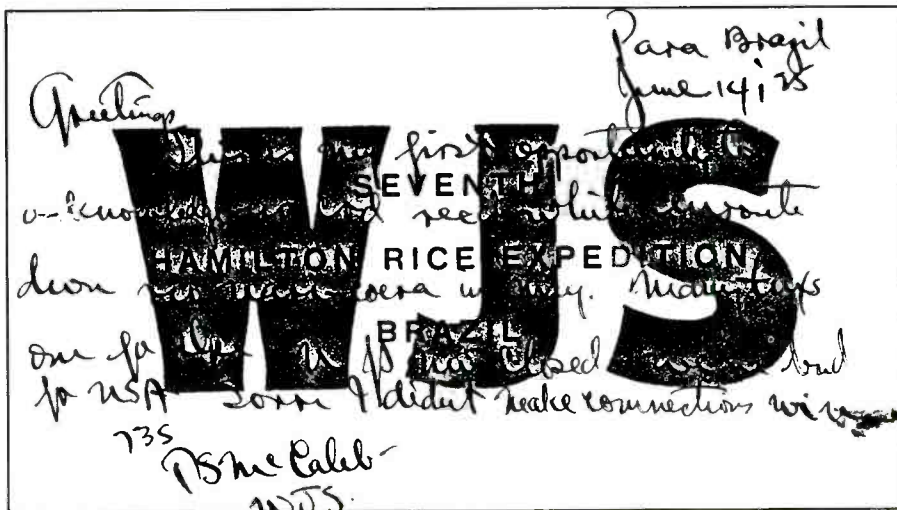
This 1930 QSL letter from WEEI apologizes for dropping EKKO stamps. (Courtesy the late Joe Hueter.)

ing with 5 kW, WEEI is owned by the Boston Celtics.

Indiana Jones For Real

During the 1920's and 1930's there were many expeditions to exotic corners

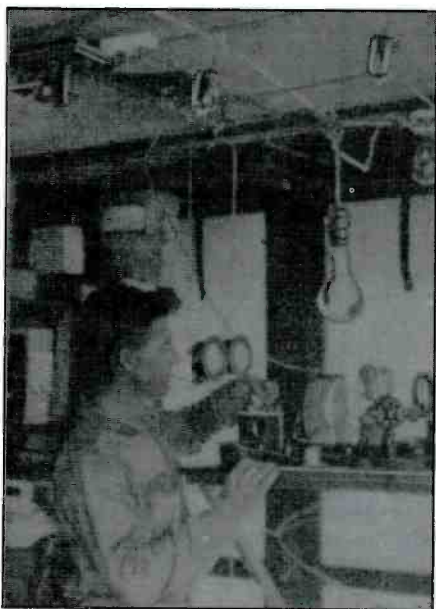
of the world. They continued until the outbreak of WWII in the late 1930's. While they were going, though, intrepid explorers made their way through jungles, up rivers, across polar regions, and into remote mountain areas of Asia, Africa, and



A postcard from expedition station WJS dated 1925.



Expedition radio operator McCaleb provides a demonstration of radio for people who were more interested in the lit tubes of the radio than the music they were hearing.

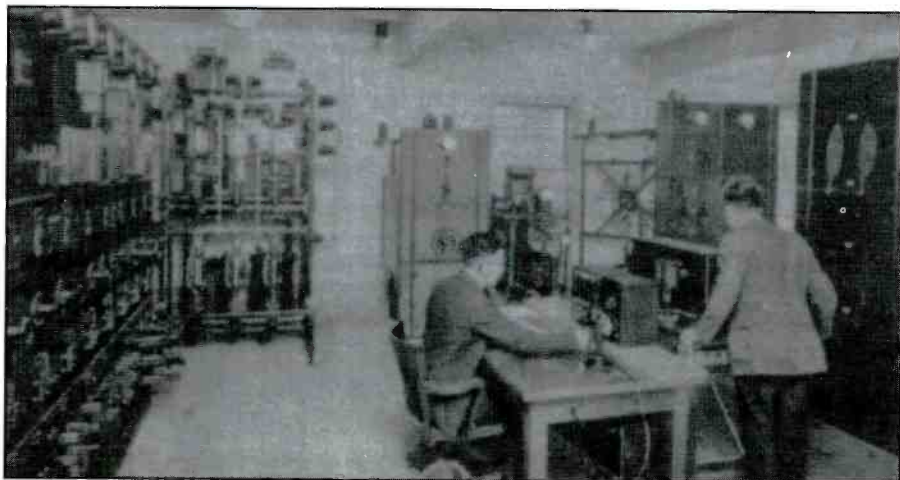


The WJS base at Boa Vista had voice and CW capabilities.

South America. They were preparing maps, looking for lost tribes and forgotten antiquities, tracking rare plants and animals, looking for fabled treasures, seeking knowledge, or maybe just hunting for adventure. It was very romantic. Hollywood made swashbuckling movies. Lowell Thomas made documentaries. *National Geographic* provided stories and had photos.

Radio fans, however, knew that all of these expeditions carried radio communications. Some expeditions had ham stations, so if you had a ham ticket you stood a reasonable chance of hooking up directly with such expeditions. Even those that didn't have ham operators carried some form of two-way radio. The stations were used to send out information for press releases, to get any needed medical advice, to coordinate schedules, etc. These stations could be copied as they exchanged traffic with their home bases or news media stations.

Frequencies were published in hobby publications, and communications took



The KGO powerhouse as it looked in 1924.

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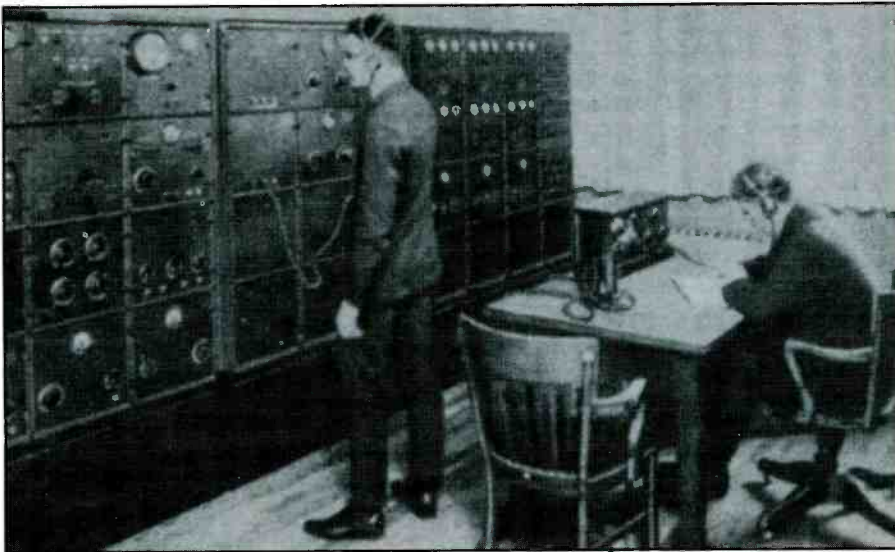
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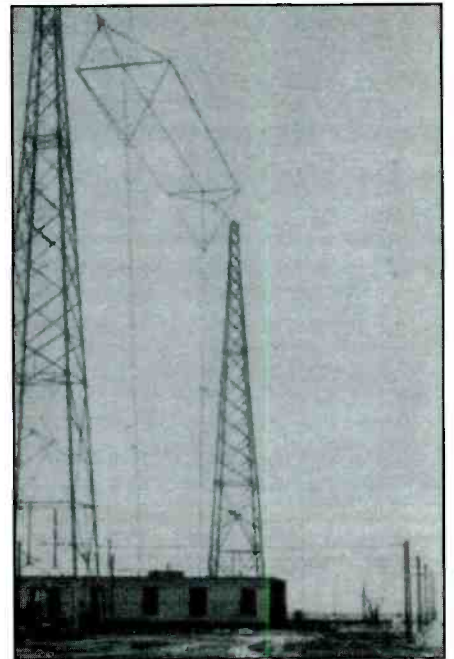
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KGO's 1924 control room was a model of technology, with all equipment available in duplicate.



The most impressive KGO antenna system when the station began operation in early 1924.

place on both voice and CW (although, mostly CW). QSL's were usually available. Inasmuch as many of these expeditions received a lot of newspaper coverage, being able to display an authentic QSL to non-hobby friends got their attention quickly.

One such expedition was the 1924-25 trek into the Brazilian jungle headed by Dr. and Mrs. A. Hamilton Rice. The \$12,000 worth of radio equipment for the expedition was granted the call letters WJS.

Leaving from New York in late March, 1924, the 10 men and 1 woman made their way towards the headwaters of the Amazon. The radio gear was under the control of Insp. J. W. Swanson, who was on a one-year leave of absence from the U.S. Dept. of Commerce. It was a supposed coincidence that the expedition's call letters were a transposition of Mr. Swanson's initials.

The equipment included a 750 watt tube-type transmitter that was expected to be run at 400 watts. This could operate as low as 100 kHz, but could switch over to short-wave for communications with several 20 watt portables (that weighed 50 lbs. each). There was also a seaplane going along on this expedition, and it had a military SCR-134 voice set, which ran 50 watts.

WJS had received special authority to communicate with ham operators, and they proved the best thing the expedition had going. Original plans called for primary communications to be longwaves between the WJS base station at Boa Vista, on the Rio Blanco, and the Brazilian station 400 miles to the south, at Manaus. Unfortunately, because of "the use of long-waves and adverse atmospherical conditions" the idea was a failure. WJS had better luck communicating via shortwave with hams in Canada, the USA, New Zealand, and England.

An interesting radio item from this expedition is a hand-written postcard sent out

on a form printed in black "Seventh Hamilton Rice Expedition," over large red letters "WJS." The card is dated June 14th, 1925, and from one of the radio operators, T.S. McCaleb. It states that the expedition was ended and WJS was off the air.

Early Western

The *Sunset Station* was the nickname given to GE's station KGO when it began operating on January 8th, 1924. That's because KGO was built in Oakland, Calif., on the western edge of the continent. GE had already opened WGY in Schenectady, N.Y., and KGO was its second station. The third GE station was planned for Denver.

KGO's earliest location was at 5555 East 14th Street in Oakland, and it first went on the air with 1 kW at 960 kHz. Not long after, the power was increased to 5 kW and the frequency changed to 780 kHz, it was changed again in November of 1928 to 790 kHz.

The early facilities at KGO were modern

and impressive. The station had its own power facilities, consisting of nine motor-generators located in their own building. All equipment in the powerhouse, as well as all transmitter and control room equipment, was installed in duplicate to avoid problems in case of failures.

The antenna system was what was known as a multiple-tuned type strung between two 150-ft steel towers located 250 ft. apart. Beneath this was a counterpoise made up of a 150 by 300 ft. area of wire mesh placed 14 ft. above the ground.

By 1930, KGO had become owned by NBC, upped its power to 7.5 kW, and moved its studios to 111 Suter Street, San Francisco. As NBC was then running two radio networks (Red and Blue), the network eventually also fed programming through a second NBC station in San Francisco sta-

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8:00 A.M. to 12:00 Midnight	-----SUNDAY-----	8:00 A.M. to 12:00 Midnight
7:30 A.M. to 12:00 Midnight	-----WEEK DAYS-----	7:00 A.M. to 12:00 Midnight

Your reception of KPO on December 9, 1932 has been verified.

Yours very truly,

NATIONAL BROADCASTING COMPANY, INC.
SAN FRANCISCO, CALIF.

F. Pattee
AUDIENCE MAIL DEPT.

A 1930 veri doubled for sister stations KPO/KGO.



This undated picture postcard shows San Francisco's Radio City bearing the letters NBC and both the KPO and KGO call letters. There is also an RCA logo displayed. To the right (across the street) is the "Radio Club."

tion, KPO. In 1943, the courts insisted that NBC get rid of one of its two networks. In response, NBC decided to sell its less profitable Blue chain. In 1945, the former NBC Blue Network was formed into the new ABC Network. KGO became the ABC outlet in San Francisco.

KGO had changed its frequency to 810 kHz at the start of WWII, and in the late 1940's increased its power to the 50 kW maximum. That's when the studios were at 153 Montgomery Street, San Francisco.

The transmitter remained at the original Oakland site.

Presently, KGO is owned by Capital Cities ABC, and remains on 810 kHz with 50 kW. Studios are now at 900 Front Street.

We will be looking forward to July, and having you back with us then. Thanks to all for passing along old QSL cards (originals if you can spare 'em, or good copies will do), old station lists, old station photos, stories, questions, and that type of material for the archives.

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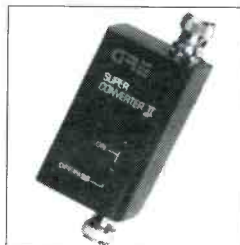
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We Review:

The New Realistic PRO-46 Handheld

100 Memory Channels & Much More!

Realistic continues to add to its large and varied selection of handheld scanners. The latest addition we have seen is the Realistic Patrolman PRO-43, being a 100-channel job covering a wide range of frequencies.

The frequency range 29 to 54 MHz is covered in 5 kHz steps, as is the 137 to 174 MHz segment. All other bands included are in 12.5 kHz steps. These bands are 108 to 137 MHz, 406 to 512 MHz, and 806 to 956 MHz (minus the cellular bands, which are locked-out at the factory). The 100 memory channels are established in 10 banks of 10 channels each. You can also temporarily save up to 10 channels you locate during a frequency search.

Scanning is done at 14 chan./sec., and it searches at a quicker 19 chan./sec. rate. There is a Priority channel feature, too, and when it is activated, that channel is sampled every 2 seconds to see if it contains activity. A switchable delay can tag 2 seconds on after each transmission before scanning resumes.

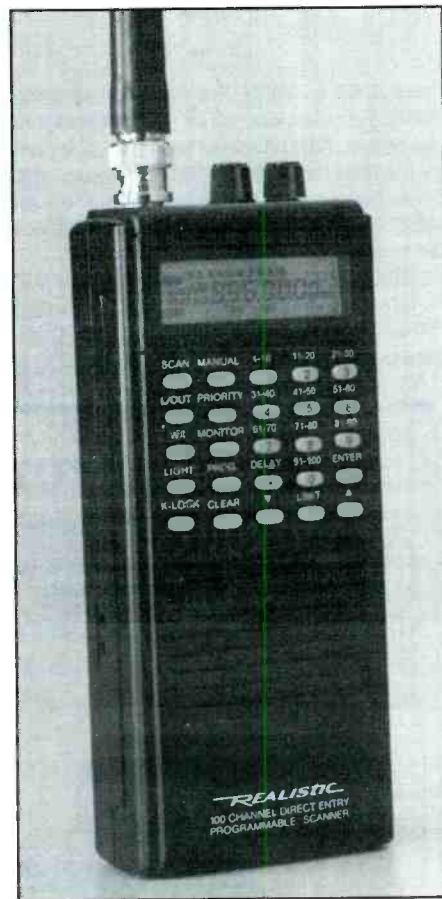
The IF frequencies are 10.8 MHz and 450 kHz. Crystal and ceramic filters cut adjacent channel interference.

The PRO-46 has a handy Weather Band access button that scans the 7 NOAA VHF channels for in-range stations transmitting important weather information. Other features include search/scan, one-hour memory retention without batteries, channel lockouts, and easy-to-read LCD display with operational status info provided.

PRO-46 comes with a detachable (BNC connector) rubberized whip. It is powered by 4 AA-type batteries or a 9VDC adapter. You can also use rechargeable NiCd batteries.

The PRO-46 weighs in at less than 8 oz. It is about 6 in. tall, 2.5 in. wide, and 1.5 in. deep.

We found that the PRO-46 was easy to use, and the instructions provided with the unit were adequate for their purpose. Programming and all operations are rather straightforward. The keyboard is plainly marked and you could figure out how to



The Realistic Patrolman PRO-46.

operate the unit in a few tries even if you didn't have the manual.

The PRO-46 performed like a trooper, bringing in stations on all bands with clarity and good quality. The PRO-46 is well-designed, well-built, and good-looking. One minor point; there is a place on the back of the case to attach a belt clip, although one wasn't supplied with the unit. We thought that one could have been included with this fine handheld.

Reviewed by POP*COMM Staff.

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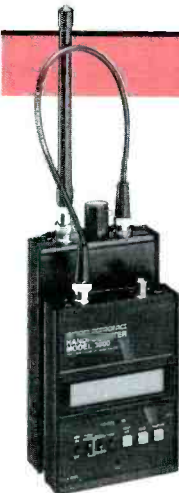


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P101- Low-Pass probe attenuates RF noise from Audio frequencies. Has two stage low pass filter. \$ 20

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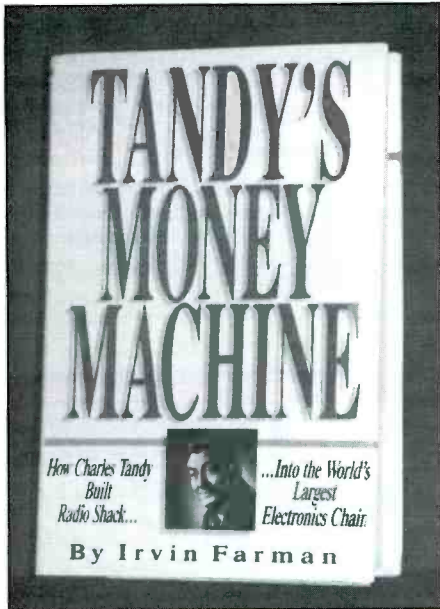
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Good Example

We love to learn the details of a personal success story, especially when the person involved has been active in an area with which we are somewhat familiar. When a 464-page hardcover book entitled *Tandy's Money Machine*, by Irvin Farman, appeared, we immediately recognized the name Tandy—Tandy as in Radio Shack Division of Tandy Corporation.

The thing is that Tandy is now a major corporation, this mesmerizing book reminds us that there was a man who made it all happen. That would be Charles Tandy, dreamer, promoter, and consummate salesman. This book relates his story.

Tandy was not a man who "found himself" in middle life. When he was only 10 years old, he realized that the strips of scrap leather from his dad's shop must have some value. He figured out how to braid the thongs into whips. He then went into business selling the thongs to his schoolmates, along with lessons on how they could turn them into whips.

By the time he moved on into high school, he had advanced his business career by manufacturing ladies' belts from his father's scrap leather. During college and graduate school, he worked as a salesman. Selling was in Tandy's blood.

After a stint in the military during World War II, Tandy converted his father's shop into a successful leathercrafts business. That business was sold, then re-acquired. He turned it into the Tandycraft chain of arts and crafts stores.

Thirty years ago, Tandy acquired Radio Shack. At that time, it was a floundering string of retail electronics stores in Boston.

Radio Shack now operates 7,000 stores and is the world's largest electronics chain.

Charles Tandy died in 1978 at age 60. Executives remember how harsh he could be at times when he felt that tactic necessary. At other times he used his enormous charm to motivate. Either approach did the trick very effectively, and he knew just when and how to switch from one mode to the other to get things done.

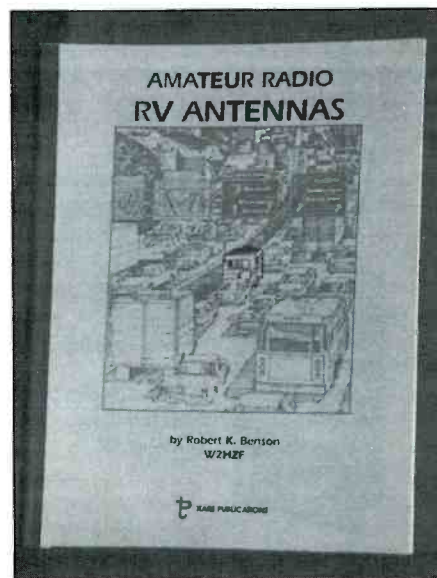
Here is a well-written and engrossing book about an unforgettable person who made his mark on electronics. There is an 8-page black and white photo section on glossy paper.

Tandy's Money Machine is \$19.95 from The Mobium Press, 414 Orleans, Chicago, IL 60610-4487. The ISBN number of the book is 0-916371-12-3.

On The Move

In case you aren't familiar with the initials RV, they stand for Recreational Vehi-

cle. A typical RV is a motor home, a trailer, 5th wheel, camper, even certain trucks and cars. When you hear of RV's, you think of vacation and retirement activities. These days, you should also think ham radio because the two things go so well together, or at least they can if one knows the best way to take a ham rig along in an RV.



A 60-page book called *Amateur Radio RV Antennas*, by Robert K. Benson, W2HZF, explains those special installation problems and techniques uniquely related to antennas in RV's. If you have ever mounted an antenna on the roof of an RV and then had it knocked off by the first low highway overpass, you will appreciate that

there are things that need to be considered before you roll out on the open road. You also need to consider whether your RV has a metal or Fibreglas body. You want lightning protection, to rid yourself of ignition noise, and to be able to use campground antennas, as well as various other things. This book covers these matters, and also discusses small boat hamming.

Amateur Radio RV Antennas is \$14.95 from Tiare Publications, P.O. Box 493, Lake Geneva, WI 53147. Add \$2 shipping and handling (\$3 foreign). VISA/MC welcome. Phone (414) 248-4845.

Inside Information

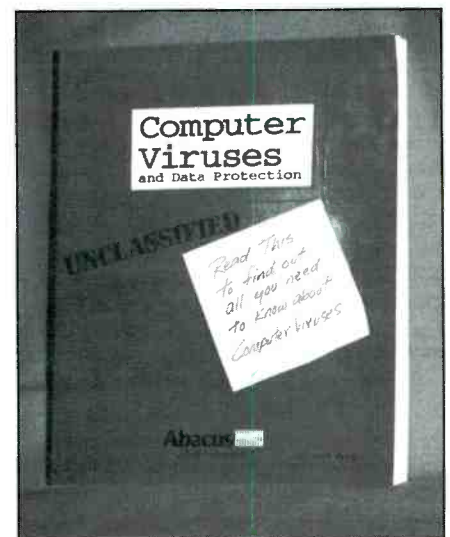
Remember the "Michaelangelo" computer virus that caused terror around the world in March of '92? Computer viruses are real, and they are frightening. Problem is they can destroy an enormous amount of valuable data as well as cause computer systems to crash.

Computer Viruses and Data Protection, by Ralf Burger, is a big 365-page book that thoroughly and expertly explains computer viruses, how they work, and how to protect your valuable data from destruction by viruses.

Burger's book tells how the insidious virus is able to quietly gain entry into a computer. Several example program listings are provided showing how a virus can infect a PC.

Some of the contents include a description and definition of computer viruses. Programs similar to viruses. Worms. Logical viruses. Trojan horses. Sleeping viruses. Compression virus. Fred Cohen's contradictory virus, and his evolutionary virus.

Burger discusses the dangers viruses pose, and efforts to trace them. How igno-



rance of viruses may be more of a danger than viruses themselves. He then provides details of viruses such as the Christmas virus, Israeli PC virus, Vienna virus, Pakistani brain virus, Amiga viruses, Crasher viruses, Overwriting and Non-Overwriting viruses, Memory resident viruses, Calling Viruses, Hardware viruses, Buffered viruses, Hide and Seek viruses, Live and Die Viruses, Assembly language viruses, the Program virus, the Rush Hour virus, the VP/370 virus, Pascal viruses, BASIC viruses, Batch file viruses, killer programs, industrial and espionage programs. More, too.

The book explains the many paths used by viruses to enter a computer, and how to effectively protect all possible points of entry. He even points out that some paths of entry are so clever that they utilize a person's own inept efforts at protection as the way to slip right in!

Burger discusses passwords, and problems with passwords. What about new methods of passwords, and virus hunter programs? What about Checksum viruses, and encryption software? How about protecting your hardware.

The book even tells what you do if your computer is infected with a virus. There are many actual programs in the book. These include virus demo programs, detection programs, as well as numerous protection strategies.

There is much more in this fine and comprehensive book on computer viruses and protecting data. *Computer Viruses* is \$19.95, plus \$3.50 shipping/handling (\$4.50 to Canada) from CRB Research Books, Inc., P.O. Box 56, Commack, NY 11725. Residents of NY State please add \$2 tax. VISA/MC welcome. Phone orders: 1-(516) 543-9169. 24-hour FAX order line: 1-(516) 543-7486.

In Addition...

An announcement advises of the availability of a book entitled *Chicksands: A Millennium of History*, by William C. Grayson. This is described by the publisher as a first-hand true account of radio and telephone eavesdropping for COMINT and COMSEC during World War II at the secret RAF/USAF Chicksands listening post in England. The author spent six years at that facility as a high-level officer where German and Italian communications were under close electronic surveillance. There are photos and drawings included in this 350-page book, according to information from the publisher. After the war, the author spent nine years with the NSA. Sounds fascinating, but that's all the information we have on this book. The book is \$21.95 (postpaid) from Shefford Press, P.O. Box 4053, Crofton, MD 21114. Phone (301) 805-7279.

The *Cipher-Ace* series of computer programs are designed to aid the pro or amateur codebreaker delve into the world's

classical ciphers. Included are substitution, transposition, checkerboard, morse, and others. The programs are suitable for beginners or experienced users. A common screen programming format offers simple menu driven routines for disc access, saving of work-in progress, help screens, stats analysis, and more. Crypto data entry is via keyboard or ASCII text files. This will run on all MS-DOS compatible machines. They require at least 512K ram and a floppy, and were compiled in Forth-83 language.

Mono and color are supported. Customization or new programs are available at reasonable rates. The *Cipher-Ace* series is available as 5 cipher types per volume. The current 30 types are on 6 volumes at \$35 per volume, plus \$4 shipping (\$8 elsewhere). Discs are 360K type. Further info on these programs via a flyer is available for a SASE. Orders are accepted by mail (only) prepaid with US\$ checks or Postal Money Orders to: Charles W. Stewart, 1197 Pickerel Circle, Orlando, FL 32839.



World's Most Powerful CB and Amateur Mobile Antenna*

**Lockheed Corp. Test Shows
Wilson 1000 CB Antenna Has
58% More Gain Than The
K40 Antenna (on channel 40).**

In tests conducted by Lockheed Corporation, one of the world's largest Aerospace Companies, at their Rye Canyon Laboratory and Antenna Test Range, the Wilson 1000 was found to have 58% more power gain than the K40 Electronics Company, K40 CB Antenna. This means that the Wilson 1000 gives you 58% more gain on both transmit and receive. Now you can instantly increase your operating range by using a Wilson 1000.

**Guaranteed To Transmit and Receive
Farther Than Any Other Mobile
CB Antenna or Your Money Back**
New Design**

The Wilson 1000 higher gain performance is a result of new design developments that bring you the most powerful CB base loaded antenna available.

Why Wilson 1000 Performs Better

Many CB antennas lose more than 50% of the power put into them. The power is wasted as heat loss in the plastic inside the coil form and not radiated as radio waves.

We have designed a new coil form which suspends the coil in air and still retains the rigidity needed for support. This new design eliminates 95% of the dielectric losses. We feel that this new design is so unique that we have filed a patent application on it.

In addition, we use 10 Ga. silver plated wire to reduce resistive losses to a minimum.

In order to handle higher power for amateur use, we used the more efficient direct coupling method of matching, rather than the lossy capacitor coupling. With this method the Wilson 1000 will handle 3000 watts of power.

The Best You Can Buy

So far you have read about why the Wilson 1000 performs better, but it is also one of the most rugged antennas you can buy. It is made from high impact thermoplastics with ultraviolet protection. The threaded body mount and coil threads are stainless steel; the whip is tapered 17-7 ph. stainless steel. All of these reasons are why it is the best CB antenna on the market today, and we guarantee to you that it will outperform any CB antenna (K40, Formula 1, you name it) or your money back!

*Inductively base loaded antennas
**Call for details.

Lockheed - California Company

A Division of Lockheed Corporation
Burbank, California 91520

Aug. 21, 1987

Wilson Antenna Company Inc.
3 Simset Way Unit A-10
Green Valley Commerce Center
Henderson, Nevada 89015

Subject: Comparative Gain Testing of Citizen's Band Antennas
Ref: Rye Canyon Antenna Lab File #870529

We have completed relative gain measurements of your model 1000 antenna using the K-40 antenna as the reference. The test was conducted with the antennas mounted on a 16' ground plane with a separation of greater than 300' between the transmit and test antennas.

The antennas were tuned by the standard VSWR method. The results of the test are tabulated below:

FREQUENCY (MHZ)	RELATIVE GAIN (dB)	RELATIVE POWER GAIN (%)
26.965	1.30	35
27.015	1.30	35
27.065	1.45	40
27.115	1.60	45
27.165	1.50	41
27.215	1.80	45
27.265	1.75	50
27.315	1.95	57
27.365	2.00	58
27.405	2.00	58

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POWER GAIN
THAN THE
K40**

Individual test results may vary upon actual use.

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TELEPHONES ENROUTE

BY TOM KNEITEL, K2AES

WHAT'S HAPPENING WITH CELLULAR, MARINE & MOBILE PHONES

We continue to receive mail and newspaper clippings about the possibilities of handheld cellular phones being a health risk. The question was raised when a man came forward and charged that his wife had died of a brain tumor that was located directly adjacent to the location of the antenna of the handheld cellphone she used of ten, and for long periods.

Soon after this man appeared on national television to announce a lawsuit against several cellular manufacturers, several other people turned up in the national media with complaints of similar medical problems they claimed were the result of using handheld cellulars.

The cellular industry rejected all such claims, pointing out that there was no proof that tied their products to the medical problems. They said that there are more than 10-million cellphones in the USA and there have been no other similar medical complaints related to their use. Also, people who don't even use cellulars develop brain tumors. The cellular industry suggested that a study be conducted to see if there was basis to claims of a health risk.

Handheld cellphones use only a fraction of 1-watt in transmit mode. In the print and broadcast media of which I was aware, it had not been pointed out that handheld VHF and UHF transceivers using far more power than handheld cellphones have been used for a long time in many radio services without any known or apparent health risks. In the 800 to 900 MHz range, which is the frequency range of the cellulars, handhelds are also used by business and public safety radio services, some cordless phones, airline air/ground phones, and 902 MHz band hams, among others.

Everyone is exposed daily to low level energy fields in home and workplace environments. Computers, TV sets, microwave ovens, fluorescent desk lamps, electric blankets, electric shavers, and many common electric household appliances are included in a long list of things that produce energy fields. Long term and continuing exposure to such low level environmental energy fields at extremely low frequencies (60 Hz) has been implicated in health problems.

However, strictly on the basis of the present emotional media reports, it isn't time to panic about the specific health risk claims now being made about the occasional use of the low-powered 800 MHz handheld cellphones. There haven't been any questions raised about possible health risks of bagphones or those installed in vehicles because their antennas aren't located next to people's heads.

A controlled scientific study by the gov-



PrivaFone introduced this cellular phone scrambling system that is simple and inexpensive. Photo shows the part of the system that connects to the car-phone.

ernment is certainly called for regarding the handhelds. Unfortunately, conclusive results would take years to be forthcoming. In the meantime, persons who are concerned about possible health risks of UHF handheld transceivers should keep transmitting time down to a minimum.

No matter what the risks of casual handheld cellphone use might eventually turn out to be (if any at all), I'd bet they prove less than the health risks we all endure from years of breathing in the smoke of other people's cigarettes.

This Is Why They Don't Want You To Listen

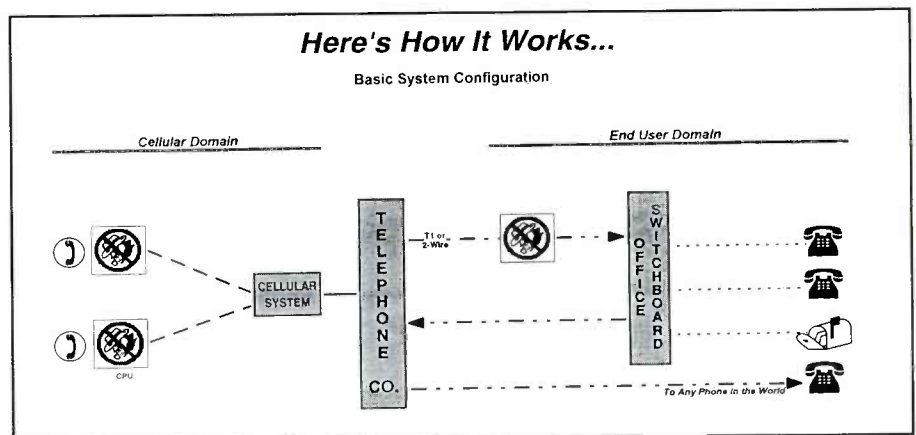
Law enforcement people will tell you that virtually every drug dealer they bust

has a pager and/or a cellular. These are the part of the mandatory tools of the trade for this industry, and yet neither the FCC nor any other branch of the government has acted against the licensees who permit their facilities to be used for these purposes. In fact, Congress and the FCC are doing everything they can to protect the communications privacy of these calls and are arranging it so that nobody can listen in. Why? We wonder when we receive things like the following item.

Kenneth Mosinski, of Reseda, Calif., sent me a news clipping that told how, in Westminster, Calif., a suspect was arrested after a local resident overheard a cellular conversation concerning a possible marijuana deal.

The Associated Press story related how an anonymous person phoned the local police and told them what he was hearing on his scanner. He provided the police with information on the location of the suspected transaction. When the police arrived, they observed two men, and it looked like they were conducting a drug transaction. When they were searched, police found between a quarter and a half pound of marijuana on one of the suspects. He was arrested for investigation of possession and sale of marijuana. The other man was arrested on an outstanding traffic warrant unrelated to the marijuana matter.

This is neither the first nor only time something like this has transpired after some good citizen overheard something nasty on a cellular. The cellular industry, however, exists in a unique and curious state of grace regarding the privacy of the traffic it handles. At least two federal laws attempt to forbid the public from listening to these calls.

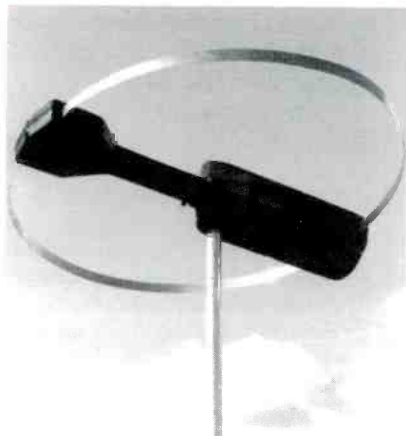


Here's a basic system configuration diagram of how PrivaFone works. The scrambler can also be switched off to allow phone to be used "in the clear" when you don't care if anybody is listening in.

STEP UP YOUR SHORTWAVE SET UP.

ISOLOOP 10-30 HF PORTABLE ANTENNA.

This is the one that gives you freedom of speech, whether you have to deal with restrictive covenants at home or in your apartment or condo, or if you are traveling in your boat, car, or RV. It features 150 watts, continuous coverage from 10 to 30 MHz, narrow bandwidth to suppress out-of-band signals. The IsoLoop antenna comes fully assembled with no mechanical joints. There is simply no better value in antennas!



PK-232MBX DIGITAL MULTI-MODE CONTROLLER.

It can receive eight different types of data signals, including Morse code, Baudot, ASCII, Time Division Multiplex (TDM), WEFAX, NAVTEX, Packet and AMTOR. Also featured is SIAM which automatically identifies many types of digital signals, excellent software support for PC compatibles, Macintosh and Commodore 64 & 128 computers. This unit is essential for the serious digital listener.



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To connect with the AEA dealer nearest you or for product sheets, call (800) 432-8873.



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Furthermore, just ask the government what action it plans on taking against the cellular carrier whose facilities were used for the Westminster call. Ask what action has ever been taken against any cellular service supplier for the use of its facilities as an accessory to drug trafficking or other felonious activities. See what answer you get. If a person had a broadcast, ham, or Business Radio license and used the equipment for any reason directly related to criminal activity, wouldn't they be fined, and/or their license become history, as soon as Washington got wind of it?

Chew on that a while and if you come up with any answers, please let me know.

In Canada, Communications Minister Perrin Beatty announced measures, including legislation, relating to cellular privacy. The government introduced in Parliament amendments to the Radio Communica-

tions Act that specify that cellular interception is illegal, that is an offense to divulge information obtained via cellular eavesdropping. Offenders will be liable for fines, and eavesdropping victims can sue the eavesdroppers for civil damages. Service providers will have to offer effective and affordable scramblers as an option. Also, phone companies are exploring the feasibility of ensuring that any call made through a cellular facility is identifiable by an audible signal on the line. As this column is being written, these things had not been finalized into law.

Get Your Own Privacy

I have always opposed our government's policy of legislating communications privacy into existence. It doesn't thrill me to see it taking place in Canada, either. Still, I have never had problems with individual com-

munications users taking steps to secure their own communications privacy. This is how comms privacy should be attained.

A system that is newly available to individual cellular users is called *PrivaFone*. This is comprised of two units, one on the cellular phone, and one on any landline phone being called or that is calling the cellular. The car phone user can install one unit in the home to achieve privacy on those calls.

