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AUGUST 1993 \$2.95

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- Selected English Language Shortwave Broadcasts
- World Band Tuning Tips
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Nostalgia, & More!**



NRD-535D

"Best Communications Receiver"

World Radio TV Handbook 1992



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Passport to World Band Radio 1992

Setting the industry standard once again for shortwave receivers, the NRD-535D is the most advanced HF communications receiver ever designed for the serious DXer and shortwave listener. Its unparalleled performance in all modes makes it the ultimate receiver for diversified monitoring applications.

Designed for DXers by DXers! The NRD-535D (shown above with optional NVA-319 speaker) strikes the perfect balance between form and function with its professional-grade design and critically acclaimed ergonomics. The NRD-535D is the recipient of the prestigious World Radio TV Handbook Industry Award for "Best Communications Receiver."

JRC *Japan Radio Co., Ltd.*

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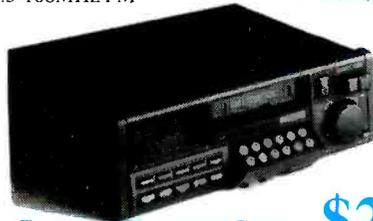
- Phase-lock ECSS system for selectable-sideband AM reception.
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AUGUST 1993

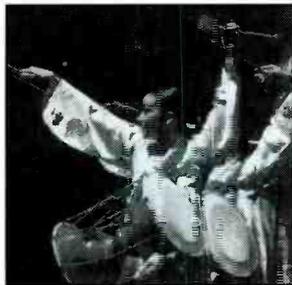
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This month's cover: Steve Faris mans the desk at the operations coordination center for fire protection in southern California in Riverside, California. Photo by Larry Mulvehill.

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If you are only listening to your shortwave radio you are missing half the fun. With the addition of a Universal decoder and monitor you can see the world. The shortwave spectrum is filled with interesting text messages and photos that you can intercept and display. If this sounds interesting to you, request our two free pamphlets: *Listening to Radioteletype* and *Receiving FAX on Your Shortwave Radio*. Shown above is the Universal M-900 (\$429.95) which decodes: Morse code, Baudot RTTY, Sitor A/B, FEC-A and FAX. Contact us today for information on the full line of Universal decoders.

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CIRCLE 77 ON READER SERVICE CARD

BEAMING IN

BY TOM KNEITEL, K2AES

AN EDITORIAL

A Vacation (For 2) For The Radio Obsessed

Summertime always means getting out on the open road. That's when I get the annual chance to hop into the car and take a radio fanatic's ideal vacation, accompanied by loudly blasting AM/FM radio, mobile ham radios, CB radio, and scanner. Even though the XYL isn't a radio person, she usually agrees to come along.

There isn't always a definite itinerary. The car just heads in the directions fate decides. At times this involves Interstate highways, but much driving is done on lesser roads. Sometimes fate isn't the only deciding factor.

The XYL was born with the natural ability to sense the proximity of all approaching roadside tourist traps and attractions. That includes caves, wax museums, scenic lookouts, souvenir shops, and stores selling factory reject towels. By some odd reasoning, I'm expected to waste valuable time by stopping at these obstacles to enjoyment. My car speeds up at the first mention that one of places is about to come into view. It can't stop until safely past the place. It's mystical. I have no conscious control over this.

On the other hand, I can detect approaching radio facilities. A tower far off in the distance will definitely set the course of travel towards that object. Is it a broadcast or a

microwave tower? I'm drawn to it by an irresistible force. There is no escaping.

Driving through Harrisburg, Penna., on Interstate 81, my internal radio station sensors detect something great and special on the road ahead. The car knew it, too. It immediately dropped down to 50 and pulled into the right hand lane. Enraged truckers zoomed past shouting terrible things at me on the CB, angrily blasting their horns. For several miles I saw nothing.

Rounding a bend west of the Susquehanna River, there it was. A wonderful AM broadcast facility that required a lot of towers. I had to pull over on the Interstate, get out of the car, stand in awe taking it all in. When a State Trooper came by and stopped to ask if there was a problem, my XYL told him it wasn't mechanical, but strictly mental. He said, "I understand," and drove off.

It's not only the hardware, it's the people, too. On a picturesque country road that turned off US Route 30 in Pennsylvania, I chanced upon a 250 watt AM station located in what had once been a private house. We went in and were warmly welcomed by the lone person there, a crusty character I'll call Bill. Bill was the owner and Chief Engineer. That day he was also the deejay.