For business calls, if a unit is installed at the office switchboard, the carphone can then be patched through the switchboard to any other phone or voicemail source in the office or the world, and the other party doesn't need a scrambler. Yet the over-the-air cellular link of the call between the car and the office is scrambled. Additional *PrivaFone* scramblers can, optionally, be furnished to be used with non-switchboard numbers.

Unauthorized listeners can't copy the scrambled signals. Signals come through a scanner sounding like a high-pitched garble. With the *PrivaFone*, the privacy feature may be switched off, permitting regular calls to be passed "in the clear" to unsecured phones.

PrivaFone is simple and uncomplicated to use. Considering that some people keep demanding communications privacy on their cellars, this is an effective and inexpensive convenience in a nation filled with 10-million scanners. The system retails starting at \$750, and has been initially marketed through dealers in the Washington-Baltimore area, and by calling (410) 494-0144. The plans are to make *PrivaFone* locally available through dealers in other areas as the year progresses.

The manufacturer of this clever device is *PrivaFone*, 1122 Kenilworth Drive, Suite 217, Baltimore, MD 21204. If you contact them, please be sure to tell them you read about it in *Popular Communications*.

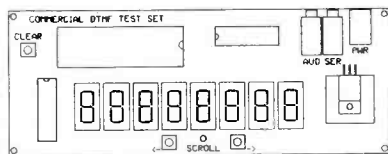
Save Some Money

We haven't seen a copy of this, but the author sent a press release on a book that could be very worthwhile. The book is called *Tele-Communications Techniques* by David A. Berger. The press release says that it has "tips on how to save money on Michigan Bell and cellular phone charges." The description of its application to cellular is sketchy, but the implication is that the book may cover the use of cellars in all areas of the USA, and not just Michigan. I don't know. It's hard to evaluate any book using only a brief and vague press release. If you want to pursue this, check with the author, David A. Berger, 101 North Main St., Suite 150316, Ann Arbor, MI 48104. Phone (313) 741-4835.

See you in July. Please write with any thoughts or clippings relating to cellars, radiopaging, or other personal comms. Also seeking information on new equipment from manufacturers.

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CIRCLE 83 ON READER SERVICE CARD

NEW PRODUCTS

REVIEW OF NEW AND INTERESTING PRODUCTS



Hi-Fi Sound From Scanner Or Shortwave

Electron Processing announced a device to greatly improve scanner and shortwave reception. The AFBOX-1 allows you to connect your receiver to an existing Hi-Fi stereo system to extract the best fidelity and clearest sound obtainable from your scanner or shortwave receiver. By connecting to your stereo system scanner listeners can often understand previously unintelligible background conversations. Shortwave listeners can finally enjoy the full fidelity that the broadcasts were meant to be heard with.

Connection to the external speaker jack of the receiver, and the Hi-Fi auxiliary input jacks are easy with the supplied connectors. An isolation transformer and passive attenuator assure clean, noise and hum free sound on both right and left channels. The AFBOX-1 can be connected to a VCR for up to 6 hours of quality recording.

The AFBOX-1 is available for \$30. There is a \$5 shipping/handling charge. To order or for additional information, contact: Electron Processing, Inc., at PO Box 68, Cedar, MI 49621 or call (616) 228-7020.

Bandpass Filters

Dunestar Systems released their line of transceiver bandpass filters. These filters are designed for use with HF transceivers providing suppression of I.M.D., phase noise, and harmonics on transmit, as well as protecting the receiver from out-of-band products. Placed in-line between transceiver and antenna or amplifier, they provide outstanding band-to-band isolation that is needed for today's crowded RF environment, whether in the close confines of Multi-Multi and Multi-Single Contest Stations, or neighbor-to-neighbor

in urban and suburban areas. Harmonic suppression afforded by the Dunestar's tailored bandpass filters, is very effective in reducing or eliminating TVI problems. Enclosures are all aluminum, 1/8 inch wall, with excellent mechanical and electrical characteristics.

The 500 Series is a 5 band DC remote switched system featuring individually selectable bandpass filters for 80, 40, 20, 15 and 10 Meter bands standard (Model 505). With the built-in direct bypass and 'failsafe' circuit, the unit can be left in-line even when used on WARC bands or for general coverage receiving. For contesting, the 'failsafe' circuit provides for continued operation even in the event of a loss of power to the unit. LED indicators show active section.

Dunestar has designed the 500 series to track with existing antenna switching



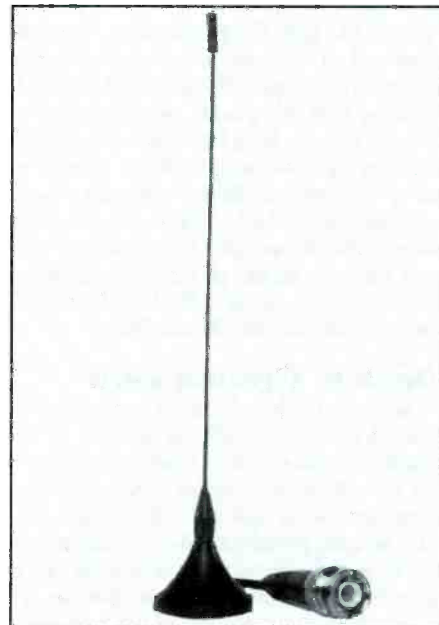
schemes or transceiver band switching interfaces. Simple closure to ground activation allows maximum flexibility to integrate the multi-band filter into existing control systems. Application examples are included with the installation directions. Operates on 12VDC. Size: 2.0 x 5.0 x 7.25 inches.

The 100 Series are single-band filters of the same design used in the multi-band unit. It is also available in 80-10M versions standard (Model 101). Size: HWD 2.0 x 3.0 x 1.25 inches.

The Model 505 Multi-band filter is \$150. The single band Model 101 is \$31.50. Custom frequencies are available in both series. For additional information, contact: Dunestar Systems, PO Box 37, St. Helens, OR 97051. (503)

"Kiss" Mobile Antennas

PRO-AM, a division of Valor Enterprises, announces a trio of designer-type VHF/UHF mobile antennas destined to capture the hearts of radio amateurs



everywhere: the 2 meter MM144, 70 cm MM450, and dualband MM240. These new ultra trim magnet mount antennas feature a slender black chrome whip and small candy kiss-size base that is barely visible on an auto's roof. The 1 1/8 inch diameter base is fitted with a newly developed titanium magnet which is several times stronger than a regular Alinco magnet.

PRO-AM's 19 inch tall MM144 2 meter and 6.5 inch tall MM450 70 cm monoband antennas use always-popular 1/4 waved whips for good range and ease of slipping into parking garages. The 19 inch tall MM240 2m/70cm dualband antenna uses a 1/4 wave radiator for 2m and 5/8 wave radiator for 2/1 dB gain on 70cm. All models are fully assembled, pretuned, and supplied with 8 feet of RG-174 coax plus BNC connector.

They cover 144-148 and 430-470 MHz with low SWR, and handle up to 25 watts of power. These new micro magnet antennas are made in the U.S.A. and built to last through many years of rigorous mobile service. They are available from amateur radio dealers nationwide.

PRO-AM's new "Kiss" antennas are made in the U.S.A., weatherproof, and top quality throughout. They are backed with PRO-AM's one year warranty. The suggested retail prices are: MM144 \$42.60; MM450 \$42.60; and MM240 \$42.60. For more information, contact PRO-AM, a division of Valor Enterprises, 185 West Hamilton St., West Milton, OH 45383. Telephone: (513) 698-4194, or circle 104 on our Reader's Service.

27 MHz COMMUNICATIONS ACTIVITIES

For June, let us introduce you to the Realistic TRC-226 CB transceiver. This full-powered 40-channel transceiver is Realistic's current top-of-the-line CB handheld. Holding that title causes the TRC-226 to offer many excellent features, including an S-meter that also reads battery condition; an ANL, a ceramic filter to increase receiver selectivity, hi/lo transmitter power switch, AC power and DC power. Operates from 8 alkaline or 10 NiCd batteries. The TRC-226 has an MSRP of \$139.95, and is available from Radio Shack.

Back to Ground Zero

When 27 MHz CB first became authorized, back in late 1959, there was no immediate general rush to market equipment for this unknown market. Early sets that came into wide use were the Globe CB-100 and the Heathkit CB-1 ("Lunchbox"), but even they came in on the heels of the International Crystal "Citizens Bander."

International Crystal had this transceiver ready to go the day 27 MHz was opened to CB'ers. It was big, ugly, and not at all versatile. In CB's earliest days, it was also the only radio available, so nobody even realized these things. CB operators loved this set, giving it the nickname of "the Tombstone."

Made in Oklahoma City, the "Citizen Bander" offered single channel (Channel 9) operation. To change to another channel, the cabinet had to be opened up and two crystals exchanged. It had a single-conversion superhet receiver, but no squelch, and no S-meter either. It didn't even have push-to-talk. The operator used a front-panel lever to switch from transmit to receive. A light on the front panel showed if any power was getting into the antenna.

There was a carrying handle, but it was not intended for battery operation as a



The Realistic TRC-226 is a handheld with numerous features.

portable. You could operate the units from 6 or 12 VDC cars, or from 110 VAC. The microphone was connected by an RCA phono jack. The antenna connector was on top of the case and would accept a PL-259. Operating instructions were on the front panel of each set.

These were popular, and many were sold. After about a year, International Crystal took this primitive unit off the market, and began bringing out many innovative CB designs. For years they were a leading CB manufacturer, as noted in the April issue.

Out of Band Comment

Bill Pittman, SSB Network member SSB-114C, of New Port Richey, Fla., wrote to advise that he does a lot of mon-



Because of its distinctive shape, CB'ers of late 1959 nicknamed one of the first 27 MHz radios "The Tombstone."

itoring on the frequencies above the authorized CB channels. He notes that although there is considerable illegal hobbying there, there are also authorized services around the world using this band.

He particularly mentioned that on 26.471 MHz, he monitored Andrews Air Force Base on USB (and later switching to LSB) exchanging comms with a/c SAM-29. Others have also monitored Andrews on this frequency. In view of the fact that at least one hobby net likes to use 26.470 MHz, it would be prudent for hobby users to try to stay at least 5 kHz clear of frequencies known to be actively in use by authorized stations.

Bill further suggests that there is a possibility that Andrews may also use 26.515

THE OUTBACK OF AUSTRALIA RELIES ON THE FLYING DOCTOR

A
M
O
S

"A MANTLE OF SAFETY"

INTERNATIONAL

THE ROYAL FLYING DOCTOR SERVICE OF AUSTRALIA

SCHOOL OF THE AIR MEDICAL AID

is "HELPING TO KEEP THE DOCTORS FLYING"

The AMOS group (from Australia) is a CB organization that works in cooperation with the Royal Flying Doctor Service of Australia. A member passed along their QSL.

7 5

GRUPPO RADIO ITALIA

ALFA TANGO

INTERNATIONAL DX GROUP
DIVISION FRANCE

QSL SPECIALE

PARIS

QTH →

14-AT-545

Op. FRANCK

"Calling all over the world"

Frank, 14-AT-545, in Paris, France, sent us his QSL and commented that he's a POP'COMM subscriber and can't get enough of "CB Scene."



"The Black Sheep" snapped this photo of Fran's Star Ranch, Beatty, Nevada. Difficult to see in the photo, but there's a large CB antenna sticking up over towards the right of the building.

MHz, although he has not personally heard activity there. He has logged MARS stations on 27.9925 MHz.

All Ears

Carlisle Area REACT, in Pa., doesn't limit its motorist aid to taking calls for assistance on CB Channel 9. This REACT group has let the new technology work for them. Many of their team members have cellars. When they see a situation on the highway, they use their cellars to dial 9-1-1 for the police. Dialing 9-1-1 from a cellular is usually a free call, and lets the REACT team provide community service faster than ever without the need for going through their own base station.

CB motorists without cellars, of course, can still call the REACT team on Channel 9, and their situation will be reported to 9-1-1 by the base station dispatcher. The Carlisle Area REACT group has made up bumper stickers advising of the new cellular capabilities. Good idea!

Here & There

A member of the AMOS group in Australia advises that their organization is the support organization for the Royal Flying Doctor Service of Australia. The RFDS furnishes medical assistance to isolated residents of the Australian outback. Summoned by two-way radio, the RFDS sends doctors to remote areas to set broken bones, deliver babies, and provide other necessary medical services.

The address of AMOS International is P.O. Box 351, Broken Hill, N.S.W., 2880, Australia.

A reader whose letter is signed *The Black Sheep*, mentions that the very small town of Beatty, Nev. has only a few buildings and is known as "The Gateway to Death Valley." On Highway 95, just outside of "downtown" Beatty, there's a place

called "Fran's Star Ranch." This happens to be a legal bordello with its own landing strip. Our correspondent observed that the roof at Fran's has a large antenna.

Checking out the purpose of this antenna, he learned that in Fran's parlor there was a CB radio constantly monitoring CB Channel 19. We have previously received several other reports about this place. The only conclusion we can come to is that Fran is an active CB'er.

The Citizens Radio Alliance (CRA) is a group of CB operators in the general area of Lansford, Pa. The purpose of the club is to provide public service to the community, and most of the CRA members are also members of REACT. If you live in N.E. Pennsylvania, you might wish to see if you can work with CRA. Contact Franklin B. Klock, Citizens Radio Alliance, P.O. Box 251, Lansford, PA 18232.

A reader writes that he is on active military duty and has a (legal) CB transceiver which he normally uses in SSB mode on Channels 37-L and 38-L. Problem is that when he transmits, he has TVI, and also he comes through on his neighbor's (hard-wired) telephone. Some neighbors tell him that they have heard him at times on their FM radios. He experiences none of this interference on his own TV or telephone, but he has to live in peace with his neighbors. In addition, being located on government property means that someone could easily complain and cause someone to come around and tell him to shut down his CB'ing. He had to obtain permission to put up his outside CB antenna, and he fears that permission could be withdrawn.

Anybody with similar experiences and some thoughts on a solution is invited to contact this operator. He is: James Carter, 14 Intrepid Ct., Newport, RI 02840.

Catch you on the flip-flop. Send us your questions, opinions, photos, and 27 MHz QSL's. ■



In Pennsylvania, members of Carlisle Area REACT use special bumper stickers to promote their cellular capabilities. (Photo by Jeffrey Lowe, *The Sentinel*.)

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SCANNING VHF/UHF

BY CHUCK GYSI, N2DUP

MONITORING THE 30 TO 900 MHz "ACTION" BANDS

Vacation time is here, and that usually means carrying along the handheld scanner while visiting amusement parks, national and state parks and special events. Don't forget to go into the search mode while you are on vacation. You may have a list of frequencies that are in use where you are visiting, but you may find newer and more exciting channels if you go into the search mode. The business band areas of 151.625-151.955, 154.515-154.625 and 461-465 MHz should result in interesting finds just about anywhere you visit.

Rod Souza of Maui, Hawaii, writes in to say that the Maui Police Department is expected to start using mobile data terminals and encrypt 800 MHz communications within two to three years. He wants to know if there are any tricks to monitoring the data terminal traffic. Additionally, Rod wants to know whether there are any descramblers available to decode encrypted communications.

First, since mobile data terminals have been used on a wide basis in the past decade and a half, I have yet to run across someone who has been able to successfully monitor these data communications being sent by public safety computers to mobile terminals in vehicles. For the most part, each system is proprietary and you would need software put out by the manufacturer of the mobile terminals in order to do anything with the information captured off the air. In other words, forget about trying to make any sense out of all those grinds over the air. Most are status data anyway, such as the mobile terminal sending a signal to headquarters saying the unit has arrived on the scene, is in service, etc. However, a lot of messages are passed along over the terminals, too.

On the encryption, you can probably forget about that, too. Most 800 MHz systems employ digital encryption that cannot be decoded only because there are so many possible combinations of encryption. While it used to be possible to unscramble simple voice-inversion scramblers (where it sounds like Donald Duck on the air) with an add-on device, the Electronic Communications Privacy Act of 1986 made possession or sale of such devices illegal and you just cannot go out and buy one of these units today.

James Leidig of Rock Island, Ill., says that he wants to hear the dispatcher for Illinois State Police District 7 in East Moline, Ill. He says that he can hear only the cars and not the dispatcher. Basically, in the Illi-



This is the listening post of Michael Barclay of Austin, Minnesota. A handheld scanner makes it easy to take scanning on the go.

nois State Police radio system, dispatchers transmit on one frequency and the cars transmit on another frequency, at least on low band VHF. In East Moline, the dispatcher transmits from the base station on 42.34 MHz, while the cars transmit back to the dispatcher on 42.84 MHz. This means that you need to be tuned into both frequencies to hear what's going on. It's best that you don't put a delay on these frequencies either because that will only delay you from hearing the response on the other frequency. Statewide, Illinois troopers use 42.50 as a car-to-car channel, and the East Moline station also uses 154.845 for some routine communications, both for cars and the dispatcher.

Alan Millmaker, KA9GUL, of Centralia, Ill., says he uses a Uniden Bearcat 760XLT scanner. He says that he doesn't think it makes sense for police agencies to scramble their signals while state police in surrounding areas such as Illinois, Missouri and Indiana don't scramble. He says that Centralia police used a scrambler a long time ago, but gave it up when they learned that a lot of folks apparently used descramblers to hear the scrambled messages. Actually, at least in Illinois, there are some state investigative agencies that use digital encryption for their communications, notably the Division of Criminal Investigation.

What do you think about encrypted communications? Do you think it makes sense for an agency to try to keep any of their communications private? Do agencies abuse the system when they use encryp-

tion to call in their sandwich orders for lunch? (Yes, I used to know of one such police department.) I'll try to use your comments here.

Brian Champa of Frazer, Michigan, owns a Realistic Pro-2006 scanner and likes to listen to police, fire and air-to-ground phones on 454.775 and 454.900 in his area. He says that he's heard several notables using these frequencies. The ground stations operate in the range of 454.700 to 454.975 MHz in 25 kHz steps, while the planes transmit to the ground stations 5 MHz higher, 459.700 to 459.975 MHz. Even if you don't live near a ground station, you can hear plenty of planes on the 459 MHz band just about anywhere in the United States. These frequencies are used primarily by private planes and not commercial airlines. The phones on commercial airlines transmit in the AM mode in 6 kHz steps in the 894-896 MHz band.

Michael Barclay writes from Austin, Minnesota, with a few questions and frequencies. He says that Austin police and the Mower County sheriff use a radio referred to as a "beat radio" and he wonders what it is and whether it is on a different frequency. I can't answer that. Do they say "Switch over to the beat radio" or do they say that they will be on their beat radio? It may be as simple as the officer or deputy using a portable radio when he or she is outside the patrol car. In addition, he says that shift supervisors talk with the dispatcher on another radio when they want to discuss something they don't want to put out over the regular channels. He wonders what that frequency might be. Well, in the listings I see for Austin and Mower County, there are several possibilities. Perhaps they are switching over to one of the public works frequencies licensed for local government service. There also is a UHF repeater licensed to your town. Maybe they are using the county road department's repeater? You'll have to check all these possibilities each time you hear the officers switch over to the so-called "other radio." It might even be as simple as a CB radio, which some departments certainly use. Look around, play detective yourself, and you will find them. Search through the bands real fast when you hear them switch over.

Here are some frequencies Michael sent in for the Austin, Minn., area: 155.130, Austin police; 155.640, Mower County sheriff; 155.475, statewide mutual aid;

155.370, point to point; 154.920, state patrol dispatch; 158.910, state patrol mobile; 155.385, area ambulance; 154.145, Austin fire; 158.835, Austin local government; 154.100, Austin local government; 152.360, Austin Cab; 146.730, ham repeater; 155.340, St. Olaf Hospital.

Chad Cessna of Ebensburg, Pennsylvania, says he has a Uniden Bearcat 205-XLT handheld scanner hooked up to an outside antenna for his monitoring post. He seems to be having trouble finding a frequency used by the Cambria County sheriff in Pennsylvania. He's tried listening on several frequencies that were labeled as being used by the sheriff, but hasn't heard anything yet. I know that the sheriff in a lot of Pennsylvania counties don't use radios mainly because they handle primarily prisoner transportation and courthouse security. However, if they are indeed using radios, there seem to be a lot of frequencies licensed to Cambria County according to the frequency listings I see, and you should punch in all those frequencies that you haven't figured out usage for yet. Don't overlook the obvious, too, as they may just be operating on one or more of the county police frequencies in Cambria County with a unique set of radio numbers. You may need to do some searching around, too, particularly if they have a new radio system that hasn't shown up in frequency directories yet.

Here are some frequencies Chad passed along for his area of Pennsylvania: 33.70, Cambria County fire dispatch; 33.48, Cambria County fire operations; 33.46, Cambria County fire central operations; 155.250, Mainline police F1; 453.600, Cambria County police F6; 453.500, Cambria County police F7; 453.550, Cambria County police F8; 39.28, Cambria County detectives; 154.665, Pennsylvania State Police base; 158.910, Pennsylvania State Police mobile; 154.755, Pennsylvania State Police car to car; 155.175, Cambria County Ambulance dispatch; 453.750, Cambria Township highway; 155.085, Ebensburg Borough highway; 47.14, 47.30, Pennsylvania Department of Transportation highway; 161.490, Cambria-Indiana Railroad F1; 161.415, Cambria-Indiana Railroad F2; 154.055, Ebensburg Center; 464.975, Richland Mall security; 122.800 Ebensburg Airport.

What are you hearing on your scanner? What questions do you have about frequencies? How about sending along a photo of your monitoring post or mobile setup? We wouldn't mind seeing your antenna farm, too! Write to: Chuck Gysi, N2DUP, Scanning VHF/UHF, Popular Communications, 76 N. Broadway, Hicksville, N.Y. 11801-2909.

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WHAT'S HAPPENING: INTERNATIONAL SHORTWAVE BROADCASTING BANDS

The shortwave differences between the two halves of the former Czechoslovakia have begun to sort themselves out. Czech radio has reverted to its original name, Radio Prague, and a new shortwave service from Slovakia has come on the air, sharing the frequencies of Radio Prague.

Slovak Radio (Slovensko Radio or Slovensky Rozhlas) is being noted with a half hour in English at 0130 to 0200 (the exact sign on and sign off times vary slightly) on 5930 and 7345. From monitoring reports we've seen it appears that different transmitters for the two stations are in use on 7345 but that a single transmitter is being shared on 5930. Slovak Radio is also announcing English broadcasts for 1900 to 1930 on 9505 and 9580 and 1400 to 1500 on 6055, 7345 and 9505. The interval signal is six notes on a synthesizer. Radio Prague seems to be airing most of its usual schedule, except for the times Slovak Radio uses the frequencies.

As advertised earlier, Moldova, the former Soviet Republic of Moldavia, now has an international service on the air although, as this is written, it's still in a testing stage. It's being heard broadcasting to the U.S. from 0205 sign on to 0230 close on 7125. Other scheduled test times are 1900 to 1925 to Europe in French on 7125, 1935 to 2000 in Spanish on 9525. This may well have changed by now, assuming the tests have ended and a regular schedule of operation is underway. Most of the programming is in Romanian but it's believed English will be added eventually. It appears as though the transmitters are located in Romania, not Moldova.

We're nearing the time when the new Voice of America relay station at Udorn, Thailand will begin operation. A preliminary schedule for the new 500 kW station has it on 6090 from 2200-0000, 9560 at



Douglas J. Barrett in Sugarland, Texas is set for everything from the BBC to decoding fax to monitoring the youngster.

1130-1230, 9615 at 1400 to 1500, 9680 1500-1700, 9760 0100 to 0130, 11705 at 1400 to 1600, 11785 from 1100 to 1400, 11855 at 1700 to 1800 and 11905 1600 to 1700. 6045 will also be used. All beams are to China, Southeast Asia, South Asia, presumably in English, Chinese and other Asian languages.

World Harvest Radio said their new station in Hawaii is expected to be on the air during the first quarter of this year.

We will have passed that point by the time you read this so we'll know, now, whether they made it. WHRI says the station will be located on the southernmost tip of the Island of Hawaii and will beam to China, Japan, Korea, India and other Asian countries.

David Alpert in New York forwards a

story from Reuters and ABC Radio News to the effect that Bahrain has established a new public radio TV corporation which will take over broadcasting responsibilities now held by the government's information ministry and eventually, seek to make a profit. Well, that's all very fine. But let's hope it won't mean cutting Bahrain's shortwave broadcasts. Many listeners, including yours truly, have yet to dig out their signal on either 6010 or 9746.

If you haven't logged El Salvador on shortwave you might prowl around the 6300 area. Radio Venceremos, the-former-clandestine-now-legitimate station has been active in this vicinity off and on. Check around 1100 in the evenings.

Make the exploration range a bit wide because the frequency tends to vary. As we



Here's Bruce Prange in his Lincoln, Nebraska shack.



Two great old tube type receivers warm the shack of James Tobola in West, Texas.

noted, activity seems spotty so it may take some tries before you run across this one.

Some other Latin American stations being heard lately you might want to go after include the new Radio Runacunapac, Ecuador on 2967.7 around 1030; new Radio Metropolitana, Bolivia on 6195 from 0905 sign on; reactivated Armonias del Caqueta, Colombia on 4915 around 1100; La Voz de la Selva, also Colombia, reactivated on 6170 and Radio Monte Carlo, Uruguay on 11735 around 2300. Also, this is the last month you'll be able to tune Trans World Radio in Bonaire on shortwave. They're due to close their shortwave operations at the end of June. We're sorry to see them go, but wish them well.

WEWN (Eternal Word Radio Network) advises their address is now WEWN, Eternal World Radio Network, P.O. Box 100234, Birmingham, AL 35210.

POP'COMM's convention is one month closer! Save time and make arrangements to attend. It's the first weekend of October in Virginia Beach, Virginia. You'll find info elsewhere in this and coming issues. Come join the fun!

YEA—SHACK PHOTOS! That's more like it! James Tobola of Texas sends photos of himself and his shack, which includes a Collins R390A and Hammarlund HQ-170, plus a Hallicrafters S118. He also has a Sangean portable, kept "at bedside."

Douglas J. Barrett, N5STD in Sugarland, Texas, also sends a shack shot. Not hard to tell that Douglas is equipped to cover about everything! The line-up includes a Kenwood TS-940S/AT transceiver with SM-220 station monitor, Icom IC R7000 receiver, Universal M-7000 decoder plus printer, monitor and another transceiver. Douglas notes the IC R-7000, along with a Sony ICF PRO80 receiver both double as baby monitors when the need arises! Bruce Prange in Lincoln, Nebraska sports

Abbreviations Used in Listening Post

AA	Arabic
BC	Broadcasting
CC	Chinese
EE	English
FF	French
GG	German
ID	Identification
IS	Interval Signal
JJ	Japanese
mx	Music
NA	North America
nx	News
OM	Male
pgm	Program
PP	Portuguese
RR	Russian
rx	Religion/iuous
SA	South America/n
SS	Spanish
UTC	Coordinated Universal Time (ex-GMT)
v	Frequency varies
w/	With
WX	Weather
YL	Female
//	Parallel Frequencies

one of those nice Japan Radio Company NRD-525's in his shack, along with a Radio Shack DX-440. Bruce says he's been reading the column for a long time.

Keep those shack photos coming in. We know readers enjoy them but we can't run 'em if we don't get 'em.

Of course, we're also in an open arm mode for your loggings each month! Please list them by country, leave space between each so we can cut them apart and don't forget to include your last name and state abbreviation after each one. If those three easy requests aren't followed we can't use your logs. It's as simple as that! Schedules, your comments and questions, station news, spare QSL's you don't need returned—all are sought and welcome! Thanks!

Here are this month's logs. Broadcast language is assumed to be English (EE)



This QSL from All India Radio pictures the Red Fort in Delhi. John Miller, Thomasville, GA got it for reception on 11620.

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unless noted otherwise. For example: SS = Spanish, RR = Russian, AA = Arabic, etc. All times are in UTC which is five hours ahead of EST, i.e. 7pm EST is the same as 0000 UTC.

SWBC Loggings

Alaska: KNLS on 7355 at 1340. Music and talk about Alaska. (Northrup, MO)

Albania: Radio Tirana, 9580 at 0130. (Carson, OK)

Antigua: BBC relay, 5975 at 2130. (Ersbak, PA) 0126. (Scheurell, PA) 15220 at 1301. (Fenwick, ME) Deutsche Welle relay, 6060 at 0110. (Seefeldt, WI) 15275 at 1245 with sports, GG. (Ersbak, PA)

Argentina: RAE, 11710 at 0109 discussing QSL policy. (Maywoods, KY) 0158 in SS. (Scheurell, PA) Radio Nacional, 6060 at 0730 with Latin pops, ID. (Rausch, NJ)

Ascension Island: BBC relay, 6005//11750/-/15260 at 0107. (Lamb, NY) 21660 at 1739. (Fenwick, ME)

Australia: VLA8, ABC/CAAMA Radio, Alice Springs, tentative on 2310 at 1240 with EE pops, talk about Australian sports, possible mention of CAAMA. (Lamb, NY)

Radio Australia, 5995 at 1250 and 9580 at 1230. (Ersbak, PA) 6060 at 1449 in Pacific service; 9580/-/11800 at 1410. (Jensen, IA) 7880//13605//21740 at 0000 in EE after ending CC. (Lamb, NY) 9510/-/9580 at 1140 and 9645 at 2140. (Borsch, IL) On new 9560//9580 at 1720, off 1758. (Lamb, NY) 11800 at 1357 and 15365 at 0000. (Low, TX) 15365 at 2215. (Scheurell, PA)

ABC, Perth, 6140 at 1305 with ABC news. (Lamb, NY)

Azerbaijan: Radio Baku, 4785, balalaika ensembles, eastern composers, classical music, some opera at 0315. (Maywoods, KY)

Belarus: Radio Belarus, 7420 at 1900, presumed Belorussian with IS, ID and news. (Lamb, NY)

Belgium: Radio Flanders Int'l, (ex BRT) 17750/-/21810 at 1400 with "Brussels Calling." (Lamb, NY) 21815 at 1743 in FF. (Fenwick, ME)

Benin: ORTB, Parakou, 5020 at 0506 in FF with local music. French pops, IDs. (Lamb, NY)

ORTB Cotonou, 4870 at 0620 in FF. (Maywoods, KY)

Brazil: Radio Nacional Amazonia, 6180 at 0812 sign on in PP with IS, ID, time check, "hora de musica." (Rausch, NJ) 6183, strong at 2200 with ID "Radio Amazonas Int'l, La Voz de Amazonia de Brasilia." (Maywoods, KY)

Radio Guaiba, 11785 at 0228 with "Musica de Guaiba", easy listening music, IDs, all PP. (Lamb, NY) Radio Anhanguera, 4915 at 0103 with ID and music, PP. (Scheurell, PA)

Radio Cultura, Araraquara, 3365 at 0553 in PP. (Low, TX)

Swiss Radio Int'l relay via Brasilia, 17730 at 0016, into SS at 0030. (Lamb, NY)

Botswana: Radio Botswana, 4830 at 2045, pops with EE announcer. (Maywoods, KY) (a winter month type catch at this hour! editor)

VOA relay, 15495 at 1954. (Scheurell, PA) 2133. (Lamb, NY)

Bulgaria: Radio Sofia, 9700//11720 at 0701 in GG with ID, folk music, into FF at 0715. (Lamb, NY) 11720 at 0001, QRM from China. (Jensen, IA) 0100 in EE. (Scheurell, PA) 1830. (Bosch, IL)

Burkina Faso: RTV Burkina, 4815 at 0628 with reggae, IS, ID, news. FF. (Lamb, NY)

Cameroon: RTV Cameroon, Garoua, 5010 at 2100 with IDs, news in English, African music. (Lamb, NY) 0541 in FF. (Maywoods, KY)

Canada: Radio Canada Int'l, 5960 at 0100. (Seefeldt, WI) 9745 at 0243. (Tobola, TX) 11730/-/11940 at 2306. (Low, TX) 13670 at 1826 to Africa and 15325 to Europe at 1720. (Jensen, IA)

CFRX relay CFRB, Toronto, 6070 at 0030. (Miller, GA) 1415. (Ersbak, PA)

CBC Northern Quebec Service, 9625 at 1412; 2100. (Ersbak, PA; Borsch, IL)

CIQX relay CIQC Montreal, 6005 at 0024. (Fenwick, ME) 2130, mention of "Montreal's country." Paszkiewicz, WI)

CHU time station, 7335 at 1847 in EE/FF. (Ersbak, PA)

Radio Korea relay, 9650 at 1139. (Fenwick, ME)

Chad: Radio Nationale, 4904 in FF at 2135. (Maywoods, KY)

China: China Radio Int'l, 7405 at 1425. (Northrup, MO) 9690 (via Spain, ed) at 0309. (Tobola, TX) via Xi'an on 11575//15130 via Mali at 1600 sign on with fanfare, ID, news. (Lamb, NY) 11610 at 0105 in CC. (Rausch, NJ) 11715 via Mali at 0001. (Jensen, IA) CPBS-1, Beijing, tentative on 11610 at 0126 in CC. (Lamb, NY)

Voice of Jinling, 4875 at 1206 in CC with international folk music, ID. (Lamb, NY)

Colombia: Caracol, Bogota, 5075 at 0259 in SS, news 0300. (Maywoods, KY) 5955 at 0234 with commercials, "Noticias Caracol." (Paszkiewicz, WI)

Congo: RTV Congolaise, 4765 at 2054 with life music. FF. (Maywoods, KY)

Costa Rica: Radio For Peace Int'l, 7375 at 0413, 7385USB at 0438, 15030 at 0324. (Carson, OK)

TIAWR, Adventist World Radio, 9722.6 with "Family Matters" at 1213. (Alpert, NY) 11870 at 0502 in SS with choral music, IDs in SS/EE, address, Costa Rican anthem and sign off. (Lamb, NY)

Faro del Caribe, 5055 at 0138 in SS and 0307 in EE "You are listening to the lighthouse of the Caribbean" and frequencies given as 1080, 5055, 9645 and 97.../40 or 90, Andreas? Neither shown on latest lists. editor)

Radio Reloj, 4831.5 at 0529 in SS with mentions of Costa Rica and music. (Maywoods, KY)

Cuba: Radio Havana Cuba, 6010 at 0345. (Jensen, IA) 6180 at 0430. (Vaage, CA) 9620 at 2216. (Low, TX) 11760 at 1240 in SS. (Ersbak, PA) 11970 at 0130. (Seefeldt, WI)

Radio Rebelde, 5025 in SS at 0411. (Fenwick, ME)

Cyprus: BBC relay, 6180 at 0537 with interview, ID, news. (Lamb, NY)

Denmark: Radio Denmark via Norway, EE ID on 9560 at 0155. (Vaage, CA)

Dominican Republic: Radio Estrella, 6205 at 0150 with lively music, ID, address. SS. (Paszkiewicz, WI)

Ecuador: Radio Popular, 4800 at 1041 in SS with jingles, dedications, IDs, local music, bird sounds, news. (Lamb, NY)

Radio Centinela del Sur, 4770 at 1019 in SS with local music, IDs, jingles, religious program. (Lamb, NY)

Radio Nacional Espejo, 4879.6 in SS at 0200 with many commercials, jingles. Abrupt power cut at 0204. (Maywoods, KY)

Radio Quito, 4920 in SS at 0246 with ID, man and woman announcers, music. (Maywoods, KY)

HCJB on 9745 at 0045. (Jensen, IA) 11925 at 1240. (Ersbak, PA) 15155 at 0100. (Seefeldt, WI) 17535USB at 0031 and 17890 at 1309. (Low, TX) 21455 at 0307. (Carson, OK)

Egypt: Radio Cairo, 9475 at 0200. (Jones, OH) 9770 at 1707 in AA with vocals, mideast music. (Maywoods, KY) 9900 at 2143 with music. (Fenwick, ME) 2129 with ID. "Scientific Life in Egypt." (Scheurell, PA)

England: BBC on 9590 at 0000. (Seefeldt, WI) 12095 at 1454. (Fenwick, ME) 15400 at 0729. (Vaage, CA)

Equatorial Guinea: Radio Nacional, Bata, 5004 at 2103 in SS with IDs, news, animal sounds and local music. (Lamb, NY)

Finland: Radio Finland Int'l, 15440 at 1420. (Ersbak, PA)

France: Radio France Int'l, 5945 at 0021 in FF. (Fenwick, ME) 9790 at 0156 in FF. (Tobola, TX) 11670 at 0136 in SS. (Scheurell, PA) 17620 at 1600 sign on in EE. Off 1700. (Tobola, TX)

French Guiana: RFI relay at 1740 on 21685. (Fenwick, ME)

Gabon: Africa Number One, 9580 in FF at 1723; 0535. (Fenwick, ME; Maywoods, KY) 17630 at 1343. (Low, TX)

Radio Japan relay 15355 at 1516. Parallel 9535 from Japan. (Lamb, NY)

Germany: Deutsche Welle, 3995 at 0410 in GG. (Low, TX) 6055 at 0027 in SS and 6100 in GG at 0030. (Fenwick, ME) 9545 at 0344. (Carson, OK) VOA Europe, 17770 at 0817. (Lamb, NY)

Ghana: GBC, 4915 at 0617. (Maywoods, KY)

Greece: Voice of Greece, 9395 at 1650, news in Greek. (Maywoods, KY) 9420 at 0350 with EE ID.

(Borsch, IL) 0319, Greek music. (Tobola, TX)

Guam: KSDA, 15610 at 2256 going into EE with ID, address, religious music. (Lamb, NY)

Guatemala: radio Tezulutlan, 4835 at 0135 with ID, music. (Maywoods, KY)

Radio Cultural, 3300 at 0110 with music, ID. (Maywoods, KY)

Hawaii: WVVH time signals, 10000 at 0600. (Seefeldt, WI)

Honduras: La Voz Evangelica, 4820 at 0312. (Maywoods, KY)

Hungary: Radio Budapest, 6100//9835 at 2229. (Lamb, NY) 9835 at 0315. (Carson, OK)

Radio France International relay, 15460 at 1721. (Fenwick, ME) (FF? editor)

India: All India Radio, Bangalore, 7125 at with open carrier 0059. 0130 in possible Hindi, ruined by IRRS-Italy sign on at 0156. (Alpert, NY) 7412/-/9910//9950//11620 at 2136 with "Film Songs" program, ID, news, commentary. (Lamb, NY) 11620 at 1746. ID at 1800. (Maywoods, KY) 1810 and 2214. (Bosch, IL) 11715 at 0032. (Tobola, TX)

Iran: VOIRI, 9022 at 2230 in FF. (Bosch, IL)

Israel: Kol Israel, 7465 and 9435 at 2230 with "Israel News Magazine." (Borsch, IL) 9435//11605/-/17575 at 1704 in Yiddish. (Lamb, NY) 11605 at 2240 in EE. (Scheurell, PA)

Italy: Italian Radio Relay Service, 7125 at 0156 sign on, address, fax number (706-38-151) and UN program at 0200. (Alpert, NY)

RAI, 5990//7275 at 0531 in (Russian, Marie?, editor) with IS, bells, Italian pops. (Lamb, NY) 11800 at 0100 with news, ID. (Jones, OH)

Japan: Radio Japan, 5960 via Canada, at 0300. (Seefeldt, WI) 9535 at 1550. (Carson, OK) 15230 via Yamata at 0351 and 17785, also Yamata, 2247 in Vietnamese. Into Indonesian at 2300. (Lamb, NY) 15325 via French Guiana at 0159; 0315. (Vaage, CA; Tobola, TX)

Kenya: Kenya Broadcasting Corporation, 4937.5 at 0230 with jazz, news, ID 0300. (Maywoods, KY)

Kuwait: Radio Kuwait, 13620 at 1811 in EE. (Scheurell, PA) to sign off at 2100. (Tobola, TX)

Lebanon: Wings of Hope, tentative on 11530 at 2310 in EE and religious programs. (Scheurell, PA)

Lesotho: Radio Lesotho, presumed, 4800 at 0335 with sermon, organ. Ute QRM. (Paszkiewicz, WI) BBC relay, 3255, parallel with 5975 via Antigua, 0305 with news, ID, sports. (Lamb, NY)

Lithuania: Radio Vilnius, 17605 and 17690 at 0023 with news, music. (Tobola, TX)

Madagascar: Radio Netherlands relay, 9560 at 1915 and 11655 at 0320, both times with "Research File" program. (Lamb, NY)

Mali: China Radio Int'l relay, 11715 at 2107. (Lamb, NY)

Mauritania: ORTM on 4845 at 2045 in AA. (Maywoods, KY)

Morocco: Radio Medi Un, 9575 in FF/AA with pops, IDs, news, local music. (Lamb, NY)

RTV Marocaine, 15335 in AA at 1715. (Fenwick, ME)

Netherlands: Radio Netherlands, 6020 at 0050. (Carson, OK)

Netherlands Antilles: Radio Netherlands Bonaire relay, 6165 at 2347; 0101. (Jensen, IA; Low, TX) 9590 at 0353. (Tobola, TX) 17605 at 1937. (Vaage, CA) 21515 at 1747. (Jensen, IA)

Trans World Radio, 9535 at 0330 with DX program. (Carson, OK) 11815 at 1200 with news. (Borsch, IL)

New Zealand: Radio New Zealand Int'l, 9700 at 1145 with travel program. (Bosch, IL) 17770 at 0329 with easy listening music from National Radio. (Carson, OK)

Niger: La Voix du Sahel, 5020 at 0558 with flute and drums, female announcer at 0600, more music. (Maywoods, KY)

Nigeria: Radio Nigeria, Kaduna, 4770 at 0521 with news in EE. (Maywoods, KY)

Northern Marianas: KHBI, Monitor Radio, 9530 at 1405 with ID, news. (Lamb, NY)

Norway: Radio Norway, 9656 at 0100 with news, folk tale show, "Norway Now." (Miller, GA)

Oman: BBC relay, 11760 at 0330 with ID, "Vintage Charts Show." (Scheurell, PA)

Palau: KHBN on 9830 at 1100 sign on with EE ID and into CC religious program. (Lamb, NY)



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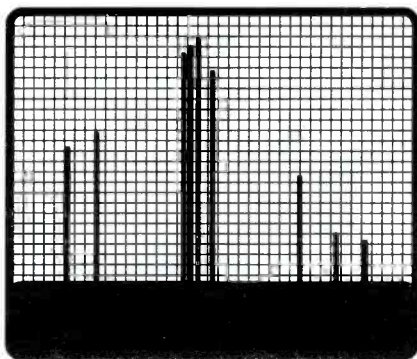
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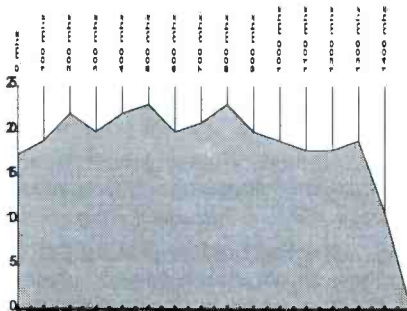
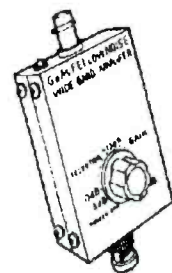
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Pakistan: Radio Pakistan, 9418 at 1715 with news, Koran, mideast music. (Rausch, NJ)

Papua New Guinea: Radio East New Britain, 3395 at 0750 in native language. (Maywoods, KY)
Radio East Highlands, Garoka, 3395 at 0827, local news with drums in background. (Maywoods, KY)

Paraguay: Radio Nacional, 9735 at 0015 in SS with "concurso nacional de composicion." (Scheurell, PA)

Peru: Radio Huancabamba, 6281.7 at 0041 with long talk in SS, mention of Huancabamba. Ute QRM. (Paszkievicz, WI)
Radio San Ignacio, 5700 at 0240 in SS with mix of Latin pops and American disco. ID "Radio San Ignacio, el estacion festivo." Off at 0330. (Rausch, NJ)
La Voz de la Selva, 4825 at 1008 in SS with local music, ID. (Lamb, NY)
Radio Tingo Maria, 4759 in SS at 0137 music with strong Indian flavor. (Maywoods, KY)

Philippines: VOA relay, 9760 at 1419 with classical music (Low, TX) 11720 at 2158 sign on in Khmer, into Vietnamese at 2230. Also 15185//15290 at 2236 in Special English. (Lamb, NY) 11820 at 1545 with ID. (Maywoods, KY)
FEBC, 11690 at 0920 with "Computer Corner." (Seefeldt, WI)

Poland: Polish Radio Warsaw on 11840 at 1600 with EE to Europe, and frequencies. (Maywoods, KY)

Portugal: Radio Portugal, 9555 at 0230 with news, weather, ID. (Jones, OH) 9705 at 0258 with listener mail. (Tobola, TX)

Romania: radio Romania Int'l, 5990 at 0247. ID, Youth Club, sports. (Scheurell, PA) 9570//11725 in GG with news, ID. Into EE at 0631. (Lamb, NY)

Russia: Radio Moscow, 4795//4860 at 2147, US pops, "Moscow Nights" theme, drama. (Lamb, NY) 7115//7150 at 0353. (Jensen, IA) 9685 at 1900. (Ersbak, PA) 9860 at 2125, 13655 at 0030. (Borsch, IL) 12050 at 0357. (Tobola, TX) 15420 at 1620. (Fenwick, ME) 15425 at 0204 and 21480 at 0048. (Carson, OK)

Radio Murmansk, domestic service, 5930 in RR at 0630. (Rausch, NJ)

Rwanda: Deutsche Welle relay, 17860 at 1832 in GG. (Scheurell, PA)

Saudi Arabia: BSKSA on 7220 at 0046 in AA with Arabic music. (Tobola, TX)

Seychelles: BBC Indian Ocean relay, 9630 at 1929. (Scheurell, PA)

South Africa: Channel Africa, 7270 at 0330 with time check, news headlines, music, ID "You are tuned to Channel Africa." (Miller, GA)

South Korea: Radio Korea, 9745 at 1253. "From Us To You." (Carson, OK) 15575 at 0025 with IS, time and frequency announcement, news and feature. (Rausch, NJ)

Spain: Radio Exterior de Espana, 9530 at 0018. (Low, TX) 0520. (Tobola, TX) 15110 (via Costa Rica, editor) at 1910 in SS. (Ersbak, PA)

Sudan: R. Omdurman, 7200 with IS from 0245. 0300 anthem and talk in AA. VOA also here from 0258. (Alpert, NY)

Swaziland: Trans World Radio, 9655 at 0440 with EE religious program, into African language at 0500. (Alpert, NY) 11740 at 0513 with "Radio Bible Class." (Lamb, NY)

Switzerland: Swiss Radio International, 3985 at 0415 and 13635 at 1513. (Low, TX) 7480 at 1420, via China. (Northrup, MO) 9885 at 0211; 0400. (Jensen, IA; Tobola, TX) 15430 at 1727. (Fenwick, ME)

Syria: Radio Damascus, 12085 at 2155 with music. (Bosch, IL)

Taiwan: Voice of Free China, via WYFR, 5950 at 0230. (Seefeldt, WI) 9680 at 0315. (Carson, OK) 9850 at 2240. (Borsch, IL)

Togo: RTV Togolaise, 5046.5 at 0647 in FF with various music types and brief announcer comments. (Carson, OK) 5047 at 0605 in FF, long newscast. (Maywoods, KY)

Turkey: Voice of Turkey, 9445 at 2135; 2300. (Borsch, IL; Scheurell, PA) 9460, 1700. (Maywoods, KY) (Turkish? editor)

Ukraine: Radio Ukraine, 0123 with folk songs. (Maywoods, KY) 4825//7180//7195//7240 at 0150, ID, "Hello From Ukraine." (Lamb, NY) 17605 at 0100. (Tobola, TX)

United Arab Emirates: UAE Radio, Dubai, 13675 at 0340 with news. (Tobola, TX)
Radio of the UAE, Abu Dhabi, 9605 at 2229 with ID, pops. (Jensen, IA) 11965 at 2310 with press review. (Jones, OH)

United States: WHRI, 7315 with Croatian Radio relay at 0002. Two minutes of news in EE, later in Croatian. (Scheurell, PA)
Radio Marti to Cuba, 11980 in SS at 1708. (Fenwick, ME)
WMLK, 9465 with sign on at 1700. (Fenwick, ME)

Uzbekistan: Radio Tashkent, 9540 at 1205 with news and music. (Borsch, IL)

Vatican: Vatican Radio, 6095 at 0312 in SS to Latin America with IS, ID. 7335, over CHU at 0157 with church news, ID, IS. 15090 at 1457 with IS, ID, bells, Hindi program. (Lamb, NY) 7305 at 0250. (Seefeldt, WI) 9605 at 0227, off 0258. (Carson, OK) 11830 at 2303. (Low, TX)

Venezuela: Radio Valera, 4840 at 0148 in SS, ID 0200. (Maywoods, KY)
Ecos del Torbes, San Cristobal, 4980 at 0249 in SS with up-beat music, ID 0252. (Maywoods, KY) 0109. (Scheurell, PA)
Radio Tachira, 4830 at 0324 in SS with ID, continuous music. (Scheurell, PA) 0129. (Maywoods, KY)

Yugoslavia: Radio Yugoslavia, 9580 at 0105 with ID, "Up to Now" program. (Lamb, NY)

Zambia: ZNBS, 4910 at 0249 with fish eagle IS. (Paszkievicz, WI)

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And that's our collection this month. Raise your glass to the following good folk who did the work:

Marie Lamb, Brewerton, NY; Paul Jensen, Mason City, IA; the Maywoods DX Team, KY (Dr. Joel Roitman, Loy W. Lee, Ed Shaw, Charles Everman and Wayne Gregory); Andreas Scheurell, Pittsburgh, PA; Bjorn F. Vaage, Granada Hills, CA; Richard A. Jones, Dayton, OH; Brad Low, Jacksonville, TX; Mark A. Northrup, Gladstone, MO; Todd Borsch, Princeton, IL; David Alpert, New York, NY; John Spencer Carson, Jr., Norman, OK; John Miller, Thomasville, GA; Jamie Ersbak, Oreland, PA; Jeff Seefeldt, Wausau, WI; James Tobola, West, TX; Ed Rausch, Cedar Grove, NJ; Charles Fenwick, South Harpswell, ME and Sheryl Paszkiewicz, Manitowoc, WI.

Thanks to all and, until next month, good listening!

HOW I GOT STARTED

Popular Communications invites readers to submit, in approximately 150 words (more or less), how they got started in the communications hobby. They should preferably be typewritten, or otherwise easily readable. If possible, a photo of the submitter should be included.

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

The person whose entry is selected will receive a one-year gift subscription (or one-year subscription extension) to *Popular Communications*.

Address all entries to: How I Got Started, Popular Communications, 76 North Broadway, Hicksville, NY 11801.

Our June Winner

This month our winner is Richard S. McKee, Registered Monitor KOH8GU, of Willow Wood, Ohio. Richard told us: "My interest in hobby radio began when I was very young. I didn't even realize I was getting started, but I'd sneak my 9-transistor portable radio into bed at night with me to see how many stations I could listen to from the next state, or even several states away. On Saturday nights, I always tuned in



Richard S. McKee, Registered Monitor KOH8GU, of Willow Wood, Ohio.

Grand Ole Opry direct from WSM in Nashville, and that was a real kick.

"The next major step up in my DX career was when my older brother gave me his shortwave radio. He had decided that cars, girls, and guitars took up too much of his time to have any left over for the radio. Poor guy just didn't have his priorities straight so his loss was my gain.

"This radio proved to me that stations could be heard from other areas of the world. Not only that, I found that when I added a long wire antenna to the set, I could hear many more stations than with the set's built-in whip antenna.

"I still listen on shortwave, and have also added a scanner and a CB radio. Ham radio is next on my schedule." ■



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Real Radios Glow In The Dark!

A column I did a few issues back on the joys of old general coverage vacuum tube receivers really hit a responsive note with you readers—in fact, it drew more mail than anything else I've ever written for *POP'COMM*! Many of you had some questions and wanted more information, so this column is in response to your letters.

Which Classic Shortwave Radios Are The Best?

That's the kind of question I'd rather not answer. I can't really comment on a receiver I haven't used, and I have experience with only a fraction of receivers from the vacuum tube era. But since you folks asked.

One recommendation I can make is that you should consider only relatively recent vacuum tube receivers, say from about 1955 to the disappearance of American-made general coverage "hollow state" radios around 1972 (when Hammarlund bowed out). Why? Mainly because older receivers usually need a good bit of restoration and repair, and doing so isn't easy or inexpensive. Parts are hard to come by for any older receiver, but for pre-1955 units parts are especially difficult to locate. Finally, the performance of most pre-1955 receivers just doesn't cut it by today standards. Most receivers from that era were single conversion, not very selective, and had poor sensitivity on higher frequencies.

Don't get me wrong—many pre-1955 receivers have a certain "something" and look classy in any shack. It's just that starting off with one of them for your first vacuum tube receiver is like making Mt. McKinley the first mountain you try to climb!

Now which makes and models are best? This is where I know I'm going to get myself into real trouble, since everyone who was active in SWL'ing during the 1950's and 1960's has a vacuum tube receiver they fondly remember. And, as I admitted, I have only used a fraction of the receivers available during that era. Nonetheless, here are my very subjective opinions based on my own experience and input from other SWL's and hams:

Hallicrafters: Probably more SWL's and hams who got started in the 1950's and 1960's did so with a receiver by Hallicrafters than from any other manufacturer. In fact, one of the treasures of my hollow state collection is a Hallicrafters S-119, which was my very first receiver back in 1963. Given this widespread affection for Hallicrafters gear, I'm disappointed to have to admit that a lot of it just isn't very good. Hallicrafters generally built receivers for the budget-conscious SWL or ham, and they did so by cutting a lot of corners in design and performance. However, their SX-100 from 1955 is still an outstanding performer today; it would have to be considered one of the classic shortwave receivers of all time. It was the first moderately-priced

receiver that offered outstanding SSB performance and superb selectivity. The SX-110 and SX-130 receivers are serviceable for most AM mode listening on the international broadcast bands. Hallicrafters also produced a real gem in the SX-88, a marvel that was several years ahead of its time and which even today fetches well into the four figures when offered for sale. Beyond these receivers, however, Hallicrafters doesn't have a lot to offer today beyond nostalgia value.

National: National made one of the most famous vacuum tube receivers of all time, the HRO-60. Unlike most other receivers available after 1955, the HRO-60 did not change bands by rotating a switch; instead, you had to plug in a new coil for each band you wanted to tune. Remarkably enough, the HRO-60 was available new until 1964! Despite this drawback, the HRO-60 was prized for its great selectivity, low internal noise, and terrific audio quality. Other National receivers from that era, such as the NC-109, NC-140, and NC-190, were only average performers. Like Hallicrafters, most National receivers are not very impressive performers by today's standards. For some reason, National receivers are less popular among fans of vintage receivers than those from other companies.

Collins: Collins was the Mercedes-Benz of hollow state receivers, and are still superb performers today. Collins pioneered



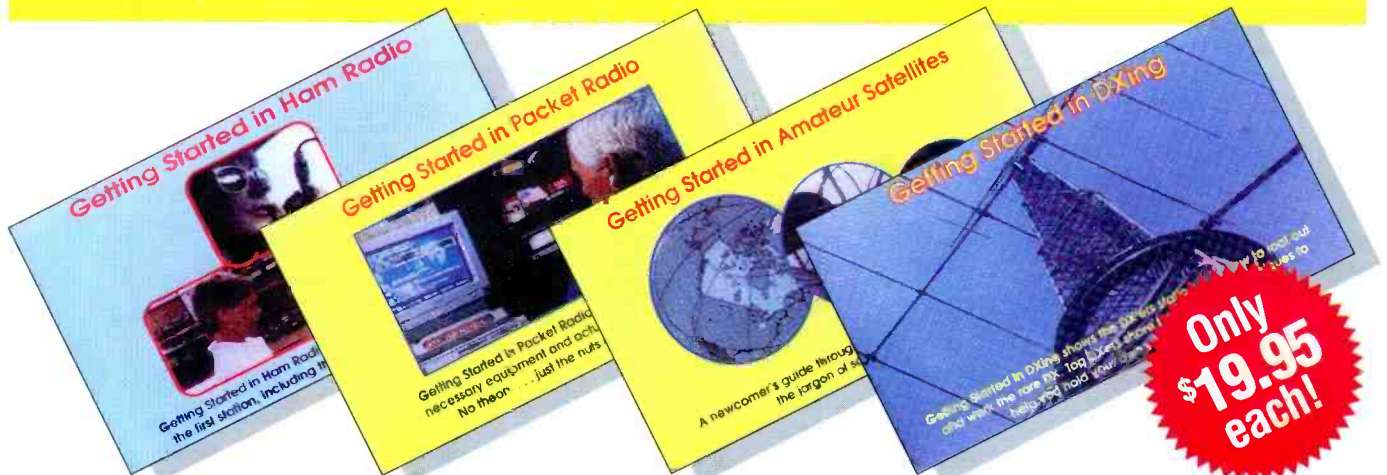
Two trends in receiver development. The larger receiver is the Hammarlund HQ160, while the one on top is the Drake 2C, the successor to the 2B.

This Hammarlund HQ180 is still found in the shacks of many top DX'ers.





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POP'COMM's World Band Tuning Tips

June—1993

Freq.	Station/Country	UTC	Notes	Freq.	Station/Country	UTC	Notes
2390	La Voz de Atitlan, Guatemala	0230	SS	6050	R. Canada Int'l	0600	
2967v	R. Runacunapac, Ecuador	1030	SS	6060	Radio Havana Cuba	0600	
3200	R. 9 de Abril, Bolivia	0100	SS	6085	Deutsche Welle, via Canada	0530	GG
3205	R. Ribeirao Preto, Brazil	0900	PP	6095	Radio Free Europe, Germany	0600	Lithuanian
3215	R. Oranje, South Africa	0300	EE/Afk	6105	R. Yucatan, Mexico	1200	irr., SS
3231	R. Madagasikara, Madagascar	0330	unid lang.	6120	R. Japan	1130	via Canada
3255	ELBC, Liberia	0600	s/on	6130	Lao National Radio	1200	
3260	R. Madang, Papua New Guinea	1100		6135	R. Aparecida, Brazil	2330	PP
3270	Namibian Bc Corporation	0300		6135	Swiss Radio Int'l	0230	
3275	R. So. Highlands, Papua New Guinea	1200		6140	ABC, Perth, Australia	1000	
3285	LV del Rio Tarqui, Ecuador	0900	SS	6155	Radio Austria Int'l	0830	
3300	R. Cultural, Guatemala	0200		6160	R. Malargue, Argentina	1000	SS
3316	SLBS, Sierra Leone	0600		6165	R. Netherlands, via Bonaire	0030	
3320	R. Orion, South Africa	0245		6190	BBC via Lesotho	0345	
3326	R. Nigeria, Lagos	0600		6205	HCJB, Ecuador	0800	
3330	CHU, Canada		time stn	6210	Croatian Radio	0000	Croatian/EE
3360	La Voz de Nahuala, Guatemala	0305	close, SS	6219	Radio Bosnia-Hercegovina	0200	irregular
3370	R. Tezulutlan, Guatemala	0130	local langs	6220	R. Sofia, Bulgaria	2130	Bulg.
3384	Icelandic State Broadcasting Service	0330	Icelandic	6250	R. Nacional, Equatorial Guinea	0500	SS
3395	Channel Africa, S. Africa	0400		6270v	R. Patria Libre, Colombian clandestine	0030	SS
3980	VOA via Germany	0600		6305	La Voz del CID (anti-Castro)	0800	SS
3995	Channel Africa, S. Africa	0300		6400	R. Pyongyang, N. Korea	1230	KK
4040	R. Yerevan, Armenia	0300	Arm.	6560v	Iraqi Radio	0330	AA
4331	R. Horizonte, Peru	1100	SS	6910	R. Africa 2000, Eq. Guinea	2200	close
4460	CPBS-1, China	1300	CC	7105	REE, Spain	0430	SS
4505	R. Horizonte, Peru	1100	SS	7115	V of Pujiang, China	1130	CC
4635	R. Dushambe, Tadzshikstan	0200	local lang.	7125	IRRS, Italy	0600	
4725	Voice of Myanmar (Burma)	1130	Burmese	7150	R. Vilnius, Lithuania	0000	
4760	Yunan PBS, China	1130	CC	7170	R. Sofia, Bulgaria	2300	
4760	R. Frontera, Venezuela	0130	SS	7175	RAI, Sicily	0700	Ital
4765	RTVC, Congo	0355	s/on, FF	7180	R. Ukraine Int'l	0100	
4770	R. Nigeria, Kaduna	0500		7210	AWR, Italy	0745	
4770	R. Centinela del Sur, Ecuador	1030	SS	7225	Deutsche Welle via Rwanda	0300	Swahili
4775	R. Tarma, Peru	1000	SS	7235	Deutsche Welle, Germany	0400	AA, via Malta
4800	R. Lesotho	0330		7250	Vatican Radio	0600	//6245
4810	R. Orion, S. Africa	0200		7255	R. Botswana	0250v	s/on
4833	R. Buenaventura, Colombia	0100	SS	7265	Sudwestfunk, Germany	0100	GG
4845	RTM Malaysia	1200	Malay	7265	VOA Relay, Botswana	0300	sign on
4850	R. Luz y Vida, Ecuador	0300	SS	7285	BSKSA, Saudi Arabia	0400	AA
4870	ORTB, Benin	0530	FF	7290	R. Sofia, Bulgaria	0500	
4875	V of Jinling, China	1100	CC	7315	BBC via Uzbekistan	0100	
4875	La Cruz del Sur, Bolivia	1030	SS	7345	R. Prague (& Slovensko R. at times)	0100	
4885	R. Clube do Para, Brazil	0100	PP	7365	KNLS, Alaska	0800	sign on
4890	R. France Int'l, Gabon relay	0400	FF	7390	Deutsche Welle via Novosibirsk	1200	
4895	LV del Rio Aruca, Colombia	0200	SS	7417	V of Vietnam	1100	
4910	Zambia National Broadcasting Svc	0300		7445	V of Asia, Taiwan	1400	CC
4915	R. Cora, Peru	1030	SS	7465	Reshet Bet HS, Israel	0100	Hebrew
4915	GBC, Ghana	0600		7510	KTBN, Utah	0400	
4920	R. Quito, Ecuador	0300	SS	7550	R. Korea, S. Korea	2230	
4935	R. Capixaba, Brazil	0300	PP	9170	R. Omdurman, Sudan	0255	sign on, AA
4945	R. Progresso, Brazil	1000	PP	9265	Icelandic Ntl Bc Svc	0730	EE
4950	Voice of Jinling, China	1200	CC	9345	R. Pyongyang, N. Korea	1300	
4960	R. Cima Cien, Dominican Republic	0100	SS	9400	R. Azadi/Liberty of Iran	0230	Farsi?
4965	R. Santa Fe, Colombia	0200	SS, irreg.	9425	KFBS, Saipan	1500	RR
4980	Ecos del Torbes, Venezuela	0200	SS	9445	Voice of Turkey	2330	TT
4985	R. Brazil Central	0100	PP	9475	R. Cairo, Egypt	0200	
4990	R. Nigeria, Lagos	2230		9490	R. Nadezhda, Russia	1530	RR
5004	R. Nacional, Eq. Guinea	2130	SS	9505	R. Tacna, Peru	1030	SS
5020	LV de Sahel, Niger	0500	FF	9510	R. New Zealand	0930	
5025	R. Rebelde, Cuba	0200	SS	9510	Radio Havana Cuba	0600	
5030	R. Continente, Venezuela	0330	SS	9535	Swiss Radio Int'l	0700	
5035	Rdf. Centrafricaine, Cent Af Rep.	0430	FF	9540	R. Exterior de Espana	0630	SS
5040	La Voz del Upano, Ecuador	1199	SS, s/on	9545	Solomon Is. Bc Corp.	0700	
5055	RFO, French Guiana	0700	FF	9555	R. Portugal	0230	
5075	Caracol, Bogota, Colombia	0400	SS	9560	Radio Finland	0230	
5097	R. Eco, Peru	0200	SS	9560	R. Jordan	1600	
5800	R. Nueva Cajamarca, Peru	1000	SS	9570	R.S. Yunost, Russia	0700	RR
5850	WCSN, Maine	0500		9570	R. Portugal	0230	
5900	R. Vlaanderen Int'l, Belgium	0600	(ex-BRT)	9575	Radio Medi Un, Morocco	0730	FF
5930	Slovensko Radio	0130	w/Czech Radio	9575	Voice of America	0245	s/on, Somali
5955	Caracol, Colombia	0230	SS	9580	R. Tirana, Albania	0230	
6000	R. Guaiba, Brazil	0000	PP	9595	R. Tanpa, Japan	1000	JJ
6015	VOA via Germany	0500		9600	R. UNAM, Mexico	1300	SS
6020	Radio Netherlands	0100		9605	UAE Radio, Abu Dhabi	2200	s/on
6030	Voice of America	2100	Croatian	9610	ABC, Perth, Australia	1200	

Freq.	Station/Country	UTC	Notes	Freq.	Station/Country	UTC	Notes
9615	KNLS, Alaska	1400	sign on	13620	R. Kuwait	2000	
9625	CBC Northern Service, Canada	0300		13620	R. Bangladesh	1300	
9640	VOIRI, Iran	1500	sign on, Farsi	13630	RFPI, Costa Rica	2300	
9645	Faro del Caribe, Costa Rica	0400	SS	13635	Swiss Radio Int'l	2130	
9665	Radio Marumbi, Brazil	2300	PP	13650	R. Pyongyang, N. Korea	0000	
9675	Channel Africa	0300		13655	R. Flanders Int'l, Belgium	2300	Dutch
9695	Channel Africa, S. Africa	0500		13660	R. Havana Cuba (USB)	0200	USB, EE
9695	R. Sweden	0200		13675	UAE Radio, Dubai	1630	
9700	R. New Zealand	1030		13685	Swiss R. Int'l	0700	
9705	R. Portugal	0230		13710	R. Vedo, Russia	1500	RR
9715	QBS, Qatar	1900	AA	13715	R. Prague, Czech Rep.	0400	
9725	BBC via Uzbekistan	1330	sign on	13755	R. Australia	1200	
9730	Channel Africa, S. Africa	0159	s/on	13785	R. Pyongyang, N. Korea	1500	
9735	R. Nacional, Paraguay	2300	SS	15010	V of Vietnam	1230	
9740	R. Canada Int'l	0630		15020	All India Radio	1400	local langs.
9746	R. Bahrain	2000	AA QRM-HCJB	15084	VOIRI, Iran	0430	Farsi
9750	R. Korea, So. Korea	1200		15090	Vatican Radio	2445	s/on
9750	R. Canada Int'l	0530		15100	FEBC, Philippines	1200	EE, others
9760	R. Tirana, Albania	0130	Albanian	15110	REE, Spain, via Costa Rica	1900	
9765	V of Mediterranean, Malta	0600		15120	R. New Zealand Int'l	0530	
9770	China R. Int'l, via Mali	0000		15130	R. Pyongyang, N. Korea	0000	
9805	R. France Int'l	1230		15165	R. Havana Cuba	2100	
9815	Radio Havana Cuba	0200	SSB	15170v	Radio Tahiti	0500	FF/TT
9830	KHBN, Palau	1300		15185	R. Finland Int'l	2300	
9835	R. Budapest, Hungary	0200		15200v	R. Bangladesh	1230	EE
9845	BBC via Russia	1000	CC	15205	VOA relay, Tangier	1800	
9845	FEBC, Philippines	1600		15220	Channel Africa, S. Africa	0600	(ex R. RSA)
9850	R. Sofia, Bulgaria	2330		15250	Iraqi Radio	1500	AA
9885	Swiss Radio Int'l	0200		15265	Radiobras, Brazil	1800	
9950	All India Radio	2200		15270	Deutsche Welle via Rwanda	2330	GG
9965	R. Caiman, anti-Cuba	1300	SS	15300	R. Cairo, Egypt	1500	AA
9977	R. Pyongyang, N. Korea	1100	s/on	15325	R. Japan via Fr. Guiana	0300	
10059	V of Vietnam	1500	VV	15335	R. Romania Int'l	1430	
11530	Voice of Hope, Lebanon	2000		15340	R. Japan, via Gabon	2000	RR
11550	RTT Tunisia	1800	AA	15345	RAE, Argentina	2130	
11587	Kol Israel	2245		15345	RTM, Morocco	1400	Berber
11603	Kol Israel	2230		15345	RAE, Argentina	1300	SS
11620	All India Radio	2000		15355	R. Japan via Gabon	1500	
11650	China Radio Int'l (R. Beijing)	1500	RR	15360	Deutsche Welle, Germany	2100	
11655	R. Netherlands via Madagascar	0100		15400	UAE Radio, Dubai	0345	
11690	Swiss Radio Int'l	1300		15415	Libyan Jamahiriya Broadcasting	1500	AA
11695	Radio France Int'l	0530	FF	15420	BBC via South Africa	1745	sign on
11700	KTWR, Guam	1400		15425	SLBC, Sri Lanka	1330	
11705	R. Sweden	2330		15445	SLBC, Sri Lanka	2330	
11710	RAE, Argentina	0100		15465	R. Tashkent, Uzbekistan	1200	
11715	R. Korea, S. Korea	1030	via Canada	15475	Africa Number One, Gabon	2100	FF
11720	R. Sofia, Bulgaria	0400		15505	Swiss Radio Int'l	1500	
11725	R. Korea, S. Korea	1000	SS	15505	R. Kuwait	2245	AA
11730	BSKSA, Saudi Arabia	1430	AA	15555	R. Pakistan	1620	slow EE
11740	R. Portugal	1900		15570	R. Ukraine Int'l	1500	
11745	Channel Africa, S. Africa	0200		15575	BBC via Cyprus	1300	
11755	R. Finland Int'l	0130		15615	Rashuth Hashidur service, Israel	1700	Hebrew
11765	R. Beijing, China	2100	SS	15630	V of Greece	1230	
11780	R. Nacional Amazonia, Brazil	2345	PP	15725	KCBI, Texas	2200	
11790	VOIRI, Iran	1200	Urdu/EE	16000	VNG, Australia (time stn)	0800	
11795	UAE Radio, Dubai	1600		17440	R. Kiribati	0600	
11795	R. Denmark, via Norway	2300		17535	HCJB, Ecuador	0000	USB
11800	RAI, Italy	0100		17540	R. Pakistan	1600	
11805	R. Georgia, Georgia Rep.	0600		17610	R. Netherlands	1330	
11810	R. Jordan	1400	AA	17715	R. Alma Ata, Kazakhstan	2030	
11820	R. Sweden	0100		17725	V of the Great Homeland, Libya	2100	AA
11825	R. Tirana, Albania	2200		17730	Vatican Radio	0628	s/on
11830	Voice of Russia	1230	RR	17730	R. Alma Ata, Kazakhstan	1830	
11835	R. El Espectador, Uruguay	0100	SS	17740	R. Yugoslavia	1200	
11840	R. Tirana, Albania	0230	s/on	17740	R. Sweden	1300	EE
11855	R. Canada Int'l	1330		17745	Radio Portugal	1330	PP
11860	R. Iraq Int'l	0400		17765	Deutsche Welle, Germany	1330	
11870	R. Yugoslavia	0040		17670	R. Cairo, Egypt	1800	AA
11880	R. Australia	1600		17690	R. Ukraine Int'l	0100	
11885	Broad Corp of China, Taiwan	0000	CC	17690	R. Yerevan, Armenia	0345	
11920	BSKSA, Saudi Arabia	1500	AA	17760	R. Filipinas, Philippines	0230	
11925	R. Bandeirantes, Brazil	0100	PP	17770	R. New Zealand Int'l	0445	
11938	V of People of Cambodia	0030		17815	RTV Morocaine	1700	
11955	Voice of Turkey	0400	TT	17860	R. Moscow	2330	
11955	BBC relay, Oman	0130		17860	Qatar Bc Service	1300	AA
11960	RTV Malienne, Mali	0900	FF	17870	R. Sweden	1500	
11965	V of the UAE	1800	AA	17875	R. Canada Int'l	2130	
11970	R. Havana Cuba	0130		17880	R. Finland Int'l	1300	
11980	R. Ukraine Int'l	0230	Ukrainian	17900	R. Pakistan	1115	
11985	R. Prague, Czech Republic	0400		18930	WHRI, Indiana	1600	
11985	UAE Radio, Dubai	2100	AA	21490	Radio Austria Int'l	1430	
12000	R. Pamyat, Russia	1430	RR	21455	HCJB, Ecuador	1900	
12015	Radio France Int'l, via Gabon	1600		21470	BBC via Cyprus	1230	
12050	R. Cairo, Egypt	0300	AA	21505	BSKSA, Saudi Arabia	1600	AA
12060	R. Ukraine Int'l	0130	unid lang	21625	Radio Sweden	1330	
12085	R. Damascus, Syria	2005		21705	R. Norway Int'l	1200	NN
13605	Radio Australia	2300		25690	UAE Radio, Abu Dhabi	1230	
				25870	WFLA, Tampa, FL (cue xmtr)	2000	FM mode

such features as frequency readout to better than 1 kHz and mechanical filters, and were able to handle strong signals without overloading better than most contemporary solid state receivers! Many top DX'ers use the R390A/URR as their primary receiver. Designed by Collins for the U.S. military, the R390A's mechanical filters provide selectivity that is legendary among SWL's. The R388, also known as the 51J4, was the predecessor to the R390A and is almost as esteemed. The 51S-1 was a general coverage receiver similar to Collins's famous "S-line" series of ham band receivers, and for years was a favorite of monitoring installations at such government agencies as the Federal Communications Commission and National Security Agency. Collins receivers are the most expensive of the classic vacuum tube radios, and they are also expensive to repair. However, the quality of Collins receivers is unsurpassed and there are several specialist firms devoted to providing spare parts and service for Collins units. A Collins receiver isn't just a radio—it's an investment that will last a lifetime!