In addition to being an AM broadcaster,



"...between each record he kept loudly calling my name and asking me over the air how his signal and modulation sounded."

“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.

Superb for reception of faint, tough signals, too.”****

*Editor's Choice
Passport to World Band Radio
Tabletop Receivers for 1992*

The ears have it!

When we introduced the American-made R8 Worldband Communications Receiver, we knew it would be judged by some very discerning ears, experts accustomed to the finest in short-wave listening equipment from around the world. After listening to the world on the Drake R8 loud and clear, they have delivered a decisive verdict.

They appreciated the R8's sensitivity, clarity, simplicity, and all-around versatility so much that many of them declared the R8 simply the best of its class. High praise, indeed, from very well-traveled ears.

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CIRCLE 142 ON READER SERVICE CARD

Bill was a ham operator, and *POP'COMM* fan. Bill was pleased to have the opportunity to show off his broadcast station to a ham visitor. He had designed and hand constructed much of the studio equipment. His broadcast facility looked like a nice home-brew ham station. He provided a grand tour which was every bit as thorough and entertaining as if it were being conducted by a guide at the NBC-TV studios in Radio City, New York.

As we were leaving, Bill asked us to listen to his station on the car radio to hear how really great it sounded, and how much range it had. We promised we would. As we listened while we drove, he was dedicating every record to my XYL. Between each selection, he would loudly call out my

name and ask me over the air how his signal and modulation sounded.

Has anyone ever had the entire programming effort of a broadcast station directed personally at them? I wondered what his audience thought about this. My XYL speculated that we were the entire audience. Whatever. It was embarrassing.

Regardless of how far I drove away from Bill's station, I thought we would never find the spot where we would completely run out of his signal. Bill continued calling out to me after each record. When the signal faded out, I pulled over and phoned Bill to let him know how far his signal reached, and how terrific it sounded. He was delighted that I called. Had I not phoned, possibly Bill would still be calling out my name.

He was very proud that his station had such good modulation and coverage. So was I.

We stopped in at a small FM station in a Virginia community and chatted with the young married couple who ran the operation. They invited us to visit their transmitter site, located a short distance away. Although my XYL gracefully attempted to beg off on this kind offer, I couldn't resist. Had to accept.

The station owners told us to head along the highway for a mile then turn off on a small side street. They said that a short distance down the street there was a road with a gate. The gate was closed, but unlocked. Their transmitter site was just up that road a piece, they said. So long as we shut the gate after us, we were more than welcome to visit the site.

Paved With Good Intentions

Following their directions, the gate was located. Behind it was a gravel road that passed between two enormous mountains of worn out tires. From the road, these mounds loomed over us like rubber Mt. Everests. Beyond the tire dump, the road quickly turned into a narrow dirt path, then curved sharply uphill into dense forest. My XYL solemnly proclaimed that it was obviously a primitive trail intended only for 4WD vehicles and that nobody could drive a Trans-Am through there, especially since a recent rain had left it mushy and rutted.

Had she not said this, I certainly would have said it myself and gladly bailed out of the visit to the transmitter site. Once the XYL had uttered it, though, it was a challenge that couldn't be declined. Now I had to drive up that road. This is a universal and primal male Neanderthal throwback reflex. No way to explain it further. Samson pushed down the Philistines' temple because he was taunted. And do you really believe it was John Dillinger's idea to go to the movies that night? Got the idea?

Let me point out that the mountain trail did not improve as my low-slung car slowly creaked along. What's worse, the road went on forever. Where I hail from, "just up the road a piece" means a mile, give or take. It seemed as if this serpentine nightmare was going to twist and zig-zag until it ended up deep in the jungles of New Guinea. Playing it safe, I was practicing up on pidgin English. I asked my partner if we brought along beaded necklaces or ax heads to swap the headhunters for our freedom. She said if we couldn't buy our way out using our box of *Dunkin' Donuts* and an Elton John CD, we'd have a problem.

Eventually reaching the transmitter site, we viewed the station's facilities. The transmitter building was an old camper trailer mounted on cinderblocks. Next to it was a pole supporting the antenna, with an STL dish pointing down into the valley. Nothing

(Continued on page 70)



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
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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.

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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.

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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.