Hammarlund: This is where I get misty-eyed and somewhat emotional. Hammarlund radios are my personal hollow-state favorites! The better models are big, roomy, and easy to work on. They are second only to Collins in their resistance to strong signal overloading, and perform great on the standard AM broadcast band. One rig I own is the HQ-150, a single con-

version wonder from 1955 that includes both a Q-multiplier and a variable crystal filter. This is considered by some as the best receiver ever made for AM broadcast band DX. It is hot on the AM band, has a terrific noise limiter, and the ability to use both the Q-multiplier and crystal filter together to give a lot of selectivity options. The HQ-160 was introduced in 1958, and had a Q-multiplier and slot filter circuit. It also had—to my ears—the best audio of any Hammarlund receiver. The "king" of the Hammarlund receivers was the HQ180, introduced in 1958. This model is still used by some top DX'ers because of its numerous selectivity options (including 3, 2, 1, and 0.5 kHz bandwidths along with selectable sidebands and a slot filter), superb noise limiter, and audio quality. Another worthy Hammarlund receiver is the SP600, a model originally designed for the U.S. military. The SP600 tuned up to 54 MHz, but had no provision for FM reception. While I do like Hammarlund receivers, they did unfortunately produce some clunkers such as the HQ145 and HQ200 models; these should be avoided.

Drake: Collins and the R. L. Drake Company were the only American vacuum tube receiver manufacturers who managed to make a successful transition to solid state. Drake, the company responsible for today's state-of-the-art R8 receiver, produced some classic radios that were far ahead of Hammarlund and Hallicrafters in several key areas such as frequency read-

out. Drake pioneered the use of crystal-controlled oscillators for tuning and the resolution to better than 1 kHz such circuits provided. Drake receivers tuned in 500 kHz segments determined by the frequency of the crystal in the tuning oscillator. Drake receivers were intended mainly for use by hams, but could tune the shortwave broadcasting and utility bands by plugging in the appropriate crystals. Perhaps the most popular Drake receiver among collectors today is the legendary 2B. This model has three different selectivity bandwidths and was the first affordable receiver with passband tuning. Running second in popularity is the R4 series of receivers, particularly the R4B model. Other interesting Drake models included the 2C and SW4A. Drake still can provide manuals, spare parts, and service for most of their receivers. Additional crystals for various bands are available from crystal manufacturing companies.

What Are The Problems?

Before you plunk down your cash on a classic receiver, you need to understand what you're getting into. Solid state receivers drove vacuum tube receivers off the market for some good reasons. Perhaps the biggest is reliability. Vacuum tube receivers fail and need service more often than solid state receivers. Unless you buy a classic receiver from a dealer that services each unit before sale, you'll probably have to do some work on any unit you buy before

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it will be usable.

The big problem area in most vacuum tube receivers aren't the tubes, but the capacitors. Older receivers have two types of capacitors that usually need replacement: wax and electrolytic. Wax capacitors actually used chemically-treated paper as a dielectric and were dipped in wax to seal them. After about 15 years, the dielectric in these capacitors dries out and the capacitor fails. Fortunately, wax capacitors can be directly replaced with ceramic or mica capacitors of the same capacitance and working voltage. Electrolytic capacitors use a dielectric "paste," and this tends to leak from older capacitors over time. It's best to replace all electrolytic capacitors with new electrolytics of the same capacitance and working voltage. Newer electrolytics are much less prone to leakage than those manufactured in the 1950's and 1960's.

Finding replacement vacuum tubes isn't as big a problem as you might think. There are still plenty of tubes available for most receivers made in the 1950's and 1960's. There are some oddball tubes used by a few receivers, but for most popular receivers replacement tubes aren't a problem. However, it is a very different story with most other parts. Replacement tuning capacitors, knobs, mechanical assemblies, and even power transformers are no longer available—period! The main "replacement parts" source for most vacuum tube receivers is a non-working model of the same unit. Many collectors of vacuum tube re-

ceivers have a few non-working units they "part out" as necessary for their own needs or to help other collectors get their receivers working again.

You will also need to do more regular maintenance on vacuum tube receivers, such as having your receiver's RF and IF stages aligned every couple of years for maximum performance.

One of the virtues of vacuum tube receivers for those of us lacking in dexterity is how spacious they are inside. If you find yourself frustrated by the packed circuit boards of contemporary receivers, then you're in for a treat when you first look at the chassis of a hollow-state receiver. Not only is there plenty of room to maneuver, you also don't have to worry about frying a transistor with too much heat from your soldering iron or zapping a CMOS IC with static electricity. I don't even try to maintain my solid state gear myself, but digging into my vacuum tube gear is half the fun of owning it!

So Where Do I Find One?

If I've whetted your appetite for a classic receiver, I suggested you first start by reading *Communications Receivers: The Vacuum Tube Era* by Ray Moore. This book is available from many of the SWL equipment suppliers whose ads you see in *POP-COMM*, and is a marvelous history of the hollow state era. When you target the receivers that interest you, I suggest going to

the library for back issues of *QST* and *CQ* magazines. These magazines will have reviews of various receivers and also the original ads for them. Before long, you'll see a certain receiver and say to yourself "I gotta have one of those!"

Electronics fleamarkets and hamfests are good places to look for classic receivers. You can often negotiate the best prices at such events. However, you must be careful at such events—don't buy anything unless you have the opportunity to try it out first! A safer but more expensive route is to check with equipment dealers that accept trade-ins of used equipment. Such dealers service the unit before shipping it and usually have a 10 or 15 day return privilege.

A monthly publication that specializes in vacuum tube equipment is *Electric Radio*, and their mailing address is P. O. Box 57, Hesperus, CO, 81326. A sample copy is \$3, and I highly recommend their classified ads as "happy hunting grounds" for hollow-state receivers. Finally, don't forget to try a classified ad offering to buy a certain receiver. Such an ad in our sister publication, *CQ*, was successful in locating a beautiful Hammarlund HQ150 for me!

I'd be interested in hearing from you if you have any experiences with classic vacuum tube receivers, particularly those involving restoration, repair, parts sources, parts substitution, etc. If there are enough responses, I'll devote a future column to your tips. ■

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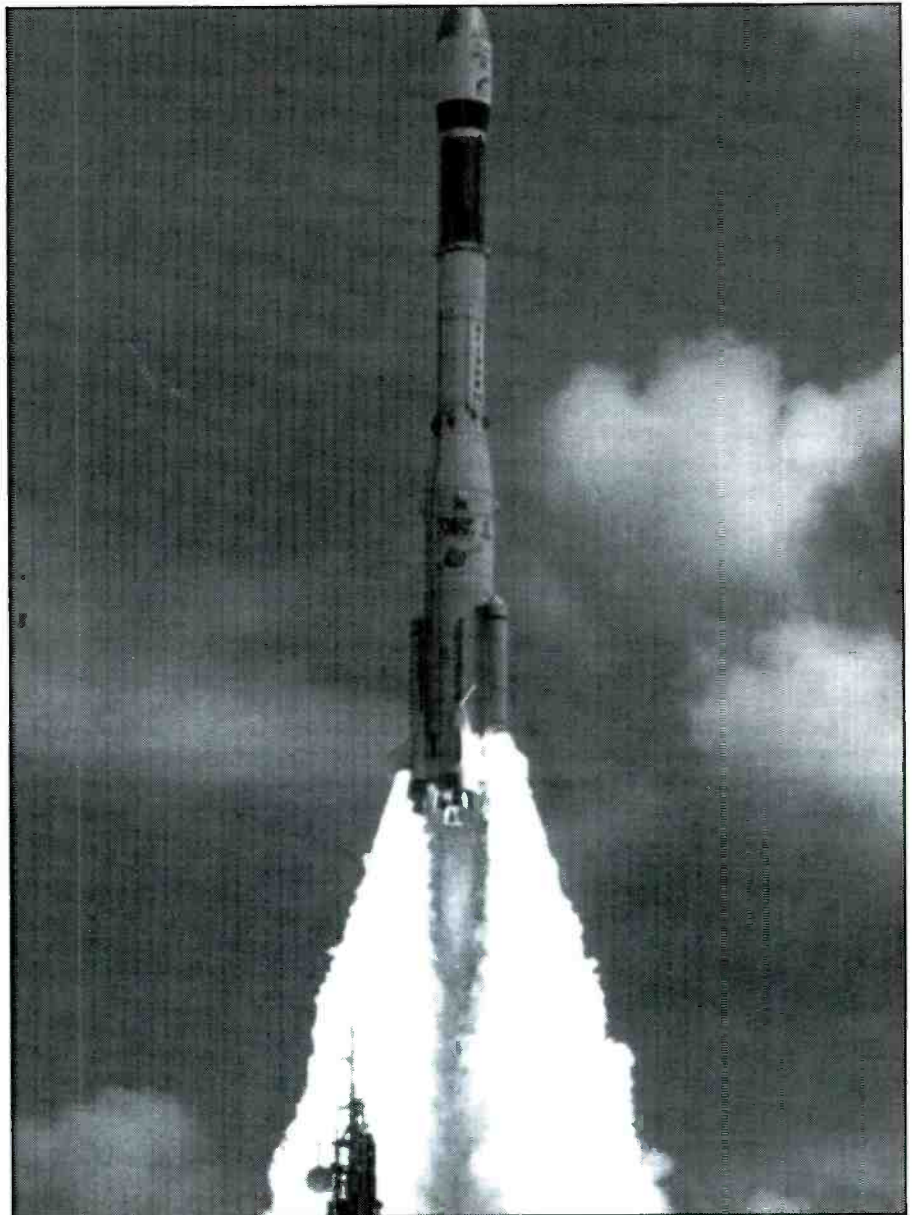
Bill Tynan—AMSAT President

I have been acquainted with Bill Tynan for several years. He embodies all the best qualities of the Amateur tradition. He is tireless in his dedication to the hobby and has been an Elmer to many. Bill is a communication specialist that wrote the QST VHF column for 18 years. W5XO is a VHF'er in the classic sense of the word. Since 1991, Bill has been the President of the amateur Radio Satellite Corporation (AMSAT-NA). AMSAT-NA is a Washington, D.C. based non-profit educational organization founded in 1969. AMSAT is responsible for the funding, building, launching and operation of all US Amateur satellites and takes a leadership role in the development of AMSAT groups the world over. I recently had an opportunity to talk with Bill about AMSAT, the Amateur Space Program in general and specifics of their current project called Phase III D.

What Is Phase III D?

"Well, first you must understand what we mean by phase. We arbitrarily called Oscar (Orbiting Satellite Carrying Amateur Radio) 1 thru 5 Phase I satellites. They were short-lived, no solar cells to recharge the battery. Phase II birds were like Oscar 6 thru 9. They were also in Low Earth Orbit (LEO) with a life span of several years. Each carried a transponder which allowed two-way communications, the first satellites carried beacons only. At an altitude of 600 to 800 miles the satellites were overhead a relatively short time on each pass. DX'ing was limited by their low orbits. In fact, it was a real break through when a ham worked all states (WAS) via Oscar 6.

Phase III was initiated to get around some of these limitations and to put up something that would be seen (or remain overhead) for several hours with extended coverage. The first Phase III satellite was launched in 1980 on an Ariane launch vehicle, built by the European Space Agency. The rocket went off course and the spacecraft had to be destroyed by the range officer. The next Phase III satellite was known as III B. After successful launch it was renamed Oscar 10 in 1983. It is still functional in mode B (435 MHz uplink with a 145 MHz downlink) though it still has serious problems due to radiation damage. The third satellite, Phase III C, became Oscar 13. It was launched in 1988 and still working well."



Ariane Launch Vehicle

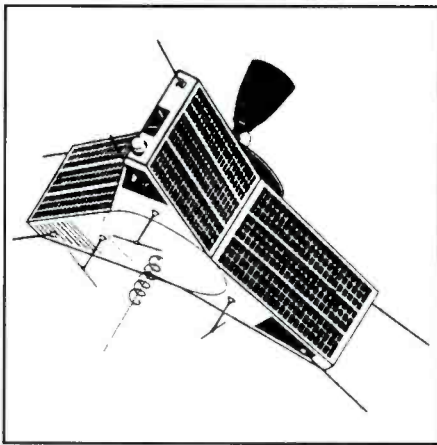
What Will Phase III D Be Like?

"It will be a different configuration, a large satellite. It will be more advanced, it will be in a higher orbit with a 50,000 km apogee. One problem with all satellites is altitude control. Both Oscar 10 & 13 are essentially stabilized with respect to inertial space. This means that the high gain antenna are pointed toward the earth at apogee and pointed away from earth on perigee

(the point at which the satellite is closest to earth during an orbit). The new Phase III D will always have its antenna pointing toward the earth. It will therefore be continually changing its altitude with respect to inertial space. This is a major engineering accomplishment."

Why Is This Important?

"The whole concept of Phase III D is to make it easier for amateurs to operate less



AMSAT Phase III B

power, smaller antenna requirements. This is possible because the satellite will have higher power and higher gain antenna. The whole push is for simplicity. One of my biggest concerns is that many amateurs ask why do the satellites need to be so complicated? They think satellites are just the "Techies" trying to show-off. So we are pushing for simpler operation. Even the orbit of Phase III D will make it easier to track and operate. For example, if the spacecraft was over your house on Tuesday, you know it will be there again on Thursday."

What Is The Launch Date For Phase III D?

"Early '96. It will be on the second flight of the proposed Ariane 5. Ariane 5 is the European Space Agency's newest, heavy lift, launch vehicle. It is much larger than current Ariane rockets."

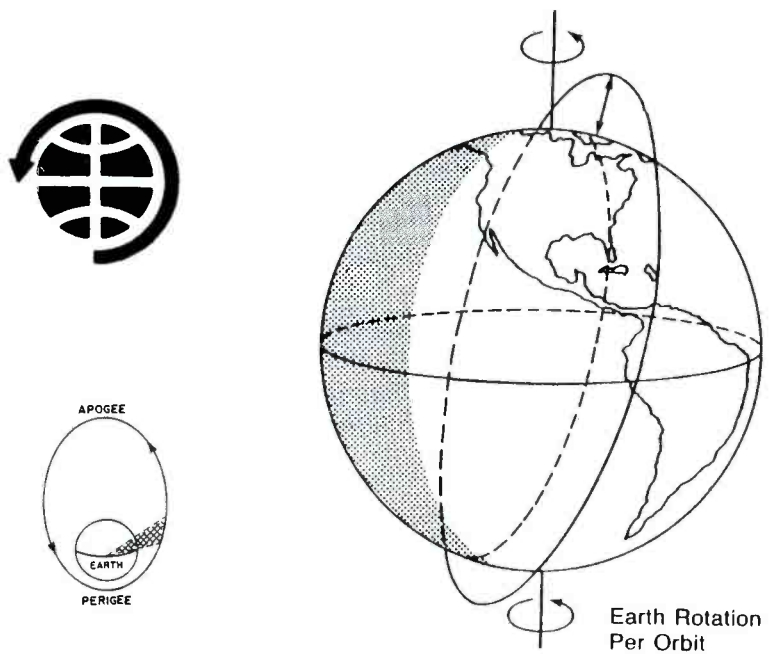
Will Oscar 13 Still Be Operational In '96?

"It should be operational until at least '95. It does have a problem, however, that we did not notice until after launch. Its orbit is such that its perigee is lowering due to certain gravitational pulls on the spacecraft. It is expected to re-enter in '95 or '96. The orbit cannot be changed as the onboard propulsion system is out of fuel. Phase III D will have two propulsion systems. One will put the satellite in proper orbit and the second will be used to maintain the orbit. This should lengthen the life of the satellite considerably."

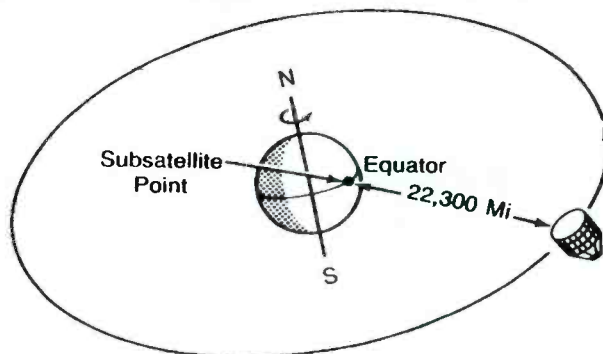
How Will The Orbit Be Financed?

"A satellite of this kind will not come cheap. In fact that is why AMSAT-NA joined the Phase III D project. It is an international program. We were in the first stages of developing a geo-stationary satel-

Polar Orbiting Satellites



Geostationary Satellites



lite, which we hope to eventually build. It is an excellent goal, however, all the funding would have to come from the Americas. You can't find many Europeans, for example, who would help sponsor a satellite that they will never get any use out of. Our studies have shown it will take \$4 million to get a satellite into geo-stationary orbit. Most of these funds would have to come from US sources.

When Phase III D was proposed, it looked like a good opportunity for us to take part in. It will cost about as much as a geo-stationary bird. The main difference is the orbit allows amateurs around the world to use it. We can now get sponsors from

around the world. Much of our work is done by volunteers to keep costs down. The launch of III D will cost over \$1.5 million. This is the most we have ever had to pay. The Microsats (Packsats) cost between \$50 & 100 thousand. AMSAT-NA has raised over \$150 thousand from its 7,000 members. This includes its membership in Canada and Mexico."

We will continue our conversation with Bill Tynan next month. If you are interested in more information in AMSAT membership, satellite publications, tracking programs, etc., write AMSAT, 850 Sligo Ave., Silver Spring, MD 20910, or call (301) 589-6062. ■

Handheld Licensing

All emergency communicators carry a "pack set." This portable VHF or UHF transceiver for the emergency responder is just as important as a weapon that law enforcement personnel will carry. The handheld two-way radio is the communications lifeline at the emergency scene, or back at the station house.

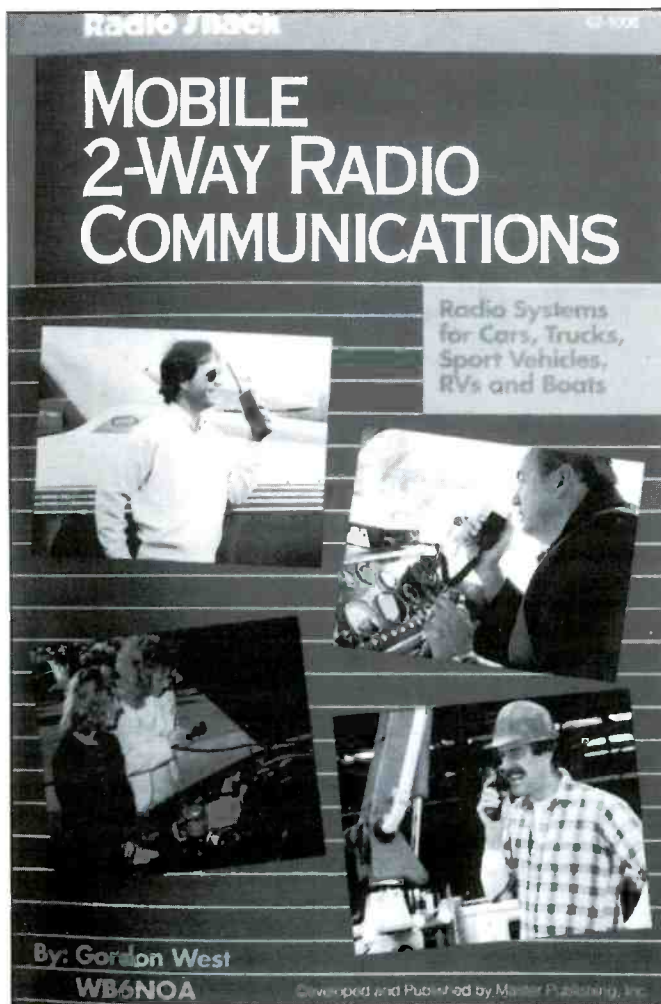
Recent FCC enforcement action may make carrying your handheld dangerous to your pocketbook. The Federal Communications Commission is cracking down on unlicensed two-way radio handhelds used in connection with commercial, maritime, or public safety communications.

Is your handheld transceiver part of a special emergency or public safety system? And, is your radio license system current? If you are operating a handheld as part of a radio system with an expired license, you personally might be held liable for any monitored transmission without the proper FCC authorization.

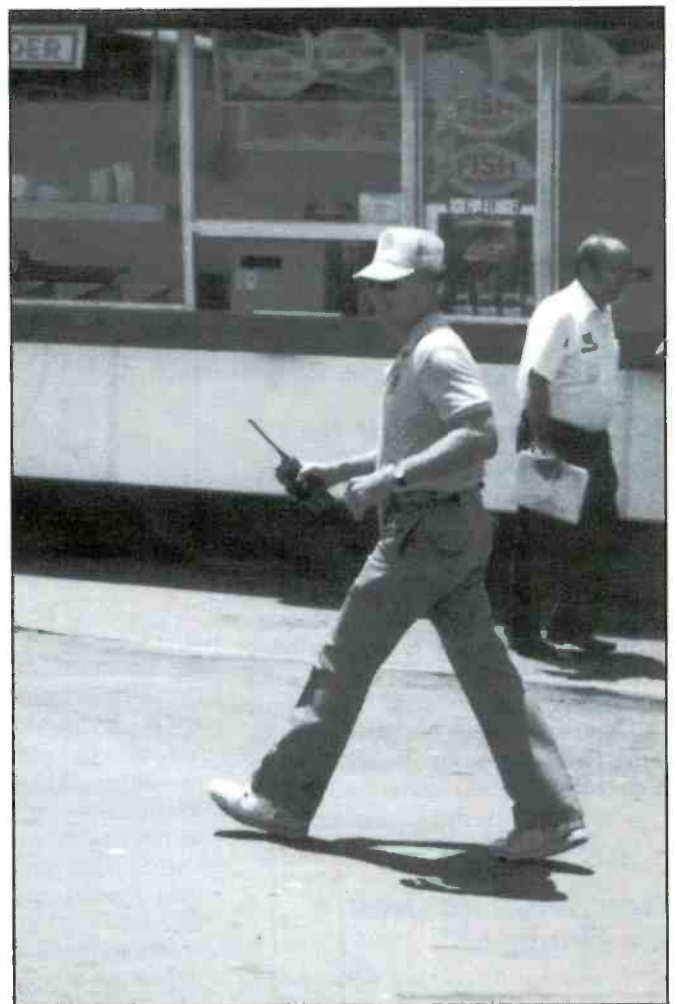
It's easy to find out if you're covered—simply go to your dispatch center, and ask to see their station license records. Look at the expiration date, and also note how many portable units are authorized under that station license. If there are 50 members carrying radios with your rescue

squad, but you only have 20 portable assignments, you might be in violation of your license grant.

If you operate handheld portable units around the state or around the country for emergency team responses, you may wish to consider obtaining an itinerant license within the business radio service. This is the same type of license that many "road shows" use when they travel around providing intercommunications within their group at unspecified locations. You should apply on FCC Form 574, and you will find some handy license preparation guides developed by the National Association of



New Gordon West book will assist emergency teams in obtaining the correct FCC license.



Business band itinerant channels are one option to rescue squads for statewide operation.

Business & Education Radio Users (NABER) by writing 1501 Duke Street, Alexandria, VA 22314; 800/759-0300.

If you operate your portable units for both personal communications between your family members and as part of a

REACT CB radio system, you might want to apply for a license in the general mobile radio service. GMRS licensing is also accomplished on FCC Form 574, and frequency coordination is not required.

Probably the best guide for obtaining the

NOW YOU'RE TALKING!

The Code-Free Ham License is Here

Enjoy all Amateur Radio privileges above 30 MHz without having to pass a code test. All you have to do is pass a 55-question exam on basic radio and the FCC regulations. ARRL's new book, **Now You're Talking** makes understanding what is required on the test a snap! And there are exams given all over the country every weekend.



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225 MAIN STREET
NEWINGTON, CT 06111

CIRCLE 52 ON READER SERVICE CARD

FCC 974
NOVEMBER 1987
Federal Communications Commission
APPLICATION FOR PRIVATE LAND MOBILE AND GENERAL MOBILE RADIO SERVICES

Approved by OMB
5010-0128
Expires 12/31/90

IMPORTANT NOTICE: ALL applicants EXCEPT Public Safety, Special Emergency and governmental entities MUST include the PROPER FEE with their applications and MUST FILE their applications at the PROPER LOCATION. See FCC 974 Instruction Booklet.

COMMISSION USE ONLY

Page No. _____ of _____

1	2	3	4	5	6	7	8	9	10	11	12
Frequency Class	Class	No. of Stations	Business Purpose	Class	ERP	AA-T	Class	App. Reg. To TV	Antenna Location	Antenna Length	Number of Mobiles By Category
461.100	FB2T	1	20K0F3E	100							10
466.100	FX1T	1	20K0F3E	70							
466.100	MO	10	20K0F3E	100							
461.100	MO	10	20K0F3E	100							

13 Area of Operation for Mobile, Temporary, or Itinerant Station

14 Station Address or Geographic Location

15 City

16 County

17 State

18 Latitude of Primary Control Point (include Telephone Number and location of all Back-Country Stations with latitude under 30°)

19 Frequency Control No.

20 Radio Service

21 Applicant Licensee Name (see Instructions)

Jones Construction, Inc.

22 Mailing Address (Number & Street, P.O. Box or R.F. No.)

Attn: Fred E. Jones
ADDRESS: PO Box 35420

23 City

Gettysburg

24 State

PA

25 ZIP Code

17325

26 Will applicant be permitted to use an existing station structure? If yes, give call sign and make serial of existing unit.

27 For all fixed address stations whether the antenna will exceed 30 ft above ground or not, give all pertinent information. Give all requested height information. Antenna tower, pole, etc. are not considered "one-time" structures.

28 If not 27, give "yes", give the name of the nearest search leading area, and the location and direction to the nearest relay.

29	30	31	32	33	34	35	36	37
Call Sign	Structure Type	Height (ft)	Height (ft)	Height (ft)	Antenna Location	Direction	Direction	Direction
A								
B								
C								
D								
E								
F								
G								

38 Applicant Classification

39 Applicant's Occupation

40 Applicant's Business

41 Applicant's Business

42 Applicant's Business

43 Applicant's Business

44 Applicant's Business

45 Applicant's Business

46 Applicant's Business

47 Individual completing this application form

Fred E. Jones
Telephone No. 717-555-3200

FOR COORDINATOR USE ONLY

CERTIFICATION: READ CAREFULLY BEFORE SIGNING

1. Applicant warrants that due to the use of any particular frequency regardless of prior use by licensee or otherwise

2. Applicant will have unobstructed access to the radio equipment and will control access to exclude unauthorized persons

3. Neither applicant nor any member thereof is a foreign government or representative thereof

4. Applicant certifies that all statements made on this application and attachments are true, complete, correct and made in good faith

5. Applicant certifies that the signature is that of the individual or partner, or officer or duly authorized employee of a corporation, or officer who is a member of an unincorporated association, or appropriate official or approved official on behalf of a governmental entity

WARRANTY: FALSE STATEMENTS MADE ON THIS FORM ARE PENALIZED BY FINE AND/OR IMPRISONMENT. U.S. CODE TITLE 18, SECTION 1001

Typed/Printed Name: Fred E. Jones

Signature: Fred E. Jones

Date: 4/20/83

Sample 4

Note: Itinerant systems: systems operating at temporary locations and mobile only systems do not have permanently located control points; however,

the applicant should insert an address and telephone number where a person responsible for the radio operations can be reached.

A sample N.A.B.E.R. itinerant license application.



Marine handhelds may be licensed as a "portable," using FCC Form 506.

GMRS license is from the Personal Radio Steering Group, PO Box 2851, Ann Arbor, Michigan 48106. You can also write the REACT GMRS User's Group, PO Box 395, Corona, California 91718.

The GMRS service also offers 7 addi-

Designator	Frequency (MHz)
5625	462.5625
5875	462.5875
6125	462.6125
6375	462.6375
6625	462.6625
6875	462.6875
7125	462.7125

The GMRS "splinter" frequencies are ideal for low power on-scene rescue squad communications.

tional splinter frequencies for low-power simplex use—ideal at emergency communications scenes when regular VHF or UHF channels are filled to the brim with other activity.

Brand new for emergency medical personnel are frequencies within the 220-222 MHz band for narrow band technology emissions. The FCC is finalizing the exact frequencies, but it may be some time before we find relatively inexpensive VHF portable gear for these channels.

Most important, keep your system's call letters handy in case you are ever asked what frequency you are operating as part of a system. If you work with several different agencies and run multi-channel equipment, you should really have authorizations

from each of these agencies as some of your back-up paperwork.

The Federal Communications Commission is also cracking down on non-type-accepted equipment. Most violations are handed down to users operating ham radio equipment that has been modified for out-of-band transmissions on business, emergency, medical, or marine frequencies. Land mobile equipment falls under Part 90 type-acceptance, and marine equipment falls under Part 80 type-acceptance.

So what proof do you have that the handheld you are operating is part of a licensed system? Get together with your emergency group, and double check that all of these handheld transceivers are adequately covered under the station license.

ICOM™ IC-R7100 Sweeping 1800 Channels/Minute

DELTA COMM™ I-7100 communication manager and your MS-DOS computer gives you a custom interface integrated with optimized software that will not just control but will maximize the potential of your R7100. Here are a few (there are many more) examples of the advanced features DELTA COMM™ I-7100 has to offer.

- DELTA COMM™ I-7100 CYBERSCAN feature for monitoring systems employing cluster or frequency hopping techniques.
- Individually programmable database volume levels (by channel) while scanning.
- Spectrum log function will sweep a frequency spectrum, generate a histogram and log frequency/activity to screen and/or disk in real time.
- Dual squelch detect electronics integrated with DELTA COMM™ I-7100 software guarantees optimum speed and performance during a frequency search or database scan.
- Programmable signal strength threshold limits with full 8-bit accuracy allow selective monitoring and logging. Only stations having signal strength less than or greater than or within upper/lower user defined signal strength window limits will be monitored and/or logged.
- Continuously updating activity information window displays the last 19 active channels.
- Channel activity status is displayed in real time with activity log function. To determine system loading when first 5 channels are simultaneously busy, "All Trunks Busy" message is logged to disk.
- Receiver characterization with DELTA COMM™ I-7100 birdie log function automatically logs any receiver birdies prior to a frequency search operation. Birdie channels are then locked out during a frequency search operation, thus eliminating false channel logging.
- Custom interface allows selective program control of relay contact. Possible uses include activating an operator alert, switching antennas via coax relay or turning on a tape recorder when user defined frequencies are found to be active.



DELTA COMM™ I-7100 communication manager comes complete with Delta Research custom (CI-V) communication interface, UL listed power supply, manual and receiver interface cable for \$349.00 + \$8.00 (U.S.) or \$25.00 (foreign) S&H. Contact us for additional information on DELTA COMM™ communication managers for ICOM™ R7000, R71A, R72 and IC735. Performance is proportional to video card, type of computer and receiver squelch detection method.

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CIRCLE 63 ON READER SERVICE CARD



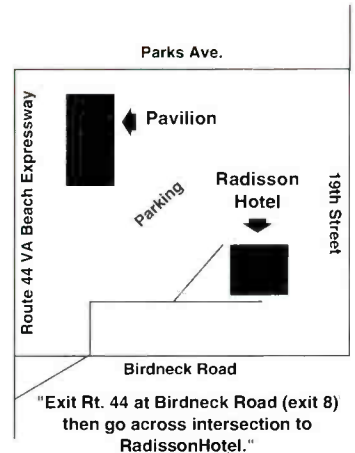
Popular Communications

Worldwide SWL Conference! October 2-3, 1993

* **Meet major SW broadcasters**

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- ★ RTTY – Tuning Digital Comms with Fred Osterman from Universal Radio, Inc.
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- ★ SW Broadcasting – It's Two-Way Communication with noted international broadcaster Ian McFarland



PLUS – Speakers from the VOA, BBC and more!!!

KEYNOTE SPEAKER, Roy Neal, K6DUE, will talk about SAREX (Shuttle Amateur Radio Experiment) and Tuning the Space Shuttle Comms. He's the Chairman of SAREX, for ARRL-AMSAT and former NBC News Correspondent.

Dozens of manufacturers and dealers of SWL and amateur radio equipment will be on hand demonstrating their equipment and ready to answer your questions on the spot -- including -- Kenwood, ICOM, Yaesu, Alinco and more!

The SWL Conference will be held in conjunction with the **18th Annual Virginia Beach Hamfest and Computer Fair** (the areas LARGEST hamfest and computer exhibit). The first Popular Communications Worldwide SWL Conference, held at the Radisson Hotel, Virginia Beach, Virginia has something for everyone! Make plans NOW to be there. As part of the one-time \$25 admission charge, on October 3 you also get a tour of nearby Norfolk Naval Base that includes a visit to a ship and Naval Base waterfront.

Make Plans Now to attend both days – October 2 - 3, 1993 at the Virginia Beach Pavilion; minutes from the beach, Navy bases and historic sites!

Radisson Hotel is across parking lot from Pavilion. You can walk between both!

"Talk-in frequency 146.970 MHz."

To acquire room reservations at the Radisson Hotel Virginia Beach call 1-800-333-3333 and ask for Virginia Beach Hamfest rates.

Yes, please reserve _____ tickets at \$25 each.



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BROADCAST DX'ING

BY ROGER STERCKX, KVT1JH

DX, NEWS AND VIEWS OF AM AND FM BROADCASTING

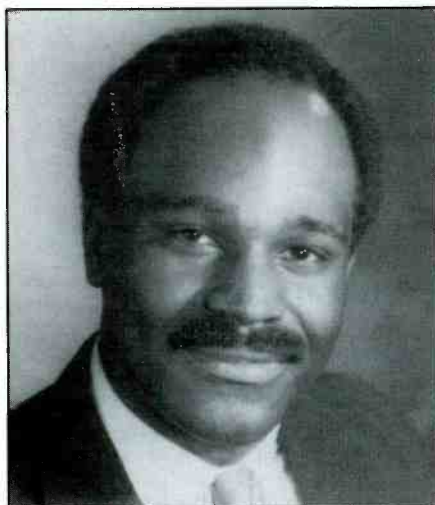
Station's Story: Buckley Broadcasting has owned KGIL/1260, San Fernando, Calif., since 1960, and for years they have been the radio voice of the San Fernando Valley, north of Los Angeles. Around 1977-78, they purchased KVFM (now KMGX-FM/94.3) in San Fernando. In 1986, KGIL changed from music to an all-talk format.

Recently, Buckley sold the AM 1260 station to Mount Wilson FM Broadcasters, which also owns KOJY/540 (ex-KKJZ, Hesperia) in Costa Mesa, and KKGO-FM in Los Angeles. In January, KGIL went dark for three weeks as it converted to a solid-state transmitter and returned to the air as KJQI ("K-Joy") with an adult standards format.

KJQI and KOJY simulcast on 1260 and 540. Both stations are known as "K-Joy," and that's the way the simulcast announcers identify.

Thanks to Michael Carland, Santa Clarita, Calif., for this information. Michael also tells us that the San Diego Price Club on Morena Boulevard runs a three-minute repeating recorded message over a low-power FM transmitter operating on 96.9 MHz. Has about a 1-block range. The 'cast relates to sale items, etc.

Good Guy Names V.P.: Stanley H. Greene, who produces and hosts the *Financial Success* radio program over Philadelphia's WDAS, has been named Vice President and General Manager of Greater Media Cable's Philadelphia cable system. Greene had previously held the same position at The Lenfest Group, and prior to that he had been the Facilities Engineering/Design Manager of Bell of Pennsylvania. Sports fans may fondly recall Stan Greene from his days as Captain and guard of the



Stanley H. Greene, of Philadelphia's WDAS, got a challenging new position in broadcasting.

University of Pennsylvania basketball team. Good luck at Greater Media, Stan!

A Reminder: A letter from DX'er Albert A. Nunnery, Registered Monitor KNC4ER, of Cary, N.C. offers good advice to those who want to increase their QSL responses from broadcast stations. He says that DX'ers need to let broadcasters know how much it means to get their response. But DX'ers should also keep in mind that postage is expensive, and if a station is watching its expenses (as many are) mailing out QSL's can add up to more than its worth to the station in good will. So, an SASE is important to enclose with a reception report. After all, it is *our hobby*, not theirs.

Broadcasters may well appreciate hear-

ing from distant listeners about how their signals are getting through. But this information from secondary audience members doesn't normally cause for them to drop everything to provide a response. It could take them a while to get around to sending a reply. DX'ers should therefore be patient. Broadcasters are running businesses, and some do it with far fewer staff members than you might think possible for a station to actually operate. Some stations get by with only 2 or 3 people on staff.

Lastly, you do not absolutely need to have the most expensive digital receiver available to hear DX. Albert once used an AM/FM clock radio to tune in stations a thousand miles away.

More About DX: A letter from Gary K. Hamlin, N2OHO, and Registered Monitor KNY2AAW, Utica, N.Y., wrote to say that one of his favorite DX'ing occasions takes place once each winter. Good time now to plan for this for the coming DX season.

Every year on the night of December 26, Gary spends several hours trying to log and positively ID as many mediumwave stations as he can. Last year he snagged 66, plus another 16 without good ID's.

Get Thee Off The Air: WPIT-FM/101.5, a religious station in Pittsburgh, Penna., was recently taken over by another local religious station, WORD-FM/104.7 (ex-WEZE-FM). WORD-FM moved its operations to the former WPIT-FM frequency, while the old WORD-FM channel was quickly picked up by a country music station. WPIT/730 is continuing the religious programming that had previously been sent out over its now-defunct sister station, WPIT-FM.

These changes may not have taken place in the spirit of love and harmony one might

Applied To Construct New FM Stations

CA	Arnold	95.9 MHz	500 watts
CA	Columbia	98.9 MHz	300 watts
CA	Palm Springs	90.5 MHz	3 kW
FL	Crystal River	90.9 MHz	2 kW
FL	Pace	88.9 MHz	6 kW
ID	Cottonwood	90.1 MHz	250 watts
IL	Mt. Olive	105.3 MHz	6 kW
IL	Palatine	88.3 MHz	100 watts
IL	Pinckneyville	104.3 MHz	3 kW
MA	Falmouth	91.9 MHz	654 kW
MD	Charlotte Hall	89.7 MHz	1.2 kW
MD	Millington	88.7 MHz	10 kW
MI	Iron Mtn.	91.3 MHz	10 kW
MI	L'Anse	106.1 MHz	50 kW
MI	Rogers City	99.9 MHz	50 kW
NY	Potsdam	90.3 MHz	100 watts
OH	Thompson	89.1 MHz	11 kW
TN	Dyer	94.3 MHz	6 kW
VI	Christiansted	88.5 MHz	10 kW
VT	Marlboro	101.5 MHz	
WA	Winlock	95.1 MHz	380 watts

Construction Permits Issued For New FM Stations

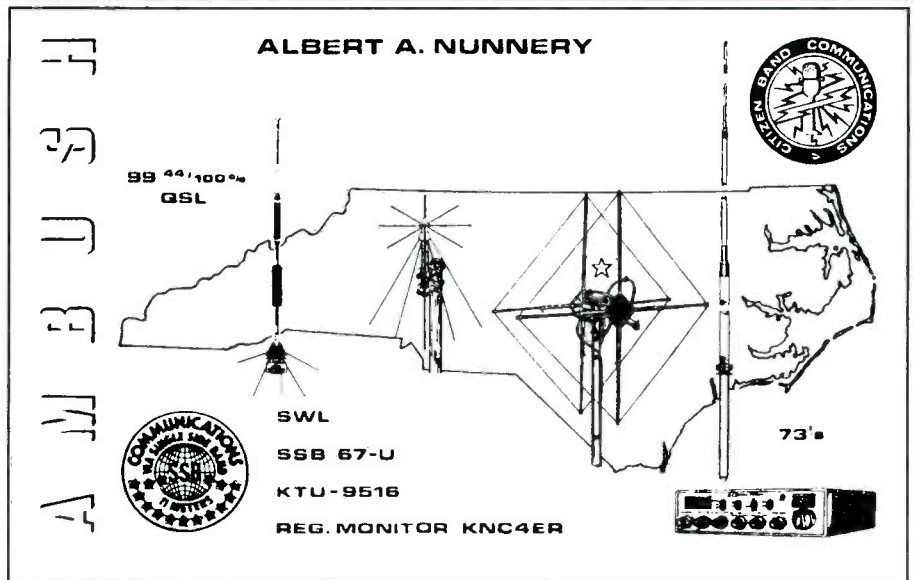
AR	Fayetteville	89.3 MHz	5 kW
AR	Ft. Smith	89.7 MHz	1 kW
AR	Hamburg	99.5 MHz	3 kW
CA	Garberville	103.7 MHz	7.6 kW
CA	Middletown	98.7 MHz	3 kW
IN	Lafayette Twp.	91.1 MHz	1 kW
MN	Staples	94.7 MHz	6 kW
MO	Gallatin	101.7 MHz	15 kW
MO	Malta Bend	97.5 MHz	3.4 kW
NC	Carolina Beach	106.7 MHz	1.8 kW
NH	Gorham	107.1 MHz	6 kW
NH	Keene	90.7 MHz	1.5 kW
NJ	Ocean City	91.3 MHz	10.5 kW
NM	Eunice	100.9 MHz	3 kW
NM	Raton	90.9 MHz	100 watts
NY	Patterson	90.7 MHz	Low Power
PA	Murrysville	88.2 MHz	100 watts
PA	S. Waverly	96.1 MHz	940 watts
SD	Brookings	90.7 MHz	
VA	Ivanhoe	90.1 MHz	250 watts

have expected from evangelical stations. Two years ago, when WORD-FM showed up, a number of the more popular WPIT-FM syndicated radio preachers dumped WPIT-FM to go to the new station. WPIT-FM then modified its program format with a more contemporary religious music approach. It ended up with a bigger morning drive-time audience than WORD-FM. Recent newspaper reports said some WPIT-FM listeners felt that this latest move was a hostile effort by aggressive WORD-FM intended to finally force 46-year old WPIT-FM out of the religious broadcasting picture in the Pittsburgh market.

We appreciate this information from A. J. Berger, Monongahela, Penna.

Not Standing on Formalities: After a few readers wrote in to ask if we knew why a broadcaster in Brooklyn, N.Y. isn't required to announce call letters, we decided to find out. The station is *Radio Soleil D'Haiti* on 97.7 MHz, which has no English language programs. My inquiries turned up information that seems to indicate that this is a well-run, very professional sounding, and unlicensed station that has been on the air for quite some time offering programs to the Haitian community. It is operated openly and has even turned up on local TV station news coverage during several crises in Haiti. No, we don't know the secret of how this station avoids FCC problems.

Report From Russia: A friend of ours



This attractive monitoring card from Albert Nunnery, Registered Monitor KNC4ER, is included with all of his reports to broadcasters.

was one of the American engineers who went to Moscow to put that nation's first FM rock music station on the air. He got a look at the jamming equipment that the Russians once used. He reports that it's positively ancient, but still looks to be in working condition.

There are two big electronics fads in Moscow, one is cellular phones and the other

is CB radio. CB's aren't authorized but the government doesn't try to stop their use. A new or used working CB radio of any vintage is worth the equivalent of \$400 on the black market.

Classic Radio: In Calgary, Alberta, Canada, station QR-77/770 has "Network Replay" seven nights a week from 11 p.m. till midnight, and again at 4:05 to 5 a.m., with

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Applied For FM Facility Changes

KEMB	Emmetsburg, IA	98.3 MHz	Seeks move to 100.1 MHz.
KMTB	Murfreesboro, AR	99.3 MHz	Seeks move to 99.5 MHz, 20.5 kW.
KTSW	New Braunfels, TX	89.9 MHz	Seeks move to San Marcos, TX.
WDGE	Saranac Lake, NY	101.7 MHz	Seeks move to 106.3 MHz, 5.1 kW.
WJWF-FM	Artesia, MS	100.1 MHz	Seeks move to 99.9 MHz, 47.25 kW.
WMPI	Scottsburg, MI	100.9 MHz	Seeks move to 105.3 MHz, 6 kW.
WVVV	Blacksburg, VA	104.9 MHz	Seeks move to 105.3 MHz, 25 kW.
WYDA	Graceville, FL	102.1 MHz	Seeks move to 101.7 MHz, 6 kW.

Changed FM Facilities

KMIH	Mercer Island, WA	104.5 MHz	Moved to 90.1 MHz.
KSWP	Lufkin, TX	91.1 MHz	Moved to 90.9 MHz, 30 kW.
KVST	Huntsville, TX	103.5 MHz	Moved to 103.7 MHz, 14.9 kW.
KWHO	Weed, CA	100.9 MHz	Moved to 102.3 MHz, 5.5 kW.
WAIA	St. Maty's, FL	93.3 MHz	Moved to Callahan, FL.
WDZD	Shallotte, NC	93.5 MHz	Moved to 103.7 MHz, 25 kW.
WEEC	Springfield, OH	100.7 MHz	Became non-commercial.
WHJC	Savannah, GA	88.5 MHz	Moved to 90.3 MHz, 6 kW.

classic old radio programs. CKNW/ 980, New Westminster, B.C., has old time radio programs either on Saturday or Sunday nights. KFBK/1530, Sacramento, Calif., has old time radio late Saturday and Sunday nights. This information kindly offered by Tas Richardson, Alberta, Canada.

A *Rising Star*: WPNA/1490, Oak Park, Ill., runs a varied foreign language programming schedule. The station is located on the 6th floor of the Oak Park Arms Hotel, which brought about a strange situation. Air personality Sophia Boris found herself stuck on the elevator between floors when the machinery decided to stop run-

ning. The 4 p.m. air time for her Polish language program was rapidly approaching. Sophia knew all about how the show must go on, and she had the answer. Picking up the elevator's emergency telephone, she spoke to the hotel switchboard operator who patched Sophia through to the WPNA studios. Station engineers managed to put Sophia's program on right from the stuck elevator, at least until nearly 5 p.m. when mechanics arrived and got the thing fixed.

That excellent tidbit furnished by regular correspondent Elmer Wallesen, La Grange Park, Ill.

Achy, Breaky, Law: St. Charles County

Sheriff's Deputies in Harvester, Missouri, had a tough hombre cornered during a two-hour stand-off recently. The agitated man was barricaded in his home, was heavily armed with at least 9 or 10 shotguns, and was threatening to hold his father hostage. As it was, he was out on \$25,000 bail for unlawful use of a weapon.

Deputies negotiated long and hard. Eventually they got the man to agree that he would surrender only if he could hear country singer Garth Brooks' rendition of the song *Friends In Low Places* over the radio. Deputies quickly contacted St. Louis C&W station WIL-FM/92.3 and asked them to play the song as soon as possible. Upon hearing Brooks' song, the man immediately gave himself up and was taken to a mental health center for evaluation.

That gem supplied by James Stulce, St. Charles, Mo.

Sideband Radio: What is becoming known as "sideband radio" in broadcasting has nothing to do with SSB, as that term may be known to radio hobbyists. In broadcasting it now means using the subcarriers of existing FM stations to send out foreign language programs, most especially to the large (and growing) Asian audiences in larger cities. These affluent audiences demand more programming than is available to local stations, so specialized stations are now sending out these programs on subcarriers. The programs can be received only on special receivers which are often sold by businesses in neighborhoods where members of the audience live. Advertisers have a direct link to very specific audiences, and at a lower cost than over major stations which may reach only a small portion of their target customers. Best of all, these stations don't need their own FCC licenses, antennas, transmitters, or so many other expensive trappings of broadcasting. They merely lease unused subcarriers of existing FM stations, same as background music services.

One successful sideband operation is *Radio Mindinao USA*, which reaches 100,000 Fiji-Americans in the New York metro area. Commercials (in the Tagalog language) over the station cost just over \$700 for 120 one-minute spots per month. Inexpensive.

Next time someone asks you about sideband radio, you'll have an idea what it's all about.

A tip of the capacitance hat to James A. L. Miller, Jr., Winston-Salem, N.C., for the information he provided on this.

Fun & Games Dept.: Ellwood Beach Broadcasting, Inc., obtained a reduction in the amount of its FCC monetary forfeiture. Originally, the fine was \$25,000 but now it's a mere \$7,500.

Ellwood was never even an FCC licensee. It was an unsuccessful applicant for a new FM station in Montecito, Calif. When Ellwood applied to the FCC, they supposedly proposed using the existing KIST tower. While the application was pending, the

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KCEQ Walnut Creek, CA 100.5 MHz

Applied For AM Facility Changes

KAGI	Grants Pass, OR	930 kHz	Seeks drop to 123 watts at night.
KCBN	Reno, NV	1230 kHz	Seeks drop to 820 watts.
KSVE	El Paso, TX	1150 kHz	Seeks increase to 5 kW days.
WACK	Newark, NY	1420 kHz	Seeks increase to 730 watts
WCAW	Charleston, WV	680 kHz	Seeks drop to 10 kW days.
WKKQ	Nashwauk, MN	650 kHz	Seeks increase to 1 kW nights.
WPGW	Portland, IN	1440 kHz	Seeks increase to 45 watts nights.
WTCL	Chattahoochie, FL	1580 kHz	Seeks to operate daytime only.
WTMJ	Milwaukee, WI	620 kHz	Seeks increase to 50/10 kW.
WVFN	E. Lansing, MI	730 kHz	Seeks increase to 50 kW nights.
WVNE	Leicester, MA	760 kHz	Seeks increase to 25 kW days.
WWJZ	Mt. Holly, NJ	640 kHz	Seeks drop to 950 watts nights.
WXKN	Newburgh, KY	680 kHz	Seeks drop to 1 kW days.

Changed AM Facilities

KEZF	Beaverton, OR	1040 kHz	Increased nights to 20 kW.
KUGN	Eugene, OR	590 kHz	Increased nights to 5 kW.
WGSP	Arlington, TN	1210 kHz	Move to Bartlett, TN.
WNYC	New York, NY	830 kHz	Drop nights to 1 kW.

FCC claims that Ellwood learned that the KIST tower was going to be torn down and would therefore no longer be available to Ellwood. The FCC apparently was miffed that Ellwood didn't bring this to the agency's attention when they learned about the problem. Ellwood said that their failure to say anything was not willful, nor did they attempt to deceive.

Ellwood complained about the stiff \$25,000 fine. The FCC said that they felt there was at least some degree of willfulness involved in not passing along this information regarding the Ellwood application. However, they agreed that there wasn't sufficient basis to prove there was deception involved. The \$7,500 FCC fine was for a company that never held an FCC license, never owned a station, never sent out a signal.

The FCC upheld a \$4,000 fine against WXLO-FM, Fitchburg, Mass. This was for broadcasting a telephone conversation without permission. The station admitted

that a conversation with the complainant had been recorded without first informing him that there was an intent to broadcast it later. Later, it was broadcast.

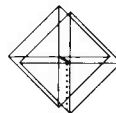
The licensee requested a reduction to \$2,000, saying that the fine was based on an FCC policy that was not in effect at the time of the incident. Also, that the station never received a copy of the FCC policy stating the position that resulted in it receiving a fine higher than other stations with similar violations.

In a lot of words, the FCC said the original amount was OK. While willing to hear pleas for relief from persons and stations receiving fines, the agency adjudges itself on appeals as to whether the amounts were fair and properly set.

Looks like the hands on the studio clock are coming up to station break time, so we will be taking a break until next time. Keep those AM/FM related clippings, station photos, stickers, and station activity notes heading this way. ■

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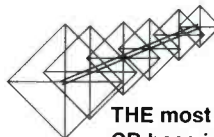


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Could any Deadhead resist this eye-catching sticker from Boston's WBCN? (Courtesy Cam LiDestri, Las Vegas, Nev.)

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YOUR GUIDE TO SHORTWAVE "UTILITY" STATIONS

Radio officer E. J. Kidd III who was aboard the USNS Sealift Caribbean, TAOT-174, callsign NRKV, sent in information that stated the USCG Communications Station NMA in Miami, FL suffered heavy damage during Hurricane Andrew and as a result the 500 kHz Distress Service at that station would not be restored. Additional details indicated that effective August 1, 1993, all USCG Communications Stations and Cutters will cease all Morse code services in the Medium Frequency radiotelegraphy band and they will discontinue watchkeeping on the 500 kHz Distress Frequency.

The Coast Guard announcement continued, "More efficient telecommunication systems are now available to provide the mariner with options for initiating or relaying distress alerts, and passing and receiving maritime safety information. These options include INMARSAT, Radio Telex (SITOR), MF/HF SSB and VHF Radiotelephone, and Satellite EPIRBS (for distress alerts and telecommunications), and INMARSAT Safetynet, NAVTEX and HF NAVTEX (SITOR) (for maritime safety information broadcasts). NAVTEX broadcasts include the same notices to mariners, weather, search and rescue and fixed fishing gear location products that have been provided by the MF Morse broadcasts. Distress and other calls to any USCG Communication Station can also be made on any of the following HF SSB radiotelephone channels: 424 (4234 kHz), 601 (6200 kHz), 816 (8240 kHz), or 1205 (12242 kHz). Meteorological broadcasts are also made on these channels. We believe that options provide sufficient redundancy to ensure that adequate distress and

Data On Sealift Tankers		
Vessel Name	Callsign	Builder
Sealift Mediterranean	NMHT	Bath Iron Works
Sealift Atlantic	NIKA	Bath Iron Works
Sealift Caribbean	NKRK	Bath Iron Works
Sealift Arctic	NQST	Bath Iron Works
Sealift Antarctic	NTYT	Bath Iron Works
Sealift China Sea	NHAR	Todd Shipyards
Sealift Indian Ocean	NGKY	Todd Shipyards
Sealift Arabian Sea	NFKQ	Todd Shipyards
Overall Length:	587 feet.	
Machinery:	Turbo Diesel, 14,000 Maximum Continuous H.P.	
Total Displacement:	34,000 tons.	
Radio Equipment (typical)		
MF CW—Transmitter(s):	ITT-Mackay Marine Type 2012 (500 watts output)	
Receivers:	ITT-Mackay Marine Type 3020A Synthesized 15 kHz 29.999 MHz.	
HF (SITOR)—Transmitter:	Harris RF Corporation RF-193M (1.5 kW output).	
Receiver:	Harris RF Corporation RF-530A 100 kHz-30 MHz, solid-state, synthesized.	
HF SSB Transceiver:	Harris RF Corporation RF-230 MS (125 watts output) solid-state, synthesized 1600 kHz to 29,999 kHz, USB/AM only.	
VHF Marine Transceivers:	Various 2 or 3 per vessel; may be ITT, Unimetrics, or other.	
INMARSAT-A equipment:	Japan Radio Corp. Model JUE-45 A, Mk II, Telex and MARISAT voice-nominal 35 watt EIRP at Antenna Focal Point.	
Navigation Electronics:	Loran-C, GPS, SATNAV, and conventional Iron Mike Autopilots: Sperry Mk. 227 Gyrocompasses.	

Thanks go to E.J. Kidd for info supplied here.

safety communication capabilities are available."

Radio Officer Kidd also offered these comments: "Popular Communications is well read onboard due to the proliferation of shortwave sets among the officers and crew. Sony's ICF-2010, ICF-7600, and the Radio Shack DX-440 are well represented aboard, along with a few Panasonic and Sangean sets."

"The Sealift Caribbean is one of the nine

Sealift-class tankers operated for the US Military Sealift Command by International Marine Carriers of Mineola, New York. These tankers are engaged in the transportation of fuels for various branches of the military. For readers who specialize in DX'ing Maritime communications, be advised that these ships, although lacking pre-printed QSL cards, usually QSL by letter as time and the work load permit. The use of PFC's is encouraged. Normal terms of

V C S

TO: Hiroshi Saito

THIS IS TO VERIFY YOUR RECEPTION OF HALIFAX COAST GUARD RADIO/VCS

DATE 28 September 1990

FREQUENCY 8440 kHz

MODE A1A (CW)

TIME 0811-0830 UTC

POWER 5000 Watts

ANTENNA Folded dipole

BROADCAST CW marker

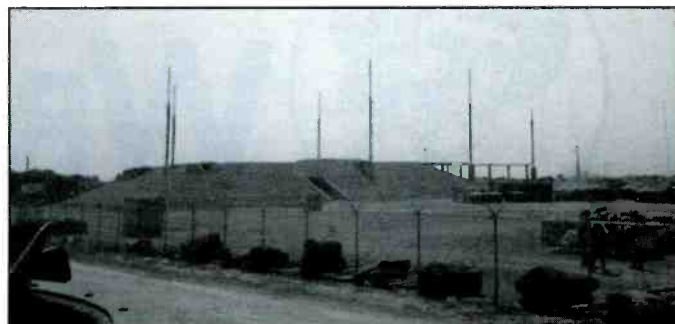
Signed: *Robert N. Ward*

Robert N. Ward, Radio Operator
Halifax Coast Guard Radio

Nice to hear from you again Mr. Saito!

Here is a copy of a QSL from the collection of Hiroshi Saito, Japan.

"The Sarge" sends us this view of an unidentified Saudi installation.



LF and VLF Time and Frequency Stations					
Call Sign	Location	Power (kW)	Carrier (kHz)	Days/Week	Hours/Day
NWC	NW Cape, Australia	1000	22.30	7	24
OMA	Liblice, Czechoslovakia	5	50.00	7	24
RBU	Moskva, USSR	10	66.67	7	24
RTZ	Irkutsk, USSR	10	50.00	7	23
RW-166	Irkutsk, USSR	40	200.00	7	23
RW-76	Novosibirsk, USSR	150	272.00	7	22
UNW3	Molodechno, USSR	---	25.50, 25.10 25.00, 23.00 20.50	7	2
UPD8	Arkhangelsk, USSR	---	25.50, 25.10 25.00, 23.00 20.50	7	2
UQC3	Khabarovsk, USSR	300	25.50, 25.10 25.00, 23.00 20.50	7	2
USB2	Frunze, USSR	---	25.50, 25.10 25.00, 23.00 20.50	7	3
UTR3	Gorky, USSR	300	25.50, 25.10 25.00, 23.00 20.50	7	2

This completes the listing of Time & Frequency Stations.

service aboard these ships run from 120 to 180 days for Radio Officers and we are not always returned to the ship we left when our vacations are over but sometimes we are rotated among the ships. This is a function of the needs of the company and our union. I am enclosing a sheet with some particulars of the Sealift-class ships."

Tom Severt, APO, England forwarded the following items: "OLX from Czechoslovakia has changed frequencies for the numbers broadcasts. They used to be open 5301, 6758, and 8142 kHz. Now they are on 5300, 6750 and 8140 kHz. I also found them on 3155 and 11000 kHz. It seems strange that a numbers station would send their ID like that. I would think that they would like to keep their location a secret.

The 5F CW messages with unusual characters that go for hours at a time seem to be continually active. One night I decided to stick it out and try to hear the end of one of the messages. I listened to one on 3606 kHz sending nonstop for about three hours. It finally stopped with no sign down. I listened to one on 3506 kHz starting about 0028 UTC. It went until 0523, almost five hours. These signals remind me of the

Energizer bunny—they just keep going, and going, and going...

I heard VLB, a YL/EE Mossad station, on 4665 kHz repeating (in phonetics) VLB14D46D47D48. There are so many of these Mossad active stations that it's no surprise to find one on some frequency.

I managed to log a OM/EE five-figure



This is a photo of what is believed to be the site of the Jeddah ATC station. Thanks to "The Sarge."

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of Transportation



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Coast Guard

Commanding Officer
USCG Communication Station

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Staff Symbol: RM1C
Phone: (305) 233-9655

8 December 1992

Mr. Richard Baker


Dear Sir,

I am glad to be able to confirm your reception of this unit of 20 November. CG 1710 and 1713 are C-130 aircraft homebased out of Clearwater, FL.

This command was totally devastated by Hurricane Andrew. Out of 20 antennas only two were left standing. The roof of the operations building was completely ripped off and we suffered the loss of all our communication equipment. We are presently operating out of the Coast Guards Emergency Transportable Communications Center (TCC) as well as a U.S. Navy Land Mobile Communications Center (AMCC). We operate our Air-to-ground mission out of the TCC from where you heard us. This Van is only equipped with one CUBIX XCVR at 25 watts, and one Collins GSB-900 XCVR at 100 watts. We are using two temporary 20 foot whip antennas.

I am sorry to say, that by the end of the summer 1993, COMMSTA MIAMI will no longer exist. The decision has been made to close us down and to remotely operate our antennas and transmitters. These will be operated from our Communication Area Master Station Atlantic (CAMSLANT), also know as COMMSTA PORTSMOUTH. All the personnel here are to be transferred to other locations. Until the remoting can be completed we will maintain a limited COMMS capability, mainly HF Air-to-Ground, and then permanently sign off the air.

Sincerely,


T.E. CRUDDAS
Senior Chief Radioman
Radioman-in-Charge
U. S. Coast Guard

Richard Baker, OH received this letter QSL from Miami CG COMMSTA.

number message. I think this is the first time I've heard an OM numbers station. He signed off with 00000."

Simon Mason, England wrote, "Two months after 'Papa November' ended I was expecting a reduction in number station activity but last month I had a bumper crop of loggings."

Some new addresses for USCG Cutters were received from Richard Baker, OH. USCGC Laurel (WLB-291), c/o Coast Guard Base, PO Box 385, Mayport, FL., 32267-0385; USCGC Durable (WMEC-628), 600 8th Ave. SE, St. Petersburg, FL. 33701; USCGC Yocona (WMEC-168), PO Box 190654, Kodiak, AK 99619-0654.

I have received a clarification from Daryll Symington, OH in reference to the signal from WFLA that Joe Weatherly wrote about. The item appeared in the February column and Daryll informed me that he had called the station engineer on the phone when Daryll heard the signal in September 1992. The signal is actually on 25870 kHz and in the FM mode. It was an actual re-broadcast of WFLA's mediumwave AM programming. It is an intentional signal and is transmitted so WFLA's roving station air-

plane can hear the station better. The station engineer had advised Daryll that the AM signal doesn't propagate well enough for the aircraft's use, so the FM signal is also transmitted. He also told Daryll that at least two other stations do this, one being WLW in Cincinnati.

Roger Caldicott, MA thought he had a



*Microwave relay tower on Tap line road.
Thanks to "The Sarge."*



This sign informs us that we are now on Table Mountain. The small sign on the bottom left of the photo lets us know that trespassing is prohibited. Thanks to Patrick Griffith, CO.



This mailbox in front of the Table Mountain multi-user facility states that it supports a NOAA gravity observatory. Photo courtesy Patrick Griffith, CO.

mystery station but in checking an ITU publication he discovered that the callsign 9AR2/3 is Rijeka Radio, Croatia. This call replaces YUR which it was when it fell under Yugoslavia. Roger pointed out two other changes associated with the breakup of Yugoslavia. Dubrovnik Radio now has 9AD which replaced YUX and Split Radio 9AS which was YUS.

ITU must have reapportioned callsigns because until recently 9AA-9AZ was allocated to the Republic of San Marino. Incidentally, 9AR is extremely active on 4346 kHz but their messages are not in English.

Perry Crabill, VA indicated he had written to Ken Stryker regarding the un-ID XCB on 260 kHz. Perry said he picked up his first North Dakota NDB when local TZ on 364 kHz was off the air during a local ice storm.

Patrick Griffith, CO described his visit to the Table Mountain site which is located about 10 miles northeast of Boulder, Colorado. The site location is apparently no secret since there are many signs pointing the way to the installation. "However, other signs make it clear that you are not welcome here without an invitation. The mail box out front proclaims that this facility

supports a NOAA gravity observatory. The signs in some of the photos of the site indicate other users are also present at this facility. There is one very large tower that doesn't appear to be for radio purposes. The guy wires are not separated by insulators so the tower itself is probably not an antenna and no side mount antennas were visible to me.

The Table Mountain site also has a series of log periodic beams mounted side by side on wooden poles all aimed east and a series of what appear to be low band beams also mounted on wooden poles and also aimed east. However, these latter beams are angled upward at a 45 degree angle and give the appearance of being one end of a meteor scatter type system. On the east side of Table Mountain is another entrance leading to a pair of very large steerable dish antennas. These antennas have been aimed straight up every time I have visited this site over a period of 5 years and are either being used to reflect signals off one or more levels of the ionosphere or they are no longer in use."

The POP'COMM RTTY Editor, Robert Margolis, reported an interesting phone patch he heard that was routed via Andrews

AFB, MD. It had to do with the START 2 nuclear arms-reduction treaty. The USB p/p was on 11053 kHz at 1452 UTC. A YL in Washington, DC was consulting with an OM, possibly in Geneva, Switzerland and she appeared to be working on the speech which was to be given by Secretary of State Lawrence Eagleburger the next day.

I wonder why officials do not use scrambled modes more often. Or maybe, it was desired that the Russians know ahead of time what the speech contents were!

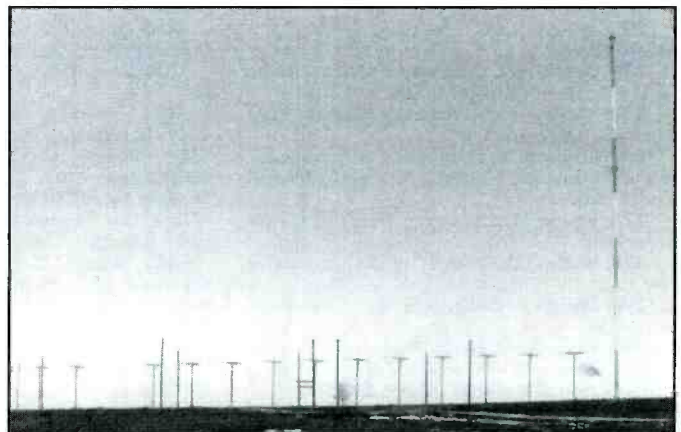
Gary Spurway, Australia sent in the address for Sydney Aero Radio and VOL-MET as follows: Flight Service Centre, B237 PO Box 211, MASCOT, NSW 2020, Australia.

Please let me again stress the importance of placing your last name and state abbreviation (or country name) after each logging and I do appreciate there being two or three blank lines between loggings. Thanks.

Ute Intercepts. All Times UTC.
60: MSF, Rugby, England, Time Signal Station in CW at 0730. (Boender, Netherlands)
70.46: DECCA Station, Thorpeness (Holland chain) w/carrier at 0803. (Boender, Netherlands)



Patrick Griffith, CO thinks these dish antennas may no longer be in operation.



Patrick Griffith, CO has reason to believe that the tower on the right is not used for radio purposes.



US Department
of Transportation
**Federal Aviation
Administration**

Honolulu Flight Service Station
4204 Diamond Head Road
Honolulu, Hawaii 96816

April 10, 1991

Mr. Dan R. Grote

Dear Mr. Grote:

Thank you for your letter providing information on our broadcasts. We are pleased to know you were able to get our transmissions, although the reception was weak. We hope you are able to hear us more clearly the next time you catch our broadcast.

If you should visit our fair Islands, we invite you to tour our facility which is located in the famous landmark--Diamond Head Crater where all of our broadcasts are done. We hope you find the following information useful:

Voice broadcasts of meteorological information are made by this facility at "00" and "30" past each hour, broadcasting simultaneously on 2863, 6678, 8828, and 13282 kHz for the benefit of aircraft in flight within the Honolulu Flight Information Region.

Honolulu Radio has assumed broadcasting responsibilities from the Anchorage and Oakland radios with extended broadcast times of "25 to 35" and "55 to 05" past each hour.

Station Call	Honolulu Radio (voice)
Transmitter	Burnell THV (remote control)
Output	5 KW
Antenna	Doublet

This station is a member of the Aeronautical Fixed Telecommunications Network (AFTN) which is sponsored by all nations to provide a worldwide system for the exchange of aeronautical communications.

"Aloha" from Hawaii.

Sincerely,

Francis G. Judd
Air Traffic Manager
Honolulu Flight Service Station

Letter QSL received by Dan Grote, IL.

75: HBG, Prangins, Switzerland w/time signals in CW at 0804. (Boender, Netherlands)

84.55: DECCA Station, Gilze-Rijen (Holland chain) w/carrier at 0835. (Boender, Netherlands)

203: Beacon NSI, San Nicholas Island, CA at 1207. (Vaage, CA); Beacon DMZ, Dickson, TN at 1115. (Crabill, VA)

205: Beacon COR, Corcoran, CA at 1203. (Vaage, CA)

236: Beacon GNI, Grand Isle, LA. ID in CW and wx in AM at 0523. (Newberry, GA)

242: Beacon LKG, Americus, GA at 0526. (Newberry, GA)

260: Beacon XCB, u/i at 1755. Can be hrd in daytime at Winchester, VA site w/bearing of NW/SE. (Crabill, VA)

275: Beacon UOS, Sewanee, TN at 0538. (Newberry, GA)

278: Beacon GS, Greer, SC at 0542. (Newberry, GA)

290: Beacon Y, Yankeetown, FL at 0543. (Newberry, GA)

299: Beacon AVZ, Terrell, TX at 0202. (Low, TX)

302: Beacon RO, Roswell, NM at 0857; Beacon ONO, Ontario, OR at 0857. (Vaage, CA)

311: Beacon MVI, Monte Vista, CO at 0859. (Vaage, CA)

317: Beacon CVP, Helena, MT at 0846. (Vaage, CA)

322: Beacon U, Miami, FL at 1109. (Crabill, VA)

326: Beacon YQX, Kenora, Ontario, Canada at 1152. (Crabill, VA)

329: Beacon IWH, Wabash, IN. No time. (Low, IN)

333: Beacon STI, Mountain Home, ID at 0906. (Vaage, CA)

338: Beacon GY, Greenville, SC at 1128. (Crabill, VA); Beacon DE, Detroit, MI at 0518. (Vylasek, VA)

339: Beacon MKR, Glasgow, MT at 0910. (Vaage, CA)

344: Beacon S, Sudbury, Ontario, Canada at 1147. (Crabill, VA); Beacon JA, Jacksonville, FL at 0559. (Newberry, GA); Beacon FCH, Fresno, CA at 0850. (Vaage, CA)

350: Beacon NUC, San Clemente, CA at 1249. (Vaage, CA); Beacon LE, Raleigh-Durham, NC at 0602. (Newberry, GA)

351: Beacon LLD, Lanai, HI at 1250. Best DX this month, 2514 miles; Beacon NO, Reno Int'l., NV at 1251. (Vaage, CA)

353: Beacon LWT, Lewiston, MT at 1252; Beacon ZES, Cape Scott, BC, Canada at 1259. (Vaage, CA)

356: Beacon FR, Medford, OR at 1259. (Vaage, CA); Beacon PB, West Palm Beach, FL at 0604. (Newberry, GA); Beacon SA, Sacramento, CA at 0917. (Forsman, CA); Beacon OPZ, Lopez Is., WA at 0917. (Forsman, CA)

359: Beacon BO, Boise, ID at 0909; Beacon YAZ,

Tofino, BC, Canada at 0909. (Forsman, CA)

365: Beacon AA, Fargo, ND at 1204. Hrd while local TZ (on 364 kHz) was off the air. (Crabill, VA)

370: Beacon MQI, Manteo, NC at 0412. (Vylasek, VA); Beacon PAI, Pacoima Helicopter Pad, CA at 1302. (Vaage, CA)

373: Beacon EP, Estevan Point, BC, Canada at 0854. (Forsman, CA)

379: Beacon CNQ, Roanoke, VA at 1212. (Crabill, VA); Beacon TL, Tallahassee Municipal, FL at 0500; Beacon CM, Channel Head, Newfoundland, Canada at 0417. (Vylasek, VA)

385: Beacon WL, Williams Lake, BC, Canada at 0840. (Forsman, CA); Beacon X, Toronto, Ontario, Canada at 0951. (Crabill, VA); Beacon NA, Natashquan, Quebec, Canada at 0425. (Vylasek, VA)

388: Beacon AM, Tampa, FL at 0621. (Newberry, GA)

392: Beacon BZE, Belize City, Belize at 1056. (Crabill, VA)

396: Beacon ZBB, South Bimini, Bahamas at 0207. (Low, TX)

399: Beacon ENS, Ensenada (probable), Mexico at 1324. Must have fixed the unit as it no longer signing ENS E. (Vaage, CA)

400: Beacon QQ, COMOX Canadian Forces Base, BC, Canada at 0906; Beacon LKO, Billings Logan Int'l, MT at 1325. (Vaage, CA)

411: Beacon VFU, Van Wert, OH. No time. (Low, IN)

417: Beacon HHG, Huntington, IN. No time. (Low, IN)

430: VAK, Victoria, BC, Canada in CW at 0156 to Canadian CG units. (Low, TX)

439: OST, Oostend, Belgium, w/navigational warnings in CW at 2124. (Sevart, England)

451: Beacon USC, Santa Clara, Cuba at 1152. (Crabill, VA)

526: Beacon RWE, Camp Roberts, CA at 1331. (Vaage, CA)

1780: Royal Navy coastal control channel w/distinctive two-tone signal hrd 0640. USB mode. (Baker, OH)

2514/2118: Canadian CG, Halifax (VCS) w/kg CSS Parisel at 0320; w/kg ?-Maru 38 (JRFR) at 0531; and w/kg Teranova Sea at 0551. All USB. (Baker, OH)

2598: Canadian CG Sydney, Nova Scotia (VCO) w/high seas wx at 2200; St. Johns, NF., (VOK) w/wx & ice reports at 0133 and Labrador, NF., (VON) w/wx & ice reports at 0150. (Rausch, NJ)

2670: F.V. Fearless notified USCG Gp Woods Hole, MA at 0202 that a crew member had fallen and severe back injury developed. Woods Hole provided info for injured party until Helo 2113 arrived on site to airlift crewman to hospital. Vessel Captain congratulated helo pilot and Medic as well as CG Coastal Station crew for superb job. (Caldicott, MA); USCGC Bittersweet (WLB-389), NODH, in comms w/Woods Hole Gp giving vital signs on injured crewman, recommended medivac. Second injured crewman has poss broken tibia. Injuries occurred while handling buoy. USB mode. Note: Letter w/PFC advised both crewman OK and back onboard ship. (Baker, OH)

2738: OM/EE w/Jamaican accents. Poss GYX, Defense Force CG Radio, Jamaica which listed on freq. Comms too weak for ID. Hrd 2358 in USB. (Baker, OH)

2760.3: Cuban coastal station giving navigational warnings to u/i vessel at 0400. (Rausch, NJ)

3125: Illegal fishing comms at 2343 in USB w/XXXX language. Not the 1st time I've logged them here. (Sevart, England)

3130: T9Z in USB at 0246 w/kg NFT & XOG, whose unit was in charge of flight ops. T9Z queries re releasing air space. (Margolis, IL)

3165: U/i stn w/5F CW msg w/unusual characters at 2258. (Sevart, England)

3485: New York VOLMET w/aviation wx for Baltimore, Philadelphia, Washington, DC & others from 0743 to 0750. Then Gander Volmet hrd w/aviation wx for various east coast/Canadian cities, ICAO HF NA-VOL. All USB. (Baker, OH)

3578: 5F CW msg w/unusual characters at 0023. Still going at 0307. This type traffic also noted on 3606 kHz at 0209 & continued until 0459 when quit w/no signdown. Also 3608 at 0141, and 3861 at 1735. (Sevart, England)

4003: MARS net in LSB at 0020. (Low, TX)

4080: Scrambled speech in USB at 2237. (Sevart, England)

4113: Cruise ship, M/V Regal Princess, ELG6 in USB at 0423 wkg WOM, Pennsco, FL (on 4405 kHz) for R/T t/c. (Baker, OH)

4175: YL/GG in AM at 0216 w/3+2F msg. Used "noyner" for 9. (Sevart, England)

4373: Giant Killer (USN FACSFAV VA Capes) w/Bravo 4 & Sierra 9 re "which alligator playground we're on," was advised "Battle Down." Hrd 0418 in USB. (Baker, OH)

4426: NMN, CG Commsta Portsmouth, VA at 0800 wkg 5MYK, Sapphire, for medico. Vessel advises it close to west side of Cuba & requests for CG can obtain assistance there. At 0838 NMN back up & advises US has no relations w/Cuba, suggests ck w/ships agent for contacts or call on Ch. 16. But it unknown if Cubans monitor it or not. USB mode. (Baker, OH)

4463: YL/EE w/Foxrot Tango Juliet from 2130-2132. Then message x2, Group 23 x2, Text x2 and into 5L text. Mossad station. (Mason, England)

4495: YL/EE rptng 127 1-0 count then 105 and into 5F grps. Hrd at 0000. (Soderlund, RI)

4535: Two OM/EE w/XXXX language talking about catching 4 swordfish weighing around 60-65 lbs. USB at 1905. (Koch, IL)

4538: YL/EE w/1-0 count and '334' at 2100. At 2110 after ten tones 'Count 78' x2 and into 3/2F grps. (Mason, England)

4550: YL/EE rptng 496, 1-0 count, 80, and into 5F grps at 0000. (Soderlund, RI)

4585: Virginia CAP, Blue Flight w/net ck in's at 1232. At 2236 hrd WV CAP, Mountaineer 291 w/net callup. Hrd Mountaineer 538, 1, 257 (b/up), Kittyhawk 422, and 101. At 2300 SC CAP Kittyhawk 100 w/net callup Blue Flight, VA CAP w/net callup. All USB. (Baker, OH)

4737.5: Rowan Oil, KFC-699, w/ck in of wells w/maintenance list/op's reports at 0805. USB mode. (Baker, OH)

4711: ZOP, United Kingdom Air Defense Ground Environment (UKADGE), wkg Q4Z in USB at 0226. Several nights later 4IA wkg 'Triden 71A,' prob US Navy. (Sevart, England)

4740: YL/EE rptng '04537' from 2000-2005. Then 'Ready, Ready, 17, 17' and into 5F grps. (Mason, England)

4780: YL/EE w/288 oblique zero zero from 200-2005 & ended w/ 'Out.' At 2010 CW started up with 288/00 also. At 2015 YL/EE (diff station) w/KPA2. (Mason, England)

4821: YL/GG rptng Victor Oscar from 1900-1905. Then 5F grps for 507 and 283. (Mason, England)

5015: YL rptng Papa Delta from 1930-1935 w/electronic tones and then GG 5F msgs for 551 and 054. (Mason, England)

5305: SLHFM's "S" and "C" at 1736. (Mason, England) A reminder I am labeling these as 'markers' rather than as 'beacon.' (Ed.)