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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
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Aug. 21, 1967

Wilson Antenna Company Inc.
3 Sunset 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 K40 antenna as the reference. The test was conducted with the antennas mounted on a 18' 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	1.60	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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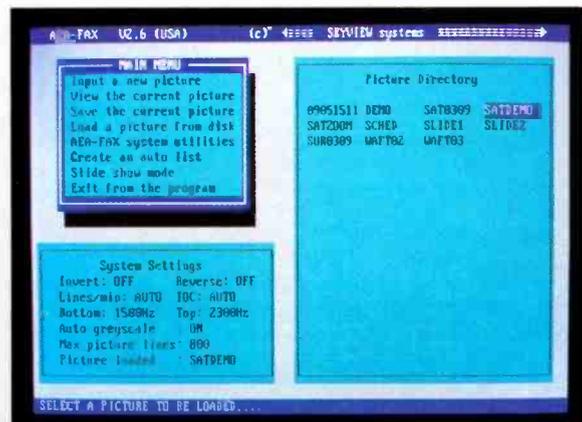
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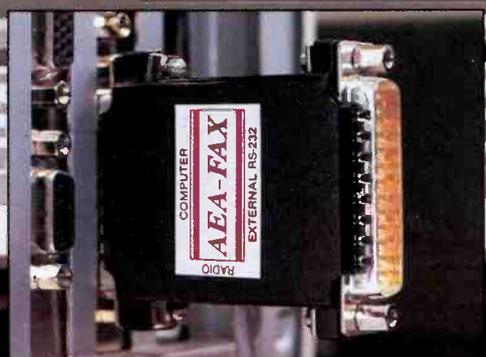
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Scanning Forest Fire Fighters!

Most Used Frequencies

BY RICK MASLAU, KNY2GL

As we head into the late summer and early fall seasons, many areas of the nation face an increasing threat of forest fires. However, no one time of the year is considered "safe" from forest fires throughout the nation, it's just that certain times are thought of as being more sensitive than others.

Individual states operate fire lookout towers, as well as maintain forces and equipment to fight forest blazes. The U.S. Department of Agriculture's Forest Service has a highly mobile and effective force that fights forest fires in all areas of the nation.

We thought this would be a good time to pass along some frequencies that are worth checking for activity in your area relative to spotting and fighting forest fires.

Check out 30.86 to 31.98 MHz (40 kHz channel spacing); 44.84 to 45.04 MHz (40 kHz channel spacing); 151.145 to 151.490 MHz (15 kHz channel spacing); and 159.225 to 159.465 MHz (15 kHz channel spacing). These are the channels most used at this time by state agencies, and often reported. There are forestry conservation frequencies from 453.05 to 453.95 MHz (50 kHz channel spacing) shared with other services, but they are not reported as often.

In states east of the Mississippi River, state agencies coordinate forest fire fighting with federal agencies on: 170.475, 171.425, 171.575, and 172.275 MHz. In western states, monitor these activities on 170.425, 170.575, 171.475, 172.225, and 172.375 MHz.

The Department of Agriculture's Forest Service makes considerable use of aircraft in fighting forest fires. These aircraft fly at low altitudes so they don't have enormous transmitting range. The following air/air and air/ground frequencies have been reported: 118.825, 118.95, 118.975, 119.95, 119.975, 122.75, 122.8, 122.85, 122.9, 122.925, 123.05, 123.075, 166.675, 169.15, 169.20, and 170.00 MHz.