5315: YL/GG w/433x3, 49176 041 from 2100-2105 every Tuesday. After five dashes into 5F grps. Also on 10255 kHz. (Mason, England)

5320: At 1608 USCGC Aquidneck (WPB-1309) wkg u/i CG Grp re problem onboard u/i vessel. At 1704 Cape Hatteras Grp wkg w/Aquidneck re problem, proper people in charge are back onboard, advises do not need CG personnel onboard at this time, but crew is disgruntled. USB mode. (Baker, OH)

5505: Shannon Volmet in USB w/Aero wx for Dublin, Barcelona, Stockholm, Santa Maria, Athens, Lisbon, Madrid & Zurich. (Narde, NY)

5529: Iberia (Spanish) Airlines company freq. All comms in SS lang. USB at 0410. (Grote, IL)

5575: San Francisco Aeradio in USB around 0340 advises all aircrews that a "Navy emergency a/c is also using this freq." Another flight crew relayed the Navy a/c ID nbr to San Francisco. At the time there was a severe storm near the California coast. That's all I hrd re this situation, whatever it was. (Thorne-Booth, CA)

5692: Frankenstein (also called Foxrot 21 a/c) wkg land stn cld C5J. Lots of comms re fact that Frankenstein had bad blackbox & not receiving proper codes. C5J made mention of getting some Delta Fox equip & then asked Frankenstein if he going to be running track & getting pictures. Frankenstein acknowledged track C5, then C5J informed Frankenstein that Alpha Whiskey requesting he run the Blackjack. Frankenstein

Abbreviations Used For Intercepts

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

was onscene & reported that it had 19 souls onboard. Comms continued but I finally lost signal. Poss DEA ops? Hrd 2330-2350 in USB. (Grote, IL)

5760: CW station at 2105 sending 874, 874, 874 TTT (no msgs). (Mason, England)

5807: OM/EE w/Russian accent rptng 261 from 2100-2105 then 945 x2, 38 x2 and into 5F grps. Ended w/00000. Rptd next day on 5805 kHz at same time. (Mason, England)

6200: USCGC Campbell (WMEC-909) NRDC wkg Portsmouth at 0249 w/pp to Miami Op's flight surgeon re poss meningitis patient. After discussion/vitals passed decided to air evac man to shore. (ltr w/PC advised crewman doing fine and back onboard. USB. (Baker, OH)

6215.5: Sydney Radio at 0841 w/pp. Channel 606. (Spurway, Australia)

6322: WLO, Mobile. AL w/Telex at 0419. (Low, TX)

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CIRCLE 81 ON READER SERVICE CARD



The sign warns that radio interference is strictly forbidden. Thanks to Patrick Griffith, CO.

6646: Cayman Air, Cayman Islands wkg a/c 443 w/wx info in EE after some comms in FF. 0840 in USB. (Baker, OH)

6700: YL/SS rptng 924 & 1-0 count then into 5F grps at 0300. This sked was on a Friday. Wednesday sked at 0200 had YL/SS rptng 35403. (Soderlund, RI)

6745: YL rptng CIO2 at 2048. Mossad station. (Mason, England)

6753: Hrd aero wx for Ottawa, Toronto, Quebec in USB at 2331. (Narde, NY)

6761: Warbling jammer on USAF freq at 0402. (Sevart, England)

6832: CW stn at 0602 w/861 rptd. At 0604 395 x2, 64 x2 & into 5F grps (cut nbrs, T=). Ends at 0611 w/395 x2, 64 x2. TTTTT. (Margolis, IL)

6840: YL/SS w/4F grps from 0232-0240. (Stawicki, OK)

6849: YL/EE w/1-0 count and '363' from 1800-1810. Ten tones, Count 216 and into 3/2F grps. Also on 9147 kHz. (Mason, England)

7425: YL/SS w/4F grps at 0200. (Stawicki, OK)

7445/9090: At 2100, 550 & 1-0 count then into 5F grps. Rptd next three days same freqs/time. (Soderlund, RI)

7595: YL/EE Mossad station rptng Victor Lima Bravo. Msg Group 51, into text of 5F grps. Hrd 2345, 0045 & 0145. (Soderlund, RI)

7530: WNIC426, u/i, in USB at 1050 trying contact NMG, CG New Orleans, but no luck so NMN, CG Portsmouth relayed msgs, QSY'd to 11438 kHz. (Koch, IL)

7532: YL/ rtpng Mike Delta fm 2000-2005. Then YL/EE said 'Message for 017, 017, 36 Group. 241, 241, 30 Group, Attention' then into 5F groups. Very rare EE version of 2L callsign station. Rptd next day at 1930 on same freq. (Mason, England)

7535: USN, Norfolk SESEF in USB between 1452-2004 w/xmtr tests: NIHF, USS Opportune ARS-41; NCLZ, USS Boulder LST-1190; NADY, USS Shreveport LPD-12; NNCD, USS San Diego AFS-6; NIID, USS Recovery ARS-43; NNUL, USS Constellation CV-64; NNGW, USS George Washington CVN-73; NOUD, USS Inchon LPH-12; NNGQ, USS Barbour County LST-1195; NNWI, USS Whitley Island LSD-41; NJUL, USS Bainbridge CGN-25; and NYKN, USS Yorktown CG-48. (Baker, OH)

7540: YL with 4F grps at 0030. (Rausch, NJ)

7654/9090: YL/EE w/3+2F grps at 2100. On Wed called 947 w/180 grps; Thu cld 851 w/111 grps. (Mazanec, OH)

7777: Two boaters in USA at 0215, USB mode w/chitchat. No XX language, believe it or not. Just ordinary talk re ordinary boater's things. (Margolis, IL)

7887: YL/SS w/5F grps in USB at 0806. Ended w/Finale x3. (Sevart, England)

7918: YL/EE Mossad station rptng YHF2 at 0501. (Sevart, England)

8173: YL/GG rptng Oscar Alpha fm 1600-1605. Then 5F grps for 039. Rptd next day at 1730 on 7404 kHz. (Mason, England)

8213: WCM, Cincinnati, OH w/tfc list at 1912 in USB. (Baker, OH)

8240: OM/EE nbrs w/2 ltrs & 4 nbrs rptd several times. Hrd at 0723. (Spurway, Australia)

8294: YPG, Jacksonville, FL clg tug Monitor at 0051. At 2148 WJK, Coastal Tug & Barge, Miami, FL wkg tug Adams Jackson in USB. (Baker, OH)

8459: YQ14, Constanta, Romania in CW clg P3NWZ w/QTC at 1801. (Caldicott, MA)

8484.6: HZG, Damman, Saudi Arabia in CW at 2245 w/DE HZG QX CH 3/4/9. Strongest sig at sundown. (Haire, MS)

8550: FFT, St. Lys, France in CW w/Nav Area II warnings in FF at 1909. (Sevart, England)

8719: USN Combat Support Squadron 8 (COM-SUPRON 8), Norfolk, VA (Salvage Net) wkg NIGP, Fleet Ocean Tug USNS Apache T-ATF-172 re ongoing op's/ETA. USB mode. (Baker, OH)

8752: KVH, NOAA Atlantic Marine Center w/WMVF, NOAA Ship, Albatross IV (R-342) re engine problems. USB mode. (Baker, OH)

8828: Honolulu Volmet at 1314. (Low, TX); Tokyo Volmet at 1110 w/aviation wx. (Spurway, Australia)

8861: Flight 705 (u/i airline) in USB at 0504 wkg Dakar w/position report. (Narde, NY)

8904: A/c 1501 wkg Portsmouth in USB at 2303 w/position report. (Narde, NY)

8906: Viasa 710 wkg Santa Maria w/Selcal check at 0032; Iberia 6300 w/NY for Selcal check at 0113; Liberty 9977 w/Santa Maria at 0120; Air France 513 w/NY, flight level 280, Selcal check at 0133. All USB. (Boender, Netherlands)

8912: Omaha 58 (Customs a/c) wkg Longhorn (Customs Center, Houston, TX) in USB at 1845. 58 advised they in air enroute to Homeplate. Some coms were scrambled. (Koch, IL)

8294: Cruise Ship Monarch high sea's calls at 0314. (Baker, OH)

8984: 510 (a/c?) wkg Commsta Kodiak for pp in USB at 0311. (Hill, MI); USCG 1713 (C13) 1401-1430 in USB w/CG Atlantic Area Rescue re C130 overhead assistance of sailing vessel Owl. Posit & heading given. Captain has a rig & mainsail but a broken rib is reported requiring full onboard pumping w/adequate fuel onboard. Request for several days of over-head observance by USCG until he reaches safe port in Antigua. Atlantic Area Rescue rejected request however. "If captain calls a distress, USCG will assist. Otherwise, captain must either call for merchant vessel assistance or he must get off the water!" 1713 to relay to Owl on 4125 kHz. (Caldicott, MA)

9090: YL/SS rptng 620 04 then into 5F grps at 0300. (Soderlund, RI); YL/EE w/1-0 count and 351 fm 2100-2110. After ten tones, Count 111 and into 3/2F grps. Also on 7654.5 kHz. (Mason, England)

9130: RAF version of Sky King EAM, hrd 2241 in USB. (Baker, OH)

10028: Prague LDOC w/various a/c in USB at 1458. (Boender, Netherlands)

10069: TWA 841 w/Berna LDOC, Enroute Rome-NY JFK w/Selcal check at 1020; Morocco 922 w/Berna LDOC w/Selcal check at 1022; Alitalia 600 w/Berna LDOC w/Selcal check, enroute Milan-NY JFK. Hrd 1103. All USB. (Boender, Netherlands)

10165: Lab One, Lab Three & Lab Five in USB at 2245, all w/pp's via Forrest between 2245 & 0100. (Margolis, IL)

10177: YL/GG rptng Juliet Whiskey fm 2100-2105. Then short 5F msg of 20 grps for 081. (Mason, England)

10493: FEMA Net w/ck in's. hrd: WGY905, Dist. 5 HQ, Chicago, IL.. WGY908, Dist. 8 HQ, Denver, CO.. WGY900, FEMA HQ, Washington DC. WGY918, u/i and WGY912 Special Facility at Berryville, VA. USB at 1541. (Baker, OH)

10780: USS DeWert clg DOD Cape at 1226. DeWert QSY'd to 5190 kHz to report on conditions before flight of Space Shuttle Endeavor (STS047). (Low, TX)

10891: At 1819 NMF, USCG Boston clg WWJ52, FHWA, Montpelier, VT. Did not hear a response. At 1923 NNN0KKU, u/i clg WWJ60, FHWA, Beckley, WV at w/SHARES exercise tfc. At 1924 WWJ44, FHWA, Dahlonega, GA., clg WNHM961, Fairmont, WV Chesapeake & Potomac Bell Telephone NSEP Net also w/SHARES tfc. At 1952 KJN950, u/i wkg u/i sta w/SHARES tfc. 1956 KJL412, Linlithgo, NY NY Telephone clg WCD6. u/i. All USB. (Baker, OH)

10945: NAWS DE CFH, Halifax, NS, Canada at 0500. (Low, TX)

11123: YL/EE in USB at 1500 w/rpts of "125, 125" and 1-0 count. Atop Grengel Meteo RTTY wx bcst. At 1510 ten tones foll by "Count 225, Count 225" & into 3-2F grps. (Margolis, IL)

11140: OM/SS in USB at 1513 dictates msg to 2nd OM/SS. Msg given sentence by sentence. 2nd OM whistles after each sentence if he wants 1st OM to continue, otherwise he asks questions about the dictation. (Margolis, IL)

11176: Reach 509DD w/Croughton in USB at 1724. (Boender, Netherlands); Flight 178 in USB for pp comms w/Dixie Duty via Andrews AFB indicates they 'lost #2 compass followed by #2 gyro. Enroute to Dakaar. 'Dixie Duty recommended 178 trace out problems at touchdown. Does not recommend any further flights until problems resolved. No parts avail. at site. Flt may be gnded for several days. Dixie Duty says will ask Charlie Whiskey for further assistance. (Caldicott, MA)

11200: At 1820 RAF Volmet, W. Drayton w/wx for European cities and gives ID at 1825 "This is RAF Volmet" rptd twice. USB mode. (Baker, OH)

11201: Commsta Portsmouth wkg Rescue 2135 re flight status at 2326 in USB. Also wkg a/c 1502. (Grote, IL)

11300: Air Mauritius 039 w/Nairobi, enroute Nairobi-Zurich. Hrd at 2238, Luxair 182 w/Khartoum at 2323 w/posit report at 2323; Air Zimbabwe 735 w/Khartoum at 2335 enroute Lacarna-Harare; Speedbird 234 w/Khartoum w/eta E1 Obeid. Hrd at 2358. All USB. (Boender, Netherlands)

11470: YL/EE in AM at 1632 w/4F grps. (Margolis, IL)

12216: GB3RAL, low power propagation beacon w/slow CW QRA 1091RL West of and near London. Hrd 1453. (Haire, MS)

12687: OFJ32, Helsinki, Finland in CW at 1230 w/QSX mkr. (Boender, Netherlands)

12688.5: UQK, Riga, Latvia in CW at 1228 w/DE UQK QSK mkr. (Boender, Netherlands)

12797.1: UDK2, Murmansk, URS in CW at 2300 w/4LS DE UDK2 12473. (Haire, MS)

12804: YQ15, Constanta, Romania in CW at 1223 wkg M/V Evlomar. (Boender, Netherlands)

12855: CQ DE XSG, Shanghai, China in CW at 2108. (Mason, England)

12930.5: JYO, Aqaba, Jordan at 1250 in CW w/CQ QSY 8/12 GCC 934 and on R/T 2182 C.804, C.1220, C.1612K. (Caldicott, MA)

12963: HAR, Budapest, Hungary in CW at 1315 w/CQ DE HAR. (Boender, Netherlands)

12985: VVV DE LPD88, Buenos Aires, Argentina at 0205. (Low, TX)

13083: KMI, Dixon, CA w/maritime wx & tfc list 0000-0018. (Narde, NY)

13092/12245: Cruise Ship Tropicale on 12245 kHz in USB at 2110 wkg WOM, Pennsuco, FL. Ship had just left Caracas, Venezuela enroute to Aruba. (Koch, IL); NWH5, USS Standley w/duplex pp via WOM, Pennsuco, FL at 2145. Standley was off coast of Somalia. (Rausch, NJ)

13122: Fisherman w/conversation re fishing conditions & Hurricane Andrew. USB at 1501. (Narde, NY)

13306: At 1539 NY Radio wkg a/c Titan 05, N.

American 89 & 91. Gander Radio wkg flight 464 for position & status reports. All in USB. (Baker, OH)

13900: Ashley 12, Wheeler AFB, Hawaii in USB at 1125 wkg Aria 15, Ec0135? re test counts, testing carrier signals. Kept evaluating looking at a down link. (Koch, IL)

14289: W1AW at 0149 w/Ham news & special bulletins. (Low, TX)

14405: AFA2VL as net control for the Worldwide Space Support Net which meets on Saturdays at 1500. Net incl USAF MARS stas at Patrick, Kelly, & Vandenberg AFB's. USB at 1503. (Margolis, IL)

14408: AFA2HO, USAF MARS, Howard AB, Panama in USB at 2105 w/pp's to Stateside via AFA2GN and at 2111 via AFA3UJ. (Margolis, IL)

14467: NNOCOV wkg NNN0HBD w/pp tfc. COV is the USS Harry Yamell. (Grote, IL)

14477: NNN0NXJ listed as USS Barney DDG-6 but PFC was returned as "decommissioned." Hrd wkg u/i MARS station w/pp at 2330. USB mode. (Baker, OH)

14686: Flint 560, DEA a/c wkg Jaguar 450 in USB at 1612. 560 said they would be patrolling SE to the border then wud RTB. This is Papa channel. They QSY'd Echo channel, 11076 kHz. (Koch, IL)

14945: YL/GG rptng Kilo Whiskey fm 1430-1435. Then 5F grps for 844/17, 091/35 and 844/14. (Mason, England)

15972: KKN50, Dept. of State, Wash DC w/QSX mkr at 2025. (Low, TX)

16363: HMS Herald A138, GQIM wkg Portishead (on 17245 kHz) for R/T tfc at 1814. Another day Herald hrd at 1852 same freq. USB mode. (Baker, OH)

16694.4: VTP, Vishakhapatnam, India in CW at 1356 w/mkr of VVV VVV VVV VTP 4/6/7/8. (Ed.)

16814.5: HEC17, Berne, Switzerland w/id in CW & phasing in ARQ. Hrd at 1105. (Boender, Netherlands)

16928.4: LFX, Rogaland, Norway in CW at 1136 w/tfc list. (Boender, Netherlands)

17010: URD, S. Petersburg, Russia in CW at 1205 w/mkr of CQ DE URD QXS 16622. (Boender, Netherlands)

17018: EBA, Navy Madrid, Spain in CW at 0905 w/mkr CQ DE EBA then NavArea 3 Warnings. (Boender, Netherlands)

17137: UHK, Batumi, Georgia in CW at 1226 wkg various vessels. (Boender, Netherlands)

17251: Canadian CG, Halifax w/wx for Nova Scotia at 1605 in USB. (Baker, OH)

17435.5: U/i stn at 1823 w/CW coded msg using cut nbrs ADNTU plus full nbrs 34567. (Margolis, IL)

18594: Omaha 63 (a/c) wkg Hammer, Customs Riverside, CA in USB at 1252. 63 wanting know how long to wait at Condor 100 before leaving. Slingshot told 63 to proceed to Cama San Lucas & refuel. Scrambled comms also. (Koch, IL)

19510: CKX64, Portishead Radio w/pp at 1438. SLHFM "P" in background. (Mason, England)

20198: Two u/i YL/EE in comms re passing a "big" encrypted msg via computer (125, 684 K)-whoz-it? Hrd in LSB at 1701. (Baker, OH) Shuttle Support comms have been reported this freq. (Ed.)

20205: YL/EE in AM at 1451 w/3+2F grps. (Margolis, IL)

20691.5: PWX33, Brasilia Navrad, Brazil in USB at 1411 w/OM opr clg Chilean Navy. (Margolis, IL)

20890: Ballyhoo 506, Customs Patrol Vessel wkg Sunshine, Customs Office, Miami, FL in USB at 1601. 506 reported it responding to u/i vessel flying yellow Custom's flag. Sunshine advised 506 it was a Customs vessel. (Koch, IL)

20960: Two stns hrd identifying as Bogota and Sinai. Hrd when terminating QSO, no more details. (Juan, Spain)

20962: CFARS sta's CIW3001 w/CIW408, 401, completing pp tfc at 1837. At 1918 CFARS sta's KIW3001B w/KIW302 (1) in Somalia, pp tfc in USB. (Baker, OH)

21392: WA3NAN w/STS-52 Shuttle audio. (Low, TX)

21460: Nbrs station OM (poss Vietnamese) rptng same phrase over and over from 0139-0155. Signal so strong it overpowering HCJ on 21455 kHz USB. Local signal?? Two government facilities are within 10 miles of my QTH. (Spurway, Australia)

21835: OM/SS comms after RTTY xmsn on 21836.5 kHz between Spanish Embassy in Tegucigal-

pa, Honduras & MFA Madrid, Spain. USB mode at 1630. (Margolis, IL)

22378: GKE7, Portishead, England Telex at 2039 and CB4 Telex at 2040. (Low, TX)

22562: CW station sending VVV de 9AR 3/7/9 CH 3/4/7 K. Hrd at 1320. Hrd at 1320. Also hrd this call on other freqs. Who is it? (Mason, England) As reported by Roger Caldicott, MA., the ITU now lists 9AR calls as Rijeka, Croatia. (Ed.)

22804: WLO, Mobile, AL in USB at 1759 w/ATL ves Coyote & wx to 1813. (Baker, OH)

22885: YL/EE in AM at 1641 w/3+2F grps. This YL spoke EE with a thick foreign accent. She trilled the T's in "three" and it sounded like "ttttthree." "Two" sounded "twooooo," and "zero" like "zeeee-row" instead of "zir-oh." (Margolis, IL)

23407: U/i stn in USB at 1020 w/Silver 12 passing coded msgs of classified and unclassified info. (Koch, IL)

23915: At 1550 in AM 2 tones: lo-hi, short-long,

2-secs cycle. (Margolis, IL)

24350: "Contrabasson" broad spectrum noise in USB at 1521. That is my term to describe the sound I heard. (Margolis, IL)

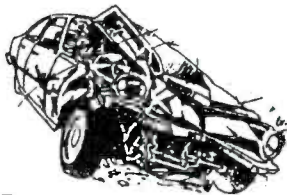
24467: 4-tone mkr, lo-hi, lo-hi, every 2 secs. USB at 1716. (Margolis, IL)

24515: At 1523 in USB at type signal as on 24350 kHz. (Margolis, IL)

26965: OM/EE oprs in AM fm 0430-0445. Probable CB outbanders. (Scharff, NJ)

27175: CB outbanders in AM fm 0307-0327. Hrd "Makin Bacon" (claimed be 9 mi. from NY, 50 mi. from Philadelphia), "Thunderbolt" (claimed be in Georgia). It obvious these guys wer not using 4 watts. Other handles hrd were "Big Roscoe," "Rattlesnake," "One Ninety Nine," "Mr. One Two Five," "Sonny Boy" and "Energizer." (Scharff, NJ)

28235: EA2ZRA, low power propagation beacon slow CW QRA 1N91NP, NE corner of Spain. Hrd at 1457. (Haire, MS)



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It's been said that many utility stations that have moved from HF Radio to satellite would continue to maintain their short-wave radio links as a backup system in case something went wrong with their transmissions from space. Such a mishap occurred one day in February for several hours as a couple of U.S. Marine Corps stations had a most difficult time sending facsimile messages over one of their satellites.

The two stations called themselves "Whiskey Sierra" and "SCE." SCE's ident was never used phonetically. The two were in the Eastern time zone. They used 10630.0 kHz for USB voice comms both in the "red" (in the clear) and the "green" (scrambled). FAX and RTTY were sent on 10631.5 kHz. I first heard them on USB at 1549 UTC, with Whiskey Sierra asking SCE to send his fax via satellite. Several attempts were made, but Whiskey Sierra reported receiving nothing. They tested the satellite circuit with voice transmissions, but nothing seemed amiss.

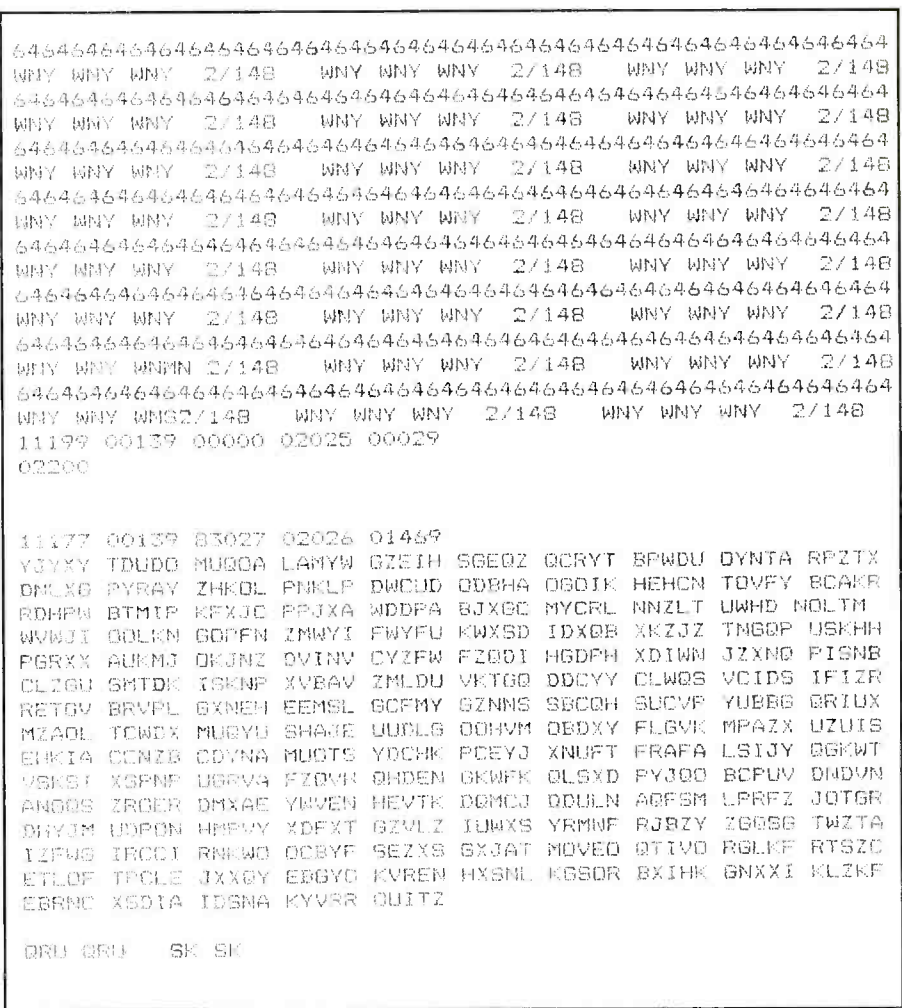
At 1635 UTC, Whiskey Sierra told SCE that the fax message had to be sent over HF Radio. But SCE's HF Radio signal was weak and barely readable, Whiskey Sierra noted. The next couple of hours were spent switching between satellite and HF Radio in attempts at getting good copy. Finally, at 1810 UTC, Whiskey Sierra told SCE that his fax transmission on satellite was "a solid copy."

Now it was Whiskey Sierra's turn to send a two-page fax to SCE on the satellite. For the next 40 minutes SCE reported not being able to receive anything. Whiskey Sierra told "SCE" at 1859 UTC that "net control is troubleshooting on Satcom at this time."

Another 10 minutes went by. Whiskey Sierra decided to send his two-page fax over HF Radio, and that's when I saw typed texts on the video monitor. The faxes seemed to be sent at a speed of 180 rpm, which my decoder isn't programmed to receive, and an IOC of around 288. At 120 rpm, the text was in three columns, and at 90 rpm it was in two columns. I then concluded the speed had to be 180 rpm. The texts looked very tiny at an IOC of 576. I never had a chance to try an IOC of 288 because I was working feverishly to find the correct speed. The texts were legible at 90/576, however, and I read both pages clearly.

RTTY traffic, called "KL43," was sent at various times via SATCOM and HF Radio. It was encrypted and seemed to be at 300-baud ASCII when I tuned it in on my shortwave receiver. Other stations were heard on the USB frequency.

"Night Stalker" talked to SCE at 1623 UTC. Whiskey Sierra called "Otis," the



Coded message from "WNY" appeared on 16448 kHz, from 1910 to 1913 UTC, 425/75. (Intercepted by Robert Margolis)

code name for KC-130 aircraft at Cherry Point MCAS, North Carolina, at 2041 UTC. "Kiwi 1" talked to SCE at 2157 UTC.

"Sedan" called SCE for a radio check at 2213 UTC. "Otis 21" announced he was airborne at 2337 UTC. He tried calling "Wild Bill" at 2354 UTC, but was unsuccessful. Meanwhile, "Kiwi 1" was heard in the background sending Morse Code. "Otis 1" called "Otis 21" at 0022 UTC. "Kiwi 6" entered the net at 0040 UTC. By now talk turned to mentions of grids and azimuths, and later of firings of small arms and automatic weapons. It appeared that they were involved in training maneuvers on two frequencies. The second net opened at 0100 UTC on "KF9L09R09-R09 MHz," a frequency given out a couple of hours earlier in a message from "Sedan." Some messages, it was learned, were being passed on a military satellite. The net remained open at 0200 UTC, but quieted

down about an hour later. Not much was heard for the remainder of the evening.

In other news, the U.S. Coast Guard ran the following RTTY broadcast in February: "Effective August 1, 1993, all United States Coast Guard communication stations and cutters will discontinue watch-keeping on the distress frequency 500 kHz, and will cease all Morse Code services in the medium frequency radiotelegraphy band.

"More efficient telecommunication systems are now available to provide the mariner with options for initiating or relaying distress alerts, and passing and receiving maritime safety information. These options include INMARSAT, radio telex (SITOR), MF/HF single sideband and VHF radiotelephone, and satellite EPIRBS (for distress alerts and telecommunications), and INMARSAT safety net, NAVTEX and HF NAVTEX (SITOR) (for maritime safety information broadcasts). NAVTEX

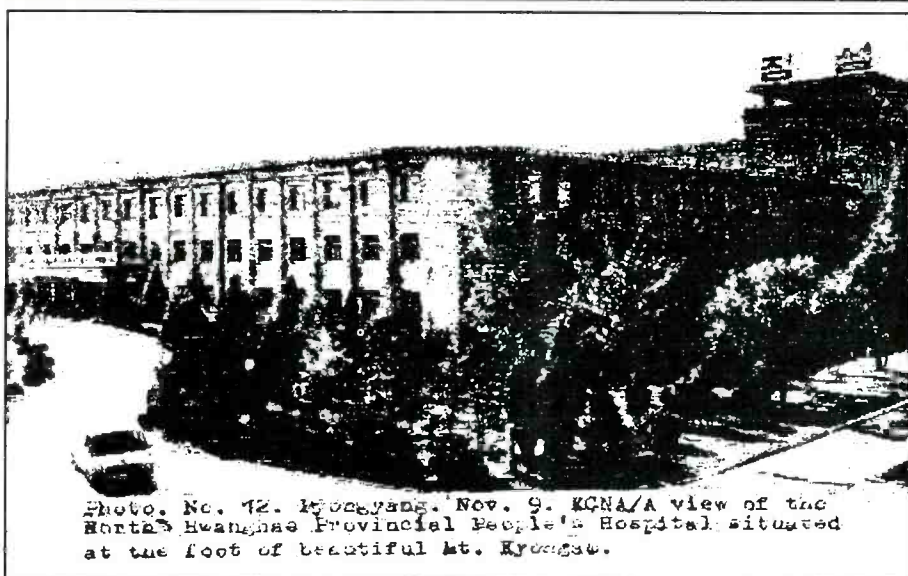


Photo. No. 12. Pyongyang, Nov. 9. KCNA/A view of the North Hwanghae Provincial People's Hospital, situated at the foot of beautiful Mt. Kyongso.

North Hwanghae Provincial People's Hospital in North Korea. Radiofax photo from KCNA, Pyongyang, North Korea. (Submitted by Richard Sprau of Florida)

broadcasts include the same notices to mariners, weather, search and rescue and fixed fishing gear location products that have been provided by the MF Morse broadcasts.

"Distress and other calls to any U.S. Coast Guard communication station can also be made on any of the following HF single sideband radiotelephone: 424 (4134 kHz), 601 (6200 kHz), 816 (8240 kHz), or 1205 (12242 kHz). Meteorological broadcasts are also made on these channels.

"We believe these options provide sufficient redundancy to ensure that adequate distress and safety communication capabilities are available."

NMF, U.S. Coast Guard, Boston, MA, sent the following broadcast schedule in a RTTY broadcast: Voice: 0440, 1040, 1640, and 2240 UTC on 2670 kHz, with offshore Boston weather, coastal Boston weather, coastal Portland, ME, weather, high seas weather, and local Notices to Mariners.

SITOR: 0140 UTC on 6312.3, 8214.8, and 12577.3 kHz (window freqs), 1630 UTC on 8414.8, 12577.3, and 16804.8 kHz (window freqs), with NAVAREA IV, hydrolants, Atlantic Area notice to fishermen, and high seas weather. CW: 0130 and 1450 UTC on 472 kHz, with offshore Boston weather and local Notices to Mariners; and 1350 UTC on 472 and 8502 kHz, with Atlantic Area notice to fishermen.

NMO, U.S. Coast Guard, Honolulu, HI, released the following SITOR FEC broadcast frequencies: It transmits on 8416.5 and 12579 kHz 24 hours daily, and on 22376 kHz from 1730 to 0330 UTC. Its GMDSS SITOR on-call working freqs and ship working freqs are (NMO assigned freqs/ship assigned freqs): 4212.0 kHz/4174.0 kHz (on request), 6316.0

kHz/6264.5 kHz (on request), 8429.5 kHz/8389.5 kHz (24 hours), 12589.0 kHz/12486.5 kHz (24 hours), 16819.5 kHz/16696.5 kHz (on request), and 22389.5 kHz/22297.5 kHz (1730-0330 UTC). NMO notes that the carrier or dial frequency is located 1.7 kHz below the assigned frequencies.