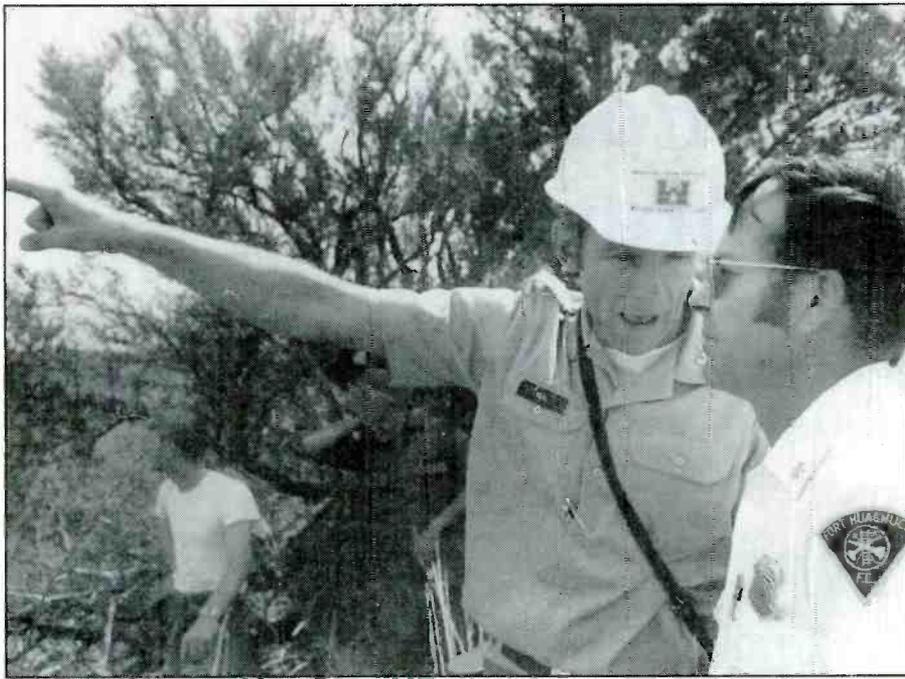
Monitor the following frequencies for



When forest fires strike, scanners begin chattering.



Firefighters at work in the smoke, cutting a firebreak.



An Operations Officer from the Army Engineer Corps confers with a local fire official during a forest fire.



A helicopter gets a water refill to dump on a forest fire.

Forest Service ground operations during forest fires: 168.075, 168.05, 168.10, 168.125, 168.20, 168.60, 168.70, 414.65, 415.40, and 415.50 MHz.

Here's a hint. The Forest Service air-

craft, communications equipment, and frequencies are also used during other emergencies. They were used during the Los Angeles riots, and during the problems at the Three Mile Island nuclear plant. Keep these frequencies handy.

Other frequencies in your area that may activate with fire fighting activities during

forest fires include CB, ham, Army, National Guard, as well as municipal and county fire agency. ■

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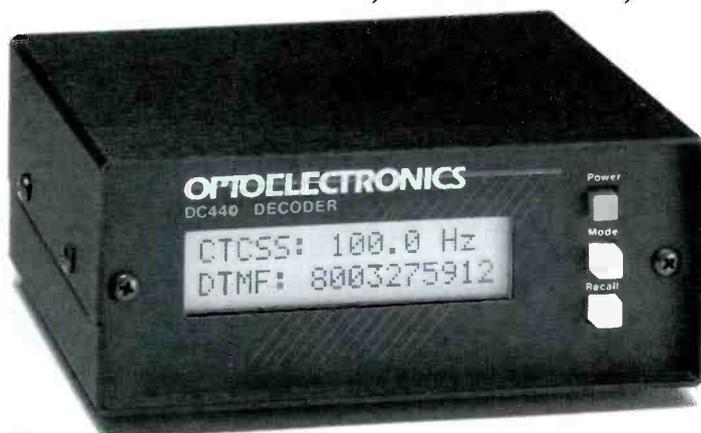
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C.O.P. = Citizens On Patrol!

Tired of Being Prey to Crime, Citizens Are Adding Extra Eyes to Police Patrols. Monitor Them on Your Scanner.

BY CHUCK ROBERTSON

Citizens on patrol. It sounds like the title of a *Police Academy* movie. But, not so. Burglaries, muggings, vandalism, street gangs, arson, drug sales, prostitution, robberies, and violence are taking place in neighborhoods around the nation. In some inner city areas, the situation continues to grow worse. This is a time when law enforcement budgets should be increasing, unfortunately they are getting smaller. All too many police departments are decreasing in size. They are operating with less personnel than they need to be at what they feel is maximum effectiveness.

Even suburban areas have noted an increase in crime, as their law enforcement agencies have also complained about feeling a budget crunch.

Sea Gate, a private residential community in Brooklyn, N.Y., hired an armed and uniformed security force to patrol its streets. A village in New Jersey used to have a police department, but they closed it down when it became too expensive. Now they use armed private guards. The armed guards cost less, but must call in state troopers to make arrests.

In many communities, citizens have formed volunteer security or crimewatch patrols. Local police spend only 2% of their time actively patrolling. The rest of their time is devoted to reacting to situations, such as responding to calls and accident scenes, testifying in court, doing paperwork, etc. Citizens groups can devote practically all of their on-duty time to active patrolling, looking for and reporting apparent criminal acts.