NMO runs a weather broadcast at 0130, 0430, 0730, 1330, and 2030 UTC. Its hydropac broadcasts are at 0630 and 2230 UTC, and NAVAREA XII broadcasts are at 0330 and 1730 UTC. On the NAVTEX frequency 518 kHz, weather and Notices to Mariners are sent at 0040, 0440, 0840, 1240, 1640, and 2040 UTC. Its HF CW broadcasts are on 9050 kHz, from 0400 to 1700 UTC, and 16964 kHz, from 1700 to 0400 UTC. Weather is broadcast at 0100, 0400, 0700, 1300 and 2000 UTC. The NAVAREA XII broadcast is sent at 0300 and 1700 UTC.

In an APT prediction bulletin sent in FEC by NMC, U.S. Coast Guard, Point Reyes, CA, these weather satellite frequencies were noted, BCN DSB 136.77 MHz, APT 137.50 MHz, and HRPT 1698.0 MHz.

Stax of Fax Dept.: AOK, the U.S. Naval Base at Rota, Spain, appears to be transmitting on a new frequency—11486 kHz. Radiofax charts seen on that frequency in January and February conform to a published schedule. Here in the States the signal is plagued by interference from an unidentified U.S. Navy station that comes up on the same frequency periodically and sends brief encrypted RTTY messages at 850/75.

On many days in February the Point Reyes Coast Guard station sent a radiofax notice reading, "Notice to users: Elimination of the NWS radiofacsimile service had been under consideration. A decision has now been reached to continue this service

due in part to user response."

An unidentified station faxed weather charts on 9318.5 kHz at 1245 UTC, 120/576. The charts were the same as those from NAM, Norfolk Naval Base, VA, that were on 8080 and 10865 kHz at the same time, but the signal strength of the unidentified station was much weaker than Norfolk's.

NPM, Pearl Harbor Naval Base, HI, was spotted on a new frequency, 21733.0 kHz, at 1810 UTC, with weather charts at 120/576.

AFS, Offutt AFB, Elkhorn, NE, was on 11113.0 kHz at 2315 UTC, with weather charts. The transmission was determined to be a spurious emission of Offutt's broadcast on 11122.0 kHz.

Abbreviations Used In The RTTY Column

AA	Arabic
ARQ	SITOR mode
BC	Broadcast
EE	English
FEC	Forward Error Connection mode
FF	French
foxes	"Quick brown fox. . ." test tape
GG	German
ID	Identification/led
MFA	Ministry of Foreign Affairs
nx	News
PP	Portuguese
RURY	"RURY . . ." test tape
SS	Spanish
tfc	Traffic
w/	With
wx	Weather

RTTY Intercepts

- 51.95:** GYA, RN, London, England, w/encryption, 75 baud at 0715. (Ary Boender, NLD)
- 68.90:** GBY, RN, Rugby, England, w/encryption at 0733, 75 baud. (Boender, NLD)
- 81.00:** GYA, RN, London, England, w/encryption, 75 baud at 0740. (Boender, NLD)
- 88.00:** GYA, RN, London, England, w/encryption at 0750, 75 baud. (Boender, NLD)
- 123.70:** DCF42, PIAB, Mainflingen, Germany, w/nx in GG, FEC-A/96 at 1510. (Boender, NLD)
- 140.30:** DCF60, EDP, Mainflingen, Germany, w/nx in GG, F7B/300 at 1512. (Boender, NLD)
- 1740.0:** Un-ID w/encryption, 300-baud ASCII, 8 databits, at 1145. Spur found on 1746.0 kHz. (Ed.)
- 3172.5:** IMB1, Rome Meteo, Italy, w/coded wx, 50 baud at 2338. (Boender, NLD)
- 3196.0:** Prague Meteo, Czech Republic, w/coded wx, 50 baud at 2336. (Boender, NLD)
- 3541.0:** GNK, Norwick R., England, w/mgs, Austospec/68.5 at 2225. (Boender, NLD)
- 4002.0:** YRR2, Bucharest Meteo, Romania, w/coded wx at 2210, 50 baud. (Boender, NLD)
- 4159.5:** TUH, ASECNA, Abidjan, Ivory Coast, w/RURY at 0315, 50 baud. (Ed.)
- 4343.0:** WLO, Mobile R., AL, w/wx forecasts, FEC at 1447. (Ed.) 4442.5: RGC72, Kiev Meteo, Ukraine, w/coded wx at 0337, 50 baud. (Ed.)
- 4463.3:** Un-ID w/continuous RURY at 0115, 50 baud. (Ed.)
- 4489.0:** GFL26, Bracknell Meteo, England, w/coded wx at 0341, 50 baud. (Ed.)
- 4570.0:** HZN46, Jeddah Meteo, Saudi Arabia, w/coded wx, 100 baud at 0347. (Ed.)
- 4788.0:** TJK, ASECNA, Douala, Cameroon, w/coded wx, 50 baud at 0204. 6VU26, ASECNA, Dakar, Senegal, w/RURY & CQ at 0450, 50 baud. (Ed.)
- 4812.8:** LZA8, Sofia Meteo, Bulgaria, w/coded wx at 0423, 50 baud. (Ed.)

5072.0: "CFM" w/5L grps at 1800, 75 baud. (Boender, NLD)

5076.0: "CFM" w/5L grps at 1815, 75 baud. (Boender, NLD)

5117.5: TYE, ASECNA, Cotonou, Benin, w/RYRY. 50 baud at 0430. (Ed.)

5122.0: MKD, RAF, Akrotiri, Cyprus, w/RY's, foxes & 10 count, FDM 50 baud at 0058. (Ed.)

5160.0: SUA, ASECNA, Niamey, Niger, idling, ARQ-M2/96 at 0440. (Ed.)

5233.3: AJE, USAF, Croughton AB, England, w/coded wx at 1425, 75 baud. (Boender, NLD)

6328.0: WOO, Ocean Gate R., NJ, w/tfc list, FEC at 2200. (Murray Lehman, AUS)

6978.2: VVD56, New Delhi Meteo, India, w/coded wx at 1200, 50 baud. (Fred Hetherington, FL)

6980.1: CCS, Santiago Navrad, Chile, w/RYRY at 0100, 100 baud. (Hetherington, FL)

7380.0: NNNOMGB, USMC MARS, Guantanamo Bay, Cuba, w/MARSgrams to NNNOMQU, Quantico Marine Base, VA, for relay elsewhere. Was 75 baud at 1610. (Ed.)

7414.2: RFFX, French Military, Versailles, France, w/a service msg to RFFXL in Beirut, Lebanon, ARQ-E/72 at 0010. (Lehman, AUS)

7621.3: Un-ID w/mil. type tfc in SS, 100 baud at 1549. (Ed.)

7643.2: RFLIGC, Gendarmerie, Cayenne, French Guiana, w/tfc in FF to Paris re events in Cayenne in which the cops had to be called into service, ARQ-E/96 at 2353. (Ed.)

7714.8: RCU71, Novosibirsk Meteo, Russia, w/coded wx at 1309, 50 baud. (Ed.)

7715.7: Un-ID w/mgs in SS at 1241, ARQ. S/off 1248 w/"73" + "saludos." (Ed.)

7808.0: DFZG, MFA, Belgrade, Yugoslavia, w/QTC + RYRY at 0630. 75 baud. Tanjug rx in SC xmted at 0633. (Ed.)

7847.0: Un-ID w/encryption, 110-baud ASCII, at 1342. (Ed.)

7850.0: ZAA, ATA, Tirana, Albania, w/RYRY at 1855, foll by nx in EE at 1900, 50 baud. (Ed.)

7854.7: ROK24, Moscow Meteo, Russia, w/coded wx at 1306, 50 baud. (Ed.)

7863.0: BJZ21, Wuhan Meteo, China, w/coded wx, 75 baud at 1310. (Ed.)

7888.0: Un-ID, possibly in Mexico. w/"...meteorologicos de aerovia." 45 baud at 1232. Sample text: C/M/HZ/981/05090/09. IPO 1200Z X/NUB 090/09/07 C/M/HZ ROCIO SBR STN/940/-0045=. (Ed.)

7892.5: SOH289B, PAP, Warsaw, Poland, w/nx in Polish at 1356. FEC. (Ed.)

7896.7: RFLI, French Forces, Fort de France, Martinique, w/"controle de voie," ARQ-E3/96 at 1027. (Ed.)

7918.1: DGG91, PIAB, Elmshorn, Germany, w/RYRY, skeds, & nx in GG for Europe. FEC-A/96 at 1440. (Lehman, AUS)

7933.5: Mexican Mil., Ensenada, B.C., Mexico, w/wx in SS, 75 baud at 1430. (Ed.)

7941.5: Un-ID w/"VVV VVV VVV ZSO ZSO ZSO testing," 75 baud at 0142. (Ed.)

7946.0: Possibly RFLIT, French Marines, St. Denis, Reunion, w/relay of naval personnel lists, ARQ-E3/96 at 2330. (Ed.)

7998.5: Un-ID mil. w/ARQ tfc in SS at 0308. (Ed.)

8011.4: Un-ID w/seical PQEM et al, ARQ at 0749. (Ed.)

8020.0: HMF85, KCNA, Pyongyang, North Korea, w/nx in EE, 50 baud at 1508. (Ed.)

8032.0: Bulgarian Emb., Havana, Cuba, w/Tel-exes in Bulgarian to Sofia, 75 baud at 2150. S/off in CW at 2152. (Ed.)

8049.0: 9BC25, IRNA, Teheran, Iran, w/nx in EE at 1959, 50 baud. (Ed.)

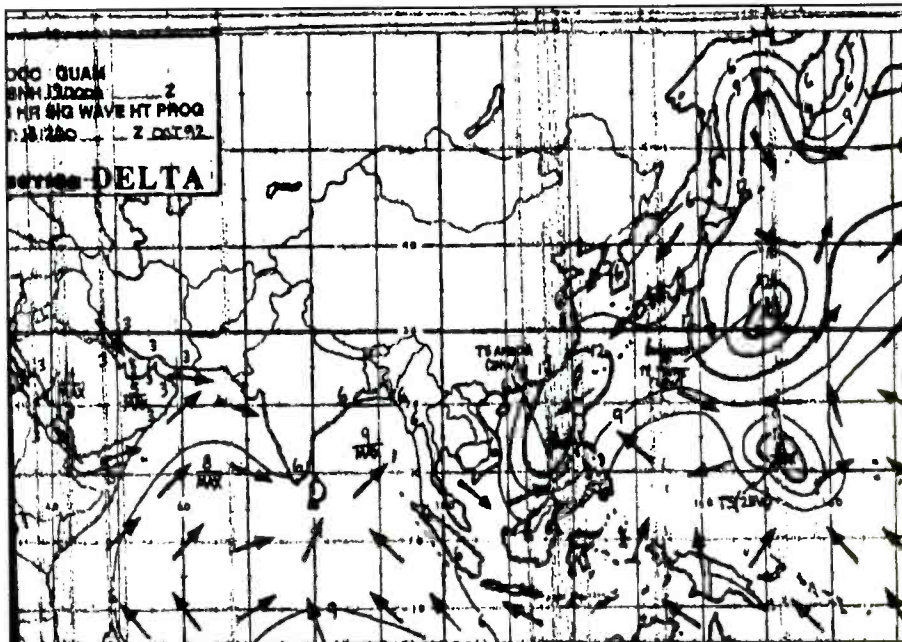
8123.0: TNL, ASECNA, Brazzaville, Congo, w/coded wx at 0100, ARQ-M2/96, channel A. (Ed.)

8133.0: Un-ID w/encryption, 200 baud at 2100. (Ed.)

8151.6: HMF86, KCNA, Pyongyang, North Korea, w/nx in EE at 1034, 50 baud (Ed.), and in FF at 1144. (Hetherington, FL)

8191.9: 9MR, Johor Baharu Navrad, Malaysia, w/CQ, ID, & "RMMJ," 75 baud at 2040. (Robert Hall, RSA)

8274.4: Un-ID in Nigeria, w/tfc in EE via Lagos



Significant wave height chart of NKW, U.S. Navy, Diego Garcia, was logged by Robert Hall of South Africa.

to an offshore oil platform. Was ARQ at 2030. (Hall, RSA)

8416.5: NMC, USCG, Point Reyes, CA, w/APT prediction bulletin, FEC at 0030. NMO, USCG, Honolulu, HI, w/navarea XII b/c + time/freq. sked at 0330, FEC, and a wx b/c at 0430. (Ed.)

8493.0: Un-ID w/encrypted msgs separated by RYRY + vmgtcnjbh, 100 baud at 0958. (Boender, NLD)

8514.0: WLO, Mobile R., AL, w/wx synopsis & forecast at 1348, FEC. (Ed.)

8556.0: Un-ID North Korean Emb., w/5F grps + msgs in KK, 50 baud, 0226-0242. (Ed.)

9001.5: Un-ID Latin American mil. stas w/Tel-exes in SS, ARQ at 0346. Voice comms are on USB on 9000.0 kHz. (Ed.)

9020.0: RFVI, French Forces, Le Port, Reunion, w/"controle de voie" to RFHI, Noumea, New Caledonia, ARQ-E3/100 at 1418. (Ed.)

9040.8: 5YE, Nairobi Air, Kenya, w/plaintext wx in EE at 2015, 100 baud. (Ed.)

9045.5: "Green Team" xmtng to "Black Team" at 1826, 100 baud. "Black Team" tells "Green Team" on 9043.5 kHz USB that his brief xmsgs are all garbled. (Ed.)

9076.7: MFA, Paris, France, w/tfc to Libreville, Gabon, ARQ-E3/50 at 1915. Libreville replies on 9126.7 kHz. (Ed.)

9114.0: HGG31, MTI, Budapest, Hungary, w/nx at 1010, 50 baud. (Boender, NLD)

9147.7: MFA, Cairo, Egypt, w/tfc in AA & diplo nx in EE to Washington, DC, ARQ at 2115. (Ed.)

9157.5: WLO, Mobile R., AL, w/ARQ phasing sig + CW ID at 2347. (Ed.)

9190.0: RDZ75, Moscow Meteo, Russia, w/coded wx at 0033, 50 baud. (Ed.)

9195.0: 5ST, ASECNA, Antananarivo, Madagascar, w/"ch" at 1500, ARQ-E3/48. Went QRT at 1503. (Ed.)

9376.7: RFHI, French Forces, Noumea, New Caledonia, w/"controle de voie" at 1503, ARQ-E3/100. (Ed.)

9891.7: RFLIG, French Forces, Cayenne, French Guiana, w/"controle de voie" at 0520, ARQ-E/96. (Ed.)

9916.0: Un-ID w/continuous RYRY, 50 baud, 1708-1741. (Ed.)

10215.0: HZN48, Jeddah Meteo, Saudi Arabia, w/coded wx at 1935, 100 baud. (Ed.)

10281.2: RFLIRT, Cayenne, French Guiana, w/"non protege" msgs to Fort de France, ARQ-E/96 at 2005. (Ed.)

10327.0: DFZG, MFA, Belgrade, Yugoslavia, w/Tanjung nx in SC at 1435, 75 baud. (Ed.)

10408.2: 9VVF63, ANSA, Singapore, w/nx at 1652, 50 baud. (Hall, RSA)

10443.0: CCS, Santiago Navrad, Chile, w/5L msgs to PXSLL, 100 baud at 0030. (Ed.)

10460.0: Un-ID w/mgs in SS, ARQ at 1536. (Ed.)

10475.0: Un-ID using a sync TTY mode at 150 bd at 1715. Sig. was completely smothered at 1727 by another sta. coming up with 75-baud FDM RTTY. (Ed.)

10493.7: RFTJF, French Forces, Port Bouet, Ivory Coast, w/a 5L msg to Mindefense, Paris, France, ARQ-E3/48 at 1915. (Ed.)

10501.7: RFLIG, French Forces, Cayenne, French Guiana, w/a msg to Paris in FF re "regles d'emploi des helicopters de l'armee" (rules for using army helicopters), ARQ-E/96 at 1228. (Ed.)

10515.0: SRI, Schwarzenburg, Switzerland, w/nx in GG & FF at 0210, 50 baud. (Ed.)

10548.7: RFQPS, French Forces, Djibouti, w/propagation prediction rpt in FF at 1500, ARQ-E3/100. (Ed.)

10580.0: HMF46, KCNA, Pyongyang, North Korea, w/nx in EE at 1545, 50 baud. (Ed.)

10584.0: Un-ID w/badly garbled tfc, 75 baud at 1550. S/off 1551 w/QRU QRU QRA 002. (Ed.)

10600.0: XVN37, VNA, Hanoi, Vietnam, w/nx in FF, 50 baud at 1237 (Ed.), and in EE at 1400. (Harold Manthey, NY)

10612.8: S2D, Dhaka Air, Bangladesh, w/ax wx msgs at 1242, 50 baud. (Ed.)

10757.5: CNM39, MAP, Rabat, Morocco, w/nx in SS at 1927, 50 baud. (Ed.)

10798.2: RFLI, French Forces, Fort de France, Martinique, w/AFP nx items in FF & navareas in EE from Washington, DC, ARQ-E/96 at 1524. Nx items from the local press is sent at 1600, wx rpts at 2245. (Ed.)

10873.7: RFVI, French Forces, Le Port, Reunion, w/"controle de voie." ARQ-E3/100 at 0316. (Ed.)

10917.7: RFTJ, French Forces, Dakar, Senegal, w/"non protege" msgs at 2240, ARQ-E3/48. (Ed.)

10966.0: RFFXS, French Military, Mogadishu, Somalia, w/end of the day tfc to RFFX, Versailles, on ZXS circuit, ARQ-E/72 at 0005. Op circuit—XXS—is on 10288, 14509 & 18360. (Lehman, AUS)

11057.5: Un-ID w/occasional foxes, alphabet, & "please QSL with DTG. Thank you." DTG means date & time (Greenwich). Was FDM, ARQ-M2/96, channel B, at 0500 (Ed.)



NMC, U.S. Coast Guard, Point Reyes, CA., sent this radiifax notice many times in February, "Notice to users: Elimination of the NWS radiofacsimile service had been under consideration. A decision has now been reached to continue this service due in part to user response." (From Robert Margolis).

11124.8: DHJ51, Gregel Meteo, Germany. w/coded wx at 1408, 100 baud. (Ed.)

11141.7: YWM1, Maracaibo Navrad, Venezuela, w/wx in SS, 75 baud at 2045. (Ed.) Un-ID USAF wx sta. w/comprehensive Mideast wx in support of Operation Restore Hope in Somalia, 75 baud at 1350. Was // 17445.5 & 24300.5 at 0900. (Lehman, AUS)

11449.7: RDD77, Moscow Meteo, Russia, w/coded wx at 1416, 50 baud. (Ed.)

11493.0: SNN299, MFA, Warsaw, Poland, w/a msg to "HAGA" (The Hague?) at 0950, POL-ARQ. (Boender, NLD)

12120.0: Un-ID w/continuous RYRY at 2153, 75 baud. (Ed.)

12136.7: Un-ID in RS-ARQ/228 65 mode at 0407. Can't decode w/present eqpmt. Also came across an un-ID sta. idling from 2210 to past 0030, ARQ-M2/200. (Ed.)

12148.0: SPW, Warsaw R., Poland, w/Telex t/c to merchant ships, FEC at 1903. (Ed.)

12223.5: Un-ID Portuguese military w/"RQA-0010 RR RPTTA DE RPFT ZNR UUUUU ZIC RFQA00 ZID ATQA017 NNNN." Was ARQ at 2055. (Ed.)

12276.0: Un-ID w/encryption at 1915, ARQ-E/288. (Ed.)

12316.8: Un-ID w/foxes, 10 count, & "testing" at 1955, 75 baud. (Ed.)

12341.7: HJNF, Simon Bolivar (Colombian cargo ship), in FEC at 2136 w/"buenos tardes amigo colega hr qj si es posible ga llamame adl. 24105 hjnf gb06." Then to ARQ w/"ok fonia estas mismas adl." Went to USB on 12340.0 kHz at 2138. Returned at 0030 w/ARQ msgs in SS to OM "Franklyn." This freq. is a ship voice channel & not for RTTY. (Ed.)

12357.5: Un-ID using a special TTY mode at 125 baud. 2040-2055, and at 0024. (Ed.)

12414.3: Un-ID w/encrypted msgs separated by RYRY + vmgtcnjhb, 75 baud at 2027. (Ed.)

12448.2: French Forces, Villacoublay, France, w/5L msgs to Djibouti at 2244, ARQ-E3/192. (Ed.)

12579.5: 9VG80, Singapore Radio, w/Satcomm & Inmarsat info + t/c list, FEC at 1945. (Hall, RSA)

12637.5: UMV, Murmansk R., Russia. w/IMBY selcal in ARQ + CW ID at 1346. (Ed.)

12666.0: EBA, Madrid Navrad, Spain, w/a msg in SS, foll by RYRY and then QRT at 2200. Was 100 baud. (Hetherington, FL)

12669.0: LOR, Puerto Belgrano Navrad, Argentina, w/5L msgs, 75 baud at 0007. (Ed.)

12676.0: EBA, Madrid Navrad, Spain, w/a msg in SS to RETJCM at 2205, 100 baud. (Hetherington, FL)

12740.7: HWN, Houilles Navrad, France, w/"ry

vw vw vvv de hwn sg vw vw vw de hwn," 50 baud at 1703. (Ed.)

12903.3: VTH, Bombay Navrad, India. w/RYRY & ID + RBSL + BNR, 50 baud at 1956. (Hall, RSA)

13259.4: "33MN" w/RYRY to "3V3G" at 2333, 75 baud. (Dave Phillips, OH)

13481.7: MFA, Cairo, Egypt, w/a msg in AA at 1415, ARQ. (Hetherington, FL)

13524.0: YIO72, INA, Baghdad, Iraq, w/agriculture nx in EE, 50 baud at 1331. (Manthey, NY)

13553.0: NSS, USN, Washington, DC, w/AP/UPI nx at 1610, 50 baud on FDM channel B01. (Ed.)

13801.5: Un-ID idling or w/SPEF selcal, ARQ at 1836. (Ed.)

13916.5: Un-ID ICRC sta. w/a lengthy ARQ msg in SS at 1837. (Ed.)

13934.5: Un-ID Cuban diplo w/crypto after ZZZZZ, 100 baud at 1628. To CW at 1631 for s/off. (Ed.)

13940.0: CLP65, Cuban Emb., Managua, Nicaragua, w/crypto after ZZZZZ. 100 baud at 1604. (Ed.)

13963.6: Un-ID w/s/off msgs in EE, ARQ at 1803. (Ed.)

13976.0: HBD20, MFA, Berne, Switzerland, w/t/c in FF & GG to 2nd sta. on this freq. The other sta. xmts selcal BMRP. Was ARQ at 1326. (Ed.)

14355.5: SAM, MFA, Stockholm, Sweden, w/crypto after IIII. SWED-ARQ at 1708, & w/5L grps to Mexico at 1835. (Ed.)

14387.0: Un-ID w/crypto after DDD + occasional op msgs, 75 baud at 1418. Might be a Bulgarian diplo. (Ed.)

14395.0: AJE, USAF, Croughton AB, England, w/EGWR wx data, 75 baud at 1556. (Ed.)

14433.0: "Tito" & "Pepe" w/msgs in SS at 1516 & 1830, Packet. (Ed.)

14454.7: Un-ID w/coded wx at 1451, 50 baud. (Ed.)

14459.8: Un-ID w/a very short encrypted msg, "ygabdwanosieeee sdkkibsohcwreqxee xoatsoop." Was ARQ-E3/48 at 0050. (Ed.)

14485.7: RFLIG, French Forces, Cayenne, French Guiana, w/"non protege" msgs, ARQ-E/96 at 2025. (Ed.)

14633.7: RFLI, French Forces, Fort de France, Martinique, w/navareas at 1725, ARQ-E/96. (Ed.)

14674.0: DFZG, MFA, Belgrade, Yugoslavia, w/encrypted msgs & Tanjung nx in SC, 75 baud at 1443. Was // 14912.0 kHz. (Ed.)

14807.3: CLP65, Cuban Emb., Managua, Nicaragua, w/crypto after ZZZZZ, 75 baud at 2030. (Ed.)

14845.2: SYD, Nairobi Air, Kenya, w/a wx at 1805, 50 baud. (Ed.)

15647.7: RFTJF, French Forces, Port Bouet, Ivory Coast, w/"non protege" msgs, "controle de voie," & 5L grps, ARQ-E3/48 at 1710. (Ed.)

15655.0: CNM65, MAP, Rabat, Morocco. w/nx in FF at 1713, 50 baud. (Ed.)

15750.0: GYA/MTO, RN, London, England/Rosyth, Scotland, w/"LF states," 75 baud at 1430. Both c/s's were used. (Lehman, AUS)

15835.0: HET5, SRI, Schwarzenburg, Switzerland, w/nx in EE at 1743, 50 baud. (Ed.)

16073.7: MFA, Oslo, Norway, w/msgs in Norwegian, ARQ, 1406-1418. (Ed.)

16093.0: AFRTS, Hollywood, CA, w/AP/UPI nx, FDM 50 baud at 1510. (Ed.)

16100.0: Un-ID idling, FEC, 1608-1700. (Ed.)

16111.2: HBD20, MFA, Berne, Switzerland, w/5L grps, 1501-1506, ARQ. (Ed.)

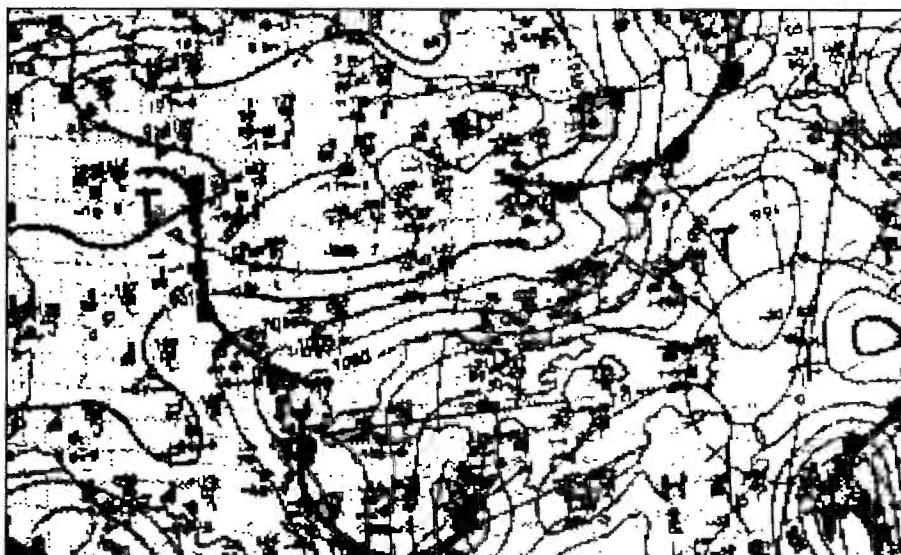
16128.7: Un-ID w/text possibly in Dutch, ARQ, 1352-1400. (Ed.)

16171.7: Un-ID Egyptian diplo w/a Telex in AA, ARQ at 1453. (Ed.)

16174.3: TAD, MFA, Ankara, Turkey, w/nx in Turk & EE + 5L grps, FEC-A/144 at 1410. (Lehman, AUS)

16186.7: Un-ID Egyptian Emb. in AA at 1426, ARQ. (Ed.)

16196.7: Probably MFA, Cairo, Egypt, w/a very



Surface pressure analysis chart of DCF54, Mainflingen Meteo, Germany, was submitted by Ary Boender of the Netherlands.

long text in AA, ARQ at 1505. (Ed.)

16203.0: RCF, MFA, Kupavna, Russia, w/RYRY at 1438, foll at 1440 w/msgs in Cyrillic w/RYRY between msgs, 50 baud. Went QRT at 1445. (Ed.)

16265.4: 9VF206, ANSA, Singapore, w/nx at 1650, 50 baud. (Hall, RSA)

16312.5: "C37A" w/RYRY, foxes, & 10 count, foll by crypto, 100 baud at 1342. (Ed.)

16318.8: Egyptian Emb., Tunis, Tunisia, w/tfc in AA at 1630, ARQ. (Hall, RSA)

16328.2: Un-ID w/msgs in JJ, ARQ at 1632. "Taishi Ecuador CHB-9" seen in one msg. S/off w/"hasta luego chao." (Ed.)

16332.4: MFA, Bucharest, Romania, w/nx in Romanian, ROU-FEC/164.5 at 1644. To CW fors/off at 1656. (Ed.)

16444.8: CLP23, Cuban Emb., Lagos, Nigeria, w/msgs to CLP1, MFA, Havana, Cuba, 50 baud at 2155. (Hetherington, FL)

16448.0: Un-ID w/"WNY WNY WNY 2/148" + RYRY, 75 baud at 1910, foll by a 5F msg consisting of one grp, then a 5L msg. QRU QRU SK SK at 1913. (Ed.)

16810.5: FFT81, St. Lys R., France, w/wx & tfc list at 1201, FEC. (Hall, RSA)

16838.5: 9AR, Rijeka R., Croatia, w/possible nx in SC, ARQ at 1320. (Hetherington, FL)

16851.0: TAH, Istanbul R., Turkey, w/msg in EE re proposed changes in port contract for vessels from "Orion Istanbul." Was 50 baud at 1220. (Hetherington, FL)

17156.7: MFA, Cairo, Egypt, w/Egyptian press extracts in EE, ARQ at 1705. (Ed.)

17197.3: LOR, Puerto Belgrano Navrad, Argentina, w/5L grps, 100 baud at 0138. (Phillips, OH)

17215.3: LOR w/nx & wx in SS at 0133, 75 baud. (Phillips, OH)

17363.0: SYE, Nairobi Meteo, Kenya, w/coded wx at 1832, 75 baud. (Ed.)

17445.5: AFS, Offutt AFB, Elkhorn, NE, w/wx msgs at 1737, 75 baud. (Ed.)

17530.0: SRI, Schwarzenburg, Switzerland, w/nx in GG at 1847, & in FF at 1904. 50 baud. (Ed.)

17550.7: RFTJ, French Forces, Dakar, Senegal, w/"controle de voie," at 1158, ARQ-E3/192 (Hall, RSA), & w/"non protege" msgs at 1910. (Ed.)

17590.0: HZN49, Jeddah Meteo, Saudi Arabia, w/coded wx, 100 baud at 1159. (Hall, RSA)

18030.1: CLP4, Cuban Emb., Bissau, Guinea-Bissau, w/msgs to CLP1, 50 baud at 1540. (Hetherington, FL)

18046.0: Probably a Bulgarian diplo w/crypto after DDDDD, 75 baud at 1543-1549. (Ed.)

18047.0: TTL, ASECNA, N'djamena, Chad, w/RYRY at 1220, 50 baud. (Hall, RSA)

18060.0: SNN299, MFA, Warsaw, Poland, w/5F grps & Telexes in Polish to embassies & consulates in Canada. Was POL-ARQ at 1439. (Ed.)

18060.7: MTO, Royal Navy, Rosyth, Scotland, w/availability tape, 75 baud at 1452. (Ed.)

18105.2: Un-ID w/personal msgs in FF, ARQ at 1220. (Hall, RSA) Possibly the Doctors Without Frontiers organization in Brussels, Belgium, or Ganta, Liberia—Ed.

18242.3: ZRO4, Pretoria Meteo, RSA, w/coded wx, 75 baud at 1234. (Hall, RSA)

18255.4: SUU20, Cairo Meteo, Egypt, w/coded wx at 1050, 75 baud. (Hall, RSA)

18270.6: HBD20, MFA, Berne, Switzerland, w/umpteen pages of 5L grps, ARQ at 1617. (Hall, RSA)

18450.0: RCF, MFA, Kupavna, Russia, w/CQ & coded msgs, 75 baud at 1450. (Boender, NLD)

18490.2: RUZU, the Russian wx base at Molo-dezhnaya, Antarctica, using TORG 11/100, spread 51, mode at 1245. Not ARQ-S4 as previously thought. (Hall, RSA)

18558.0: MFA, Bucharest, Romania, w/diplo text in Romanian, ROU-FEC/164.5 at 1630. (Ed.)

18566.2: Bangladesh Emb., Beijing, China, w/Telexes in EE to Dhaka, FEC-A/144 at 0850. (Lehman, AUS)

18593.2: Cuban Emb., Lima, Peru, w/5F msgs & Telexes, 50 baud at 1638. (Ed.)

18630.5: CLP1, MFA, Havana, Cuba, w/RYRY w/ID to Guyana, foll by a 5F msg & nx circular in EE. Was 50 baud at 1411. (Ed.)

18744.5-18777.6: MKK, RAF, Stanbridge, England, w/RYI's, foxes, & 10 count, on all FDM channels, 50 baud at 1747. (Hall, RSA)

18860.8: ZAT, ATA, Tirana, Albania, w/nx in EE at 1807, 50 baud. (Hall, RSA)

18922.0: Un-ID w/encrypted msgs, FEC-A/144 at 0858. (Boender, NLD) My logbook shows TAD, MFA, Ankara, Turkey—Ed.

18966.5: RFHJ, French Forces, Papeete, Tahiti, w/"controle de voie," to Fort de France. ARQ-E3/96 at 2144. (Ed.)

19019.7: CLP1, MFA, Havana, Cuba, w/5L msgs to CLP95 then one to CLP18, 50 baud at 1845. (Hetherington, FL)

19025.5: Cuban Emb., Cairo, Egypt, w/Telex t/c, 50 baud at 1658. (Ed.)

19029.4: PWX33, Brasilia Navrad, Brazil, w/RYRY at 1830, 75 baud. (Hetherington, FL)

19086.5: CLP1, MFA, Havana, Cuba, w/a circular in EE, 50 baud at ??? (Hetherington, FL)

19221.7: Un-ID w/text in SS, ARQ, 1705-1723. (Ed.)

19291.3: RFV1, French Military, Le Port, Reunion, w/tfc to RFVIMA in Cambodia, on IMA circuit, ARQ-E3/100 at 0840. (Lehman, AUS)

19689.5: KMI, Dixon R., CA, w/freq. list, service info, & t/c list, FEC at 1843. (Ed.)

19984.5: CLP1, MFA, Havana, Cuba, w/5F grps, Telex t/c, & crypto after ZZZZZ to various Mideast embs, 50 baud at 1715. (Ed.)

20085.0: ISX20, ANSA, Rome, Italy, w/nx, 50 baud at 1100. (Boender, NLD)

20086.0: RFVIMA, French Forces in Cambodia, w/tfc to RFV1, Le Port, Reunion, on MAI circuit, ARQ-E3/100 at 0840. (Lehman, AUS)

20104.8: Probably CLP1, MFA, Havana, Cuba, w/RYRY sans ID at 1511, going QRT at 1514, 50 baud. (Ed.)

20133.2: DFZG, MFA, Belgrade, Yugoslavia, w/crypto after VCVC & wx nx to its embassy in Havana, Cuba, 75 baud at 1700.

20179.7: RFFA, Mindefense, Paris, France, w/"controle de voie," at 1636, ARQ-E3/100. (Ed.)

20286.5: SOV228, PAP, Warsaw, Poland, w/nx in Polish, FEC at 1810. (Ed.)

20364.8: IPG20, MFA, Rome, Italy, w/5L msgs, 1358-1432, ARQ-E/96. (Ed.)

20372.5: IRS23, ANSA, Rome, Italy, w/nx in FF, 50 baud at 1628. (Ed.)

20401.5: MFA, Jakarta, Indonesia, w/text in Indonesian, ARQ at 1455. (Ed.)

20560.0: JANA, Tripoli, Libya, w/nx in EE at 1615, 50 baud. (Ed.)

20584.0: Salini Costruttori SPA, Rome, Italy, w/a Telex in II at 1435, ARQ. To LSB phone on same freq. at 1442. (Ed.)

20603.0: Un-ID w/encryption, 1509-1531, ARQ. (Ed.)

20613.0: CLP45, Cuban Emb., Luanda, Angola, w/crypto after ZZZZZ, 50 baud at 1757. (Ed.)

20619.0: OMZ, MFA, Prague, Czech Republic, w/a Telex in Czech, 100 baud at 1610. (Ed.)

20628.4: CLP5, Cuban Emb., Algiers, Algeria, relaying t/c from Mideast embs to CLP1, 75 baud at 1606. (Ed.)

20716.7: RFTJD, French Forces, Douala, Cameroon, w/"non protege" msgs & 5L grps at 1449, ARQ-E/50. (Ed.)

20754.4: Un-ID ICRC sta. w/a Telex in FF at 1505, ARQ. (Ed.)

20758.0: RFLIG, French Forces, Cayenne, French Guiana, w/non protege msgs to Paris, ARQ-E/96 at 1630. (Ed.)

20813.7: RFTJD, French Forces, Douala, Cameroon, w/"controle de voie," ARQ-E3/50 at 1405. (Ed.)

21756.0: Un-ID Hungarian diplo w/DUP-ARQ phasing sig at 1646. (Ed.)

21831.5: Spanish Emb., Managua, Nicaragua, w/instructions in SS on how to operate a computer when sending telegrams. Was ARQ at 1415. (Ed.)

21859.0: DFZG, MFA, Belgrade, Yugoslavia, w/RYRY at 1430, foll by nx in SC at 1433, 75 baud. Nx in EE at 1544 logged on another day. (Ed.)

21926.7: Un-ID French diplo w/5L grps at 1547, ARQ6-90/200. (Ed.)

22258.2: Un-ID possibly in Guatemala, w/a msg in SS that was divided into 5L grps: "buena suert esper esure." Explanation given that this was a test "por medio de CW para de R O II." The test ended w/"buena suerte." Was in FEC at 1535. (Hetherington, FL) "Inter estin glogg ingfr edxxx"—Ed.

22358.2: Un-ID w/75-baud encryption all day long on a ship RTTY channel. Occasional ZCZC seen but not much else that makes sense. Whozit? (Hall, RSA) Don't hear the sta. up here—Ed.

22378.0: FFT91, St. Lys R., France, w/a t/c list at 1700, FEC. (Ed.)

22402.0: LGG3, Rogaland R., Norway, w/ARQ phasing sig + "LGB TLX" in CW at 1708. (Ed.)

22403.5: HEC72, Berne R., Switzerland, w/ARQ phasing sig + "HEC QRV" in CW at 1703. (Ed.)

22550.0: MTO, Royal Navy, Rosyth, Scotland, w/a list of available open channels, 75 baud at 1717. (Ed.)

22955.0: ISX22, ANSA, Rome, Italy, w/nx in FF, 50 baud at 1626. (Ed.)

22977.0: MFA, Dhaka, Bangladesh, w/nx briefs in EE to its embassy in Riyadh, Saudi Arabia, at 1140, FEC-A/144. (Lehman, AUS)

23006.7: MFA, Cairo, Egypt, w/a msg in FF from Egypt's President to Dakar, Senegal, ARQ at 1441. (Ed.)

23238.0: MKL, RAF, Pitreavie, Scotland, w/crypto ending at 1600, 75 baud. To CW on 23237.0 w/"X2Q de MKL" & a wx msg. Returned to 23238.0 at 1613. (Hetherington, FL)

23251.7: Un-ID Egyptian diplo w/msgs in AA, 1544-1616, ARQ. (Ed.)

23355.0: CLP18, Cuban Emb., Dar-es-Salaam, Tanzania, w/msgs & "daily news" in SS, 50 baud at 1816. (Ed.)

23358.5: RFFA, Mindefense, Paris, France, w/5L grps & "non protege" msgs to Cayenne, ARQ-E/96 at 1513. Nx in FF runs at 1700. (Ed.)

25012.0: MTO, Royal Navy, Rosyth, Scotland, w/available channels list at 1508, 75 baud. (Ed.)

25023.0: Italian Emb., New Delhi, India, w/a service msg to Rome, ARQ-E/96 at 1200. (Lehman, AUS)

25227.0: HBD20, MFA, Berne, Switzerland, w/nx in FF at 1515, ARQ. (Manthey, NY)

25238.0: Un-ID w/5L msgs, w/brief msgs in GG, after each msg, ARQ at 1520. (Ed.)

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FCC ACTIONS AFFECTING COMMUNICATIONS

Man Charged In False Distress Case

Richard Cullen, United States Attorney for the Eastern District of Virginia; Richard M. Smith, Chief of the Field Operations Bureau of the Federal Communications Commission; and the United States Coast Guard, announced that Jorge Mestre, age 50, of Fairfax, Virginia, an amateur radio operator with the callsign NS3K, has pled guilty to knowingly and willfully communicating false distress signals in violation of 14 U.S.C. § 88(c). The false distress communications, which were made on August 7, 1992, caused the Coast Guard to make an unnecessary attempt to save lives and property.

Mestre entered his plea on February 12, 1993, before the Honorable Claude M. Hilton, U.S. District Court Judge, Eastern District of Virginia, Alexandria, Virginia, pursuant to a plea agreement with the government, under the terms of which Mestre pled guilty to one count of violating the statute. The agreement further provides that Mestre will permanently surrender his FCC amateur radio license, dispose of his amateur radio equipment within 60 days, and make immediate restitution of \$50,000 to the U.S. Coast Guard. Sentencing was set before the Honorable Claude M. Hilton.

The false distress communications, consisting of both single sideband (SSB) voice and Morse Code transmissions on the Amateur Radio Service frequency of 14.313 MHz, falsely reported a sinking vessel off the Turks and Caicos Islands, British West Indies. It was also falsely reported that six persons aboard the vessel were in the water and needed to be rescued. For a period of approximately two hours during the evening of August 7th, the false distress communications continued intermittently and included the internationally recognized Morse Code distress message "SOS."

The distress signals were monitored by other amateur radio operators who notified the Coast Guard and the Federal Communications Commission. The FCC's long range radio direction finding network immediately began monitoring the signals. Using the direction finding data, subsequent detailed technical analysis of tape recordings of the hoax transmissions, and information provided by other amateur radio operators, the FCC was able to later identify Mestre's amateur radio station as the source of the false distress messages. The subsequent testing of his radio equipment, which was seized pursuant to a federal search warrant, confirmed that his station was responsible for the hoax communica-

tions. Mestre is also suspected of having been involved in at least three additional false distress cases within the last several years.

U.S. Coast Guard rescue policy requires that it commit the assets necessary for locating a vessel in distress and for assuring the safety of individuals aboard such a vessel. Consequently, the Coast Guard, upon receiving notification of the distress signal, immediately began a major search and rescue operation. Coast Guard cutters and aircraft were deployed to the area claimed to be the sinking vessel's location. The Coast Guard conducted an extensive search using medium endurance cutters, two HH-25 fixed wing aircraft, a HH-3 Pelican helicopter and a HH-65 Dolphin helicopter. Additionally, the Government of the Turks and Caicos Islands launched their patrol craft, and merchant marine vessels in the area were advised of a vessel in distress.

Responding to such hoax distress calls diverts crucial Coast Guard equipment and personnel that may be needed to respond to real emergencies and conduct legitimate search and rescue operations, poses unnecessary potential threats to the safety of Coast Guard personnel, and is extremely costly to the government. As a result of the false distress messages transmitted in this case, the Coast Guard expended more than \$100,000 in conducting the totally unnecessary search and rescue operations.

The United States Attorney, the Coast Guard and the FCC will continue to cooperate fully to ensure that individuals who engage in false distress signals are apprehended and prosecuted.

For further information, please contact Larry Clance, Assistant Bureau Chief for Law, Field Operations Bureau, at (202) 632-7591.

NAL List

Notices of Apparent Liabilities issued for willful violation of Section 301 of the Communications Act. The violations include: operation without a license, operation with an expired license, operation on an unauthorized frequency, willful and malicious interference in the Amateur Radio Service.

Private Radio Stations: NAL Recipients: Douglas M. Bowman, Norfolk, \$2,000; MedStar Ambulance, Inc. San Francisco, \$1,000; Barry A. Stevenson, Seattle, \$2,000.

Maritime Mobile Stations: NAL Recipients: Duckworth Steel Boats, Inc., Powder Springs, \$5,000; Patriot Fishing Co., Belfast, \$1,000; Joseph F. Rendeiro, Belfast, \$10,000; Steven V. Lundgren, Ferndale, \$500; Mark R. Marosu, Laurel, \$2,000;

Shinnecock Fishermen's Co-op, Laurel, \$8,000; Danny D. Graham, Anchorage, \$2,000.

The following licensees were assessed forfeitures for violations related to Part 17 (Towers) and/or Part 73 (Broadcast).

Broadcast and/or Tower Violations: NAL Recipient: KCOH (AM), KCOH, Inc., Houston, TX. Office Issuing NAL: Houston. NAL Amount: \$5,650.

KEXS (AM), Crossway Communications, Inc., Excelsior Springs, MO; Office Issuing NAL - Kansas City; NAL Amount - \$375.

KBOR (AM)/KTJN (FM), La Nueva KBOR, Inc., Brownsville, TX. Office Issuing NAL - Kingsville. NAL Amount - \$20,000.

Private Land Mobile Stations/Tower Violations: NAL Recipient: WNWC-543, U.S. West Paging, Inc., Bellevue, WA. Office Issuing NAL - San Diego; NAL Amount - \$8,000.

WSM-534, Chesapeake Bay Contractors, Inc., Virginia Beach, VA. Office Issuing NAL - Norfolk; NAL Amount - \$20,000.

KNKA-341, U.S. West Cellular of California, Inc., Bellevue, WA. Office Issuing NAL - San Diego; NAL Amount - \$8,000.

Notices of Apparent Liability issued for repeated violation of Sections 301 and 15.29 of the Communications Act.

NAL Recipient - George Jones. Office Issuing NAL - Powder Springs. NAL Amount - \$2,000.

NAL Recipient - James D. Skipper, III. Office Issuing NAL - Powder Springs. NAL Amount - \$2,000.

NAL Recipient - James D. Skipper, III. Office Issuing NAL - Powder Springs. NAL Amount - \$2,000.

Notices of Apparent Liability issued for willful violation of Sections 301 and 15.29 of the Communications Act. The violations include: operation without a license, operation on an unauthorized frequency and failure to allow inspection.

Private Radio Stations: NAL Recipient: Robert J. Powers; Office Issuing NAL - Seattle; NAL Amount - \$2,000. James L. Bruce; Office Issuing NAL - Seattle; NAL Amount - \$2,000. W.P. Clark; Office Issuing NAL - Seattle; NAL Amount - \$2,000. Jack D. Eason; Office Issuing NAL - Seattle; NAL Amount - \$2,000. Carlos James Hondragon; Office Issuing NAL - Seattle; NAL Amount - \$2,000.

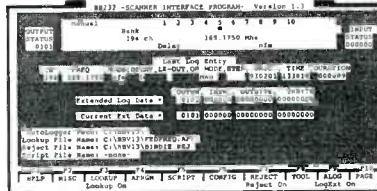
Unlicensed Operation/Refused Inspection: NAL Recipients: Daniel W. Crompton, Sr., Office Issuing NAL - Seattle; NAL Amount - \$3,500. Brent Finnigan; Office Issuing NAL - Seattle; NAL Amount - \$3500.

Maritime Mobile: NAL Recipient - Beyer Brother, Inc.; Office Issuing NAL - Vero Beach; NAL Amount - \$8,000. NAL Recipient - Henry Fischer and Sons; Office

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Notices of Apparent Liability issued for violation of the Commission's rules relating to radio antenna towers. The violations reflect non-compliance with the lighting of radio antenna towers, notification to FAA if tower lights malfunction and painting of radio antenna towers.

NAL Recipient: State of Florida, KQT-621; Office Issuing NAL - Miami; NAL Amount - \$8,000.

NAL Recipient: Carmelita T. Gossard, dba: AA Beep, KNKK622; Office Issuing NAL - Miami; NAL Amount - \$8,000.

NAL Recipient: Priority Communications, Inc., KNKK620; Office Issuing NAL - Miami; NAL Amount - \$8,000.

NAL Recipient: Nationwide Paging Co., L.P., KNKM447; Office Issuing NAL - San Francisco; NAL Amount - \$8,000.

NAL Recipient: Key West, WAIL; Office Issuing NAL - Miami; NAL Amount - \$8,000.

NAL Recipient: Thomas Goddard, dba: Day Dreamers Towing, WNQN320, Office Issuing NAL - Miami; NAL Amount - \$8,000.

Painting Violation Only: NAL Recipient: Colorado Mobile; Office Issuing NAL - Denver; NAL Amount - \$8,000.

Notices of Apparent Liability issued for marketing uncertified computers or peripherals. Section 2.803 of the Commission's Rules, 47 C.F.R. Section 2.803.

Uncertified Computer: NAL Recipient - Accustar Computer Systems; Office Issuing NAL - Detroit; NAL Amount - \$14,000.

NAL Recipient - On/Site Micro; Office Issuing NAL - Denver; NAL Amount - \$7,000.

Improper Labeling: NAL Recipient - Sceptre Technologies, Inc.; Office Issuing NAL - Los Angeles; NAL Amount - \$700.

Notices of Apparent Liability issued for marketing uncertified computers or peripherals. Section 2.803 of the Commission's Rules, 47 C.F.R. Section 2.803.

Uncertified Computer: NAL Recipient - Blackship Computer Systems; Office Issuing NAL - San Francisco; NAL Amount - \$10,000.

NAL Recipient - Caching Technology Corp.; Office Issuing NAL - San Francisco; NAL Amount - \$10,000.

NAL Recipient - Ripe C&C Technologies; Office Issuing NAL - San Francisco; NAL Amount - \$7,000.

NAL Recipient - Kingtech; Office Issuing NAL - San Francisco; NAL Amount - \$10,000.

NAL Recipient - K.S. Brotherbox (U.S.A.) Corp.

Uncertified Peripherals: NAL Recipient - Criterion Computer Corp.; Office Issuing NAL - San Francisco; NAL Amount - \$7,000.

NAL Recipient - PC Time Data; Office Issuing NAL - San Francisco; NAL Amount - \$4,900.

NAL Recipient - Danwill Industrial Ltd.; Office Issuing NAL - San Francisco; NAL Amount - \$7,000.

NAL Recipient - Greenleaf International; Office Issuing NAL - San Francisco; NAL Amount - \$10,000.

NAL Recipient - Phonic Hi-Tech Corp.; Office Issuing NAL - San Francisco; NAL Amount - \$7,000.

NAL Recipient - Infiniti Manufacturing; Office Issuing NAL - San Francisco; NAL Amount - \$7,000.

The following broadcast licensees were assessed forfeitures for violations related to Part 73 (Broadcast). On-site inspections revealed, noncompliance in areas including, but not limited to public inspection file, EBS, station log maintenance & unattended stations.

Broadcast Violations: NAL Recipient - KDLF, Church of the Christian Crusade, Inc.; Office Issuing NAL - Houston; NAL Amount - \$12,500.

NAL Recipient - KNUS, Mile High Broadcasting Corporation; Office Issuing NAL - Denver; NAL Amount - \$13,150.

NAL Recipient - KMUS, KMUS Inc.; Office Issuing NAL - Denver; NAL Amount - \$950.

NAL Recipient - KLDI and KRQU, Rocky Mountain Radio Corporation; Office Issuing NAL - Denver; NAL Amount - \$1900.

NAL Recipient - KMCI-TV, Miller Broadcasting, Inc.; Office Issuing NAL - Kansas City; NAL Amount - \$1,150.

NAL Recipient - KYFC-TV, Kansas City Youth for Christ, Inc.; Office Issuing NAL - Kansas City; NAL Amount - \$550.

NAL Recipient - KJEZ, ACI Broadcasting of Poplar Bluff, Inc.; Office Issuing NAL - Kansas City; NAL Amount - \$3,750.

NAL Recipient - KLEN, Blue Sky Broadcasting, Inc.; Office Issuing NAL - Denver; NAL Amount - \$3,750.

NAL Recipient - KWAY, Bauer Properties; Office Issuing NAL - Denver; NAL Amount - \$300.

NAL Recipient - KLMR/KSEC, A&B Broadcasting; Office Issuing NAL - Denver; NAL Amount - \$1300.

NAL Recipient - KKGZ-KSIR, KKDD-FM Broadcasters and New Directions Media, Inc.; Office Issuing NAL - Denver; NAL Amount - \$2,200.

NAL Communications Corporation; Office Issuing NAL - Denver; NAL Amount - \$10,700.

NAL Recipient - KGLL, Duchossois Communications of Colorado, Inc.; Office Issuing NAL - Denver; NAL Amount - \$3,450.

NAL Recipient - KSHY, Radio Property Ventures; Office Issuing NAL - Denver; NAL Amount - \$300.

NAL Recipient - KIMX, Laramie Women's Hispanic Network; Office Issuing

NAL - Denver; NAL Amount - \$2,700.

NAL Recipient - KCUV, RMF Broadcasting Company of Colorado; Office Issuing NAL - Denver; NAL Amount - \$3,750.

NAL Recipient - KTWU, Washburn University of Topeka; Office Issuing NAL - Kansas City; NAL Amount - \$2,800.

NAL Recipient - KOZX, Twin Cities Broadcasting, Inc.; Office Issuing NAL - Kansas City; NAL Amount - \$4,250.

NAL Recipient - KMFM, Paulino Berna; Office Issuing NAL - Kingsville; NAL Amount - \$9,800.

NAL Recipient - KKGD, Western Media, Inc.; Office Issuing NAL - Denver; NAL Amount - \$2,000.

NAL Recipient - KCDC, St. Vain Valley School District; Office Issuing NAL - Denver; NAL Amount - \$5,150.

NAL Recipient - KRCC, Colorado College; Office Issuing NAL - Denver; NAL Amount - \$550.

NAL Recipient - KCBR, Chip & Lusko & Kent Bagdasar, GP; Office Issuing NAL - Denver; NAL Amount - \$1000.

NAL Recipient - KFTM & KBRU, Lovecom, Inc.; Office Issuing NAL - Denver; NAL Amount - \$3,150.

Notices of Apparent Liability issued for willful violation of Section 301 of the Communications Act, unauthorized operation. The violations include: operation without a license, operation with an expired license, operation on an unauthorized frequency, willful and malicious interference in the Amateur Radio Service.

Private Radio Stations: NAL Recipient - Port of Anacortes; Office Issuing NAL - Ferndale; NAL Amount - \$8,000.

NAL Recipient - Jeff Klein; Office Issuing NAL - Denver; NAL Amount - \$3,500.

NAL Recipient - William A. Moskowitz - Vero Beach; Office Issuing NAL - \$2,000.

NAL Recipient - Surf-n-Sand Theater; Office Issuing NAL - Norfolk; NAL Amount - \$8,000.

Maritime Coast Station: NAL Recipient - East Point Seafoods, Co.; Office Issuing NAL - Ferndale; NAL Amount - \$5,000.

Broadcast Operator: NAL Recipient - Erin Marie Gant; Office Issuing NAL - San Francisco; NAL Amount - \$2,000.

Maritime Mobile: NAL Recipient - Charles E. Yates; Office Issuing NAL - Anchorage; NAL Amount - \$2,000.

NAL Recipient - Bulldog Fisheries, Inc.; Office Issuing NAL - Belfast; NAL Amount - \$8,000.

NAL Recipient - Phillip Fogg; Office Issuing NAL - San Francisco; NAL Amount - \$2,000.

NAL Recipient - Sean T. Clark; Office Issuing NAL - San Francisco; NAL Amount - \$2,000.

NAL Recipient - Minh C. Quach; Office Issuing NAL - San Francisco; NAL Amount - \$2,000.

NAL Recipient - Chauncer C. Woodworth; Office Issuing NAL - San Francisco;

NAL Amount - \$2,000.

NAL Recipient - Kyanooosh Rashidi; Office Issuing NAL - San Francisco; NAL Amount - \$2,000.

NAL Recipient - Moonrise Inc.; Office Issuing NAL - Honolulu; NAL Amount - \$200.

Notice of Apparent Liability issued for willful violation of the Commission's Rules relating to public inspection files. Section 73.3526(a)(10) of the Commission's Rules.

NAL Recipient - KSIX (AM), Corpus Christi Broadcasting Co., Inc.; Office Issuing NAL - Kingsville; NAL Amount - \$750.

Notice of Apparent Liability issued for willful violation of the Commission's rules relating to non-compliance of the painting of radio antenna towers. Section 17.50 of the Commission's Rules.

NAL Recipient - Western Company of North America; Office Issuing NAL - Kingsville; NAL Amount - \$8,000.

Notice of Apparent Liability issued for willful and malicious interference in the amateur Radio Service. Sections 97.101(d) of the Commission's Rules.

NAL Recipient - Richard L. Whiten, Amateur Station-WB20TK; Office Issuing NAL - Kingsville; NAL Amount - \$10,500.

Private Paging Systems At 929-930 MHz

The Commission proposed to amend Part 90 of its rules governing private carrier paging (PCP) service in the 929-930 MHz band to grant channel exclusivity to

qualified local, regional and national paging systems.

This action was taken at the request of the Association for Private Carrier Paging Section of the National Association of Business and Educational Radio, Inc. (NABER).

Under the Commission's proposal, PCP systems consisting of six or more transmitters would be entitled to channel exclusivity in most services areas, and larger systems could obtain regional or nationwide exclusivity. This proposal would be implemented on 35 of the 40 private paging channels at 900 MHz, while five channels would continue to be assigned on a non-exclusive basis. To qualify for exclusivity, PCP licensees would be required to construct their systems within eight months of licensing, with "slow growth" extensions allowed under some circumstances. Existing systems that meet the new criteria would obtain immediate exclusivity, and all other existing systems would be grandfathered. The Commission is asking for comments on the merits of exclusivity for PCP systems generally, and on the specifics of this proposal.

The Commission believes this proposal will promote more effective PCP service by providing incentives for licensees to invest in the highest level of technology and to develop efficient, high-density paging systems on a local, regional and national basis.

Because of the potential impact of this proposal on the future assignment of PCP channels, no new 900 MHz PCP applications will be accepted until the conclusion of this rulemaking.

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The assembled DDI test set is \$330. Write for an order form and details on the DDI and options for your radio. Most radios require a kit involving a part change and internal connection for \$9 to \$18.

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Here we are with another great crop of pirate logs so let's get going.

Pan Global Wireless heard on 7417 SSB at 0047, giving the PO Box 452, Wellsville, NY 14895 drop, says Peter Stawicki, OK. Pat Murphy in Virginia heard it on 7415.8 to 0105 close with dj Mike Oxlong "with the first, from Sonora, Mexico".

CRR—Christian Rock Radio on 7415 at 2140 says Neil Sauerbier in New York.

The Voice of Bono was logged by Jay Brower, PA at 2330 on 7415 with oldies rock and apparent technical difficulties. The operator gave his name as Gary Daniels. Skip Harwood, CA had them at 0130 on 7418USB saying Baltimore maildrop had been closed and now using the Wellsville address. Ken Evans in South Carolina noted them at 1555 on 7415, AM mode. It appears that this broadcast was a relay by WSKY which came on with their ID on the hour and Bono continuing the next hour.

Voice of the Night was found by Stawicki on 7415 at around 0140. No maildrop announcement was noted.

CSIC heard by Murphy at 2156 to 2238 close on 7416 "live radio with Owen the Announcer." Also at 2340 on 7413 with Pirate Rambo on the Voice of the Great White North." Greg Martin, MI had this at 2202 to 2300 sign off on 7413 with the "first ever Box 109 mailbag program" and the Blue Ridge Summit address.

WSKY was heard by Harwood in California at 0430 to 0605 on 7418 with "Vietnam-era music." Jim Keeling in Kansas thinks he had this station at 0515 on 7418 but he says reception was very poor so he couldn't be sure. Murphy had this one to 0519 mentioning Gary Daniels and the Voice of Bono.

Radio Fluffernut was found by Martin on 7417 at 2230 to 2304 sign off with alternative music and the PO Box 293, Merlin, Ontario, NOP 1W0, Canada address. Sauerbier had this one on the same frequency and during the same time period. Murphy heard them from 2240 with "Twilight Zone," "Lot like You" and ID. Off at 2303.

Radio Free Euphoria heard by Harwood on 7419.3USB at 0130 to 0210 with "Dagnet" theme and "commercials" favoring pot.

WSRN noted by Murphy to 0434 sign off on 7415, giving the Merlin address and saying they were simulcasting on 15050.

Radio Free America heard by Murphy from 1509 to 1527 sign off on 7405 with commentaries about citizen's rights, commercial spoofs and offer of a free pocket constitution with every QSL request.

Radio Clandestine noted by Martin in

Michigan at 2307 to 2327 fade on 7415 with R.F. Burns and fast-paced comedy sketches. Murphy had this one to 2325 close, also with comedy routines. Pat says it was a repeat of an earlier taped program.

Radio USA heard by Skip Harwood on 7417USB at 0110 to 0120 with commentary and ID.

WRV heard by Martin on 7415 USB at 0500 to 0513 sign off. No address heard.

CCC Radio was noted by Martin also on 7415 USB at 0019 to 0055, identifying as "Consolidated Conservative Confederacy" with talk about first amendment and free speech rights and "racist" talk. Address in Fallbrook, California. Harwood noted this also and says it seemed to take a pro-Klu Klux Klan stance. Also read off prisoner ID numbers from "around the USA", with a demand to set them free.

Anarchy One heard on 7417USB by Harwood at 0420 to 0433 with classical music and talk. Skip says "Captain Anarchy needs to have his transmitter reworked"—too much distortion.

He Man Radio heard by Murphy to 2341 sign off "live from Briar Cliff with Kristen Kaye." Read pirate loggings and played music by Glen Campbell and Charlie Rich.

Home Made Radio, another Murphy logging, heard on 7415 at 0014-0043. Claimed they'd QSL reports sent to any of the major pirate maildrops.

7415 Radio heard by Murphy on that frequency at 2258 to 2324 with a montage of taped programs by different pirate broadcasters: KNBS, Voice of Anarchy,

Radio Beaver, Radio USA, Radio Tower and others. Said running 100 watts and gave the Merlin, Ontario address.

Radio EXP had punk music at 2302 to 0001 sign off on 7415, says Martin. Murphy had this one to 2334 close.

Live Wire Radio noted by Murphy on 7415 at 0033 announces "This is Live Wire Radio with an engineering test—100 watts from the south of England" and played the song "Abba" over and over.

Skip Harwood has good reason to be very pleased with his 1992 pirate DX. Skip says he heard and confirmed a total of 96 broadcasts, compared to only 33 in 1991!

Keep those reports flowing in, gang. I welcome copies of pirate QSL's, too. I don't hear from you station operators nearly as much as I'd like. How about writing now and then to fill me and the Den's readers in on what you are doing and planning? Catch y'all next month!

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Rob Roy

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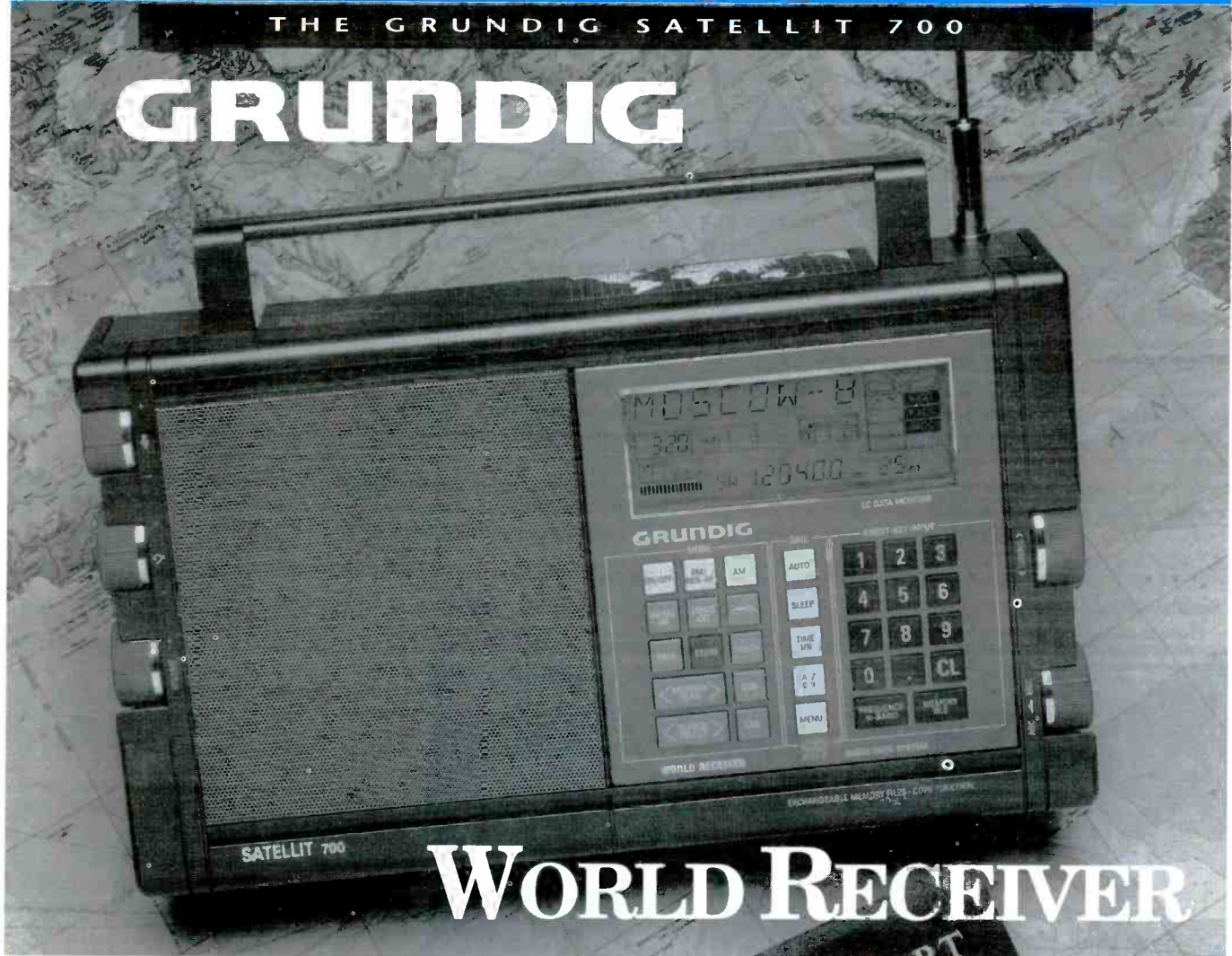
*Don McClarren in Michigan QSL'd Radio Scottish Montreal, which was broadcast-
ing via the CSIC transmitter last summer.*



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Beaming In...

(from page 4)

when they hear the one word we (and the FCC) use to describe our hobby? Even many who don't think of Amateur Radio operators as bumbling believe we are little more than dedicated Tom Swift type tinkerers using homebrewed dot-n-dash radios to contact other eccentrics. Too many members of the public still relate the term Amateur Radio to quaint machines like 1910-era steam-powered quenched rotary spark dischargers, or whatever those infernal contraptions were. They are surprised when they learn that Amateur Radio has progressed beyond that era.

Does being an "Amateur" sound like something that offers a maximum potential for attracting new entrants into the hobby? When the neighbors don't like a large antenna, might they be less inclined to squawk if it wasn't used by an "Amateur" operator? When one radio service petitions the FCC to rip-off the frequencies of another, might they be less inclined to zero-in on the ham bands if they weren't allocated for "Amateur Radio" use?

Notwithstanding the wonderful decades

the hobby has had using this term, and its proud traditions, I wonder if "Amateur Radio" still accurately describes our present-day radio service. I wonder if it is the best course of action, in the long term, to continue to cling to this term and not seek a better name for the radio service for our use, and the FCC's. Overseas, let them continue to call the service what they will.

Consider the possibility that the term "Amateur Radio" has outlived its purpose and may have now become so inaccurate as to be more of a liability than an asset. These things happen all the time. For instance, last February, the famous Central Park Zoo in New York City decided that the term "Zoo" had become a liability, with connotations of caging wild animals and taking away their freedom. The facility therefore was renamed the "Wildlife Conservation Center, Central Park," to reflect its concern with the preservation of wildlife.

It's why garbage dumps became "sanitary landfills." It's how nuclear bombs became nuclear "devices." This is how a person goes from being an elevator operator to a "vertical transportation specialist" in an impressive sounding career upgrade that doesn't include an increase in salary.

Years ago, the FCC created a radio ser-



Webster's Dictionary gives one definition of "Amateur" as, "A person who does something more or less unskillfully."

vice called "Miscellaneous Common Carriers." The licensees (mostly radiopaging and some non-wireline mobile phone companies) complained that being categorized as "miscellaneous" sounded like they were ragtag, assorted, nondescript leftovers that didn't fit in anywhere. They thought the word minimized their significance and the services they provided. The FCC responded, accommodating the licensees by changing the name of the service to "Radio Common Carriers." The RCC service still has this name.

Is it time now to think about the possibilities of coming up with a more contemporary, descriptive, effective, and appropriate name for Amateur Radio? I have thought about this, and in recent months I have mentioned the concept to about two dozen other hams.

Let's say that a couple of those people received this idea with as much joy as hearing about another increase in postal rates. Proud traditions do not go gently into that dark night. I can fully appreciate this.

Still, after some discussion and reflection on the various aspects of the situation, more than half of the people I asked were not negative on the idea. Most really thought it had merit. The rest weren't dancing in the streets, but generally felt it was at least worth investigating further because there was a chance that I could be right.

A sampling of possible alternate names suggested by these people includes: "Technical Communication Radio Service," "Private Communicator Radio Service," "Non-Commercial Radio Communications Service," and "Communication and Research Radio Service." Your own imagination can probably come up with some others that are equally appropriate, or maybe better.

Do you have thoughts on this? If so, why not put them on a card or in a letter and let me know. If we get a varied assortment of opinions on the subject, we will run them in a forthcoming issue.

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54.000 - 71.995 MHz (WFM)	50.0 KHz
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76.000 - 107.995 MHz (WFM)	50.0 KHz
108.000 - 136.995 MHz (AM)	12.5 KHz
137.000 - 173.995 MHz (NFM)	5.0 KHz
174.000 - 215.995 MHz (WFM)	50.0 KHz
216.000 - 224.995 MHz (NFM)	5.0 KHz
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400.000 - 511.995 MHz (NFM)	12.5 KHz
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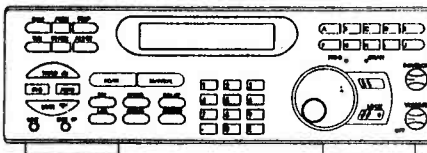
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216.000 - 224.995 MHz (NFM)	12.5/25.0 KHz
225.000 - 399.995 MHz (AM)	12.5/25.0 KHz
400.000 - 511.995 MHz (NFM)	12.5/25.0 KHz
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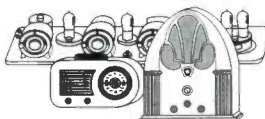
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New Bearcat units cover 29-1300MHz on those frequencies allocated for NFM or AM. Model 8500 mobile offers 500 channels. Four hundred channels in 2500 model and 890 model offers 200 channels with coverage from 29 to 956MHz. Lots of nifty features and plenty of memory, but delivery not until late Spring or Summer of 1993.

Fax fact document #420

Bearcat 2500XLTA\$369.00
Bearcat 8500XLTC\$389.00
Bearcat 890XLTB\$279.00

Mobile Scanners

\$249.95

Bearcat 760XLTM



100 Channel 800 MHz

Five banks of 20 channels each. Covers 29-54, 118-174, 406-512 and 806-954MHz (with cell lock). Features scan, search, delay, priority, CTCSS option, lockout, service search, & keylock. Includes AC/DC cords, mounting bracket, BNC antenna. Size: 4 3/8 x 6 15/16 x 1 5/8. Weight: 4.5lbs.

Fax fact document #550

Other Mobile Scanners

BC590\$199.95
BC560XL TZ\$99.95

Fax fact on above: #560

Scan/CB/Highway Patrol/WX. X,K,Ka,Wide & Laser

\$399.00

Scans police pre-programmed by state channel plus full radar and laser alerts in one small unit. Weather, CB receive & mobile relay.

Size: 5 5/8 x 4 7/8 x 1 3/4. Wt: 1.5lbs.

Fax fact #580



Trident TR-33WL

Other Pre-Programmed Scanning Receivers

BC350AS\$129.00
BCT2\$149.00
BC700AS\$169.00

Fax fact on all above: #580

Hand Held Scanners



AOR 900

\$249.95

100 Channel 800 MHz
Five scan banks 5 search banks. Covers 27-54, 108-174, 406-512 and 830-950 MHz (no cell lock). Features scan, search, delay, priority, permanent memory, lockout, backlite, & keylock. Includes AC/DC adapter, belt clip, antennas, & Micad.
Size: 5 3/4H x 2W x 1 1/2D. Wt. 12oz..
Fax fact document #650

Bearcat 200XLTN

\$229.95

200 Channels 800 MHz
Ten scan banks plus search. Covers 29-54, 118-174, 406-512 and 806 956MHz (with cell lock). Features scan, search, delay, 10 priorities, mem backup, lockout, WX search, & keylock. Includes NiCad & Chrgr.
Size: 1 3/8 x 2 11/16 x 7 1/2. Wt. 32 oz.
Fax Facts # 450



Other hand held scanners

Bearcat 100XLTN 100Ch H/L/U\$159.95

Bearcat 70XLTP 20Ch H/L/U\$139.95

Bearcat 55XLTR 10 Ch H/L/U\$99.95

Fax facts on all above: #475

Table Top Scanners



Bearcat 800XLX

12 bands and 40 channels with 800MHz and nothing cut out. AC or DC.
Fax facts #690

\$219.95

Other Table Top Scanners

Bearcat 855XLTE 50Ch w/800\$159.95

Bearcat 142XLM 10Ch H/L/U\$84.95

Bearcat 147XLJ 16 Ch H/L/U\$89.95

Bearcat 172XM 20Ch H/L/U/Air.....\$99.95

Bearcat 210 16Ch H/L/U/Air\$129.95

Fax facts on all above: #675

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