Relatively little is known about how the citizens patrols fit into the legal landscape, as well as the degree and manner they should cooperate with law enforcement agencies. Some groups work very closely with police agencies, others don't. Some police agencies welcome the input from these groups. Others politely say, "thanks, but no thanks." In any case, just as there can be real benefits, there are also potentials for abuses, misuses, civil rights violations, and charges of vigilantism.

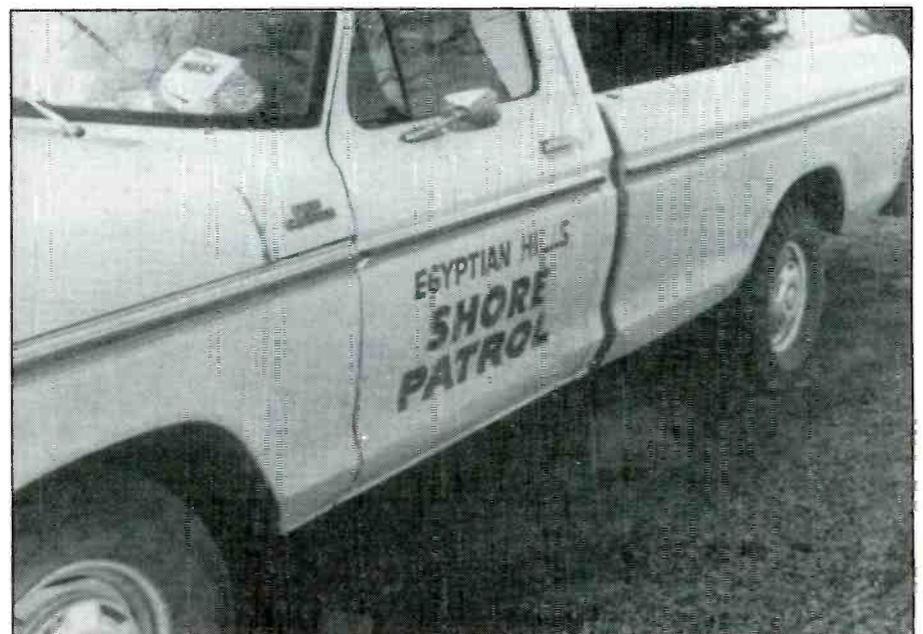
In New York City's Times Square, there are citizens' patrols working closely with police, who are able to call the police direct-



A sign like this advises that area residents are assisting police with volunteer patrols watching for criminal activity.



Effective neighborhood warning sign posted at the outskirts of a community.



This citizens patrol vehicle is equipped for two-way comms on the Business Band frequency of 151.865 MHz.

Citizens Crimewatch Sampler

66th Precinct Civilian Observer Patrol, Brooklyn, NY: 463.65 464.2875
67th Precinct Civilian Observer Patrol, Brooklyn, NY: 464.2625 464.2625 464.6125 464.825 464.8625
94th Precinct Civilian Observer Patrol, Brooklyn, NY: 151.955
911 Emergency, Santa Rosa, CA: 155.295, 851.2125
Arizona Rangers, Sierra Vista, AZ: 151.955
Child Escort Service, New York, NY 151.625
Citizens Action Team, Taylor, MI: 151.805
Citizens Crimewatch, Hollywood, FL: 464.50
Citizens On Patrol, Ft. Lauderdale, FL: 472.2625
Citizens Police Patrol, Largo, FL: 154.54
City Watch, Las Vegas, NV: 463.325
City Wide Patrol, Bedford, OH: 154.515
Citywide Radio Net, New York, NY: 461.325
Community Crime Research Ctr., Mission, KS: 464.85
Community Watch Group, Los Angeles, CA: 853.4375
Crime Control, Detroit, MI: 463.60
Crime Fighters Patrol, Cincinnati, OH: 154.60 464.075
Crime Prevention, Rock Springs, WY: 154.57
Crime Prevention Security, New Albany, IN: 461.10
Fla. Patrol Investigation, Miami, FL: 464.175
Greater Los Angeles Patrol, Los Angeles, CA: 464.75
Greenwyche Community Watch, AL: 462.675
Guardian Angels, Lake Worth, FL: 151.685
Hillwood Community Watch, AL: 462.625
Illinois Auxiliary Police, Winfield, IL: 462.55
Innecity Crime Prevention, Los Angeles, CA: 154.60
Intruder Watch, Golden, CO: 462.65
Juvenile Patrol, Honolulu, HI: 461.575 462.725
Katherine Acres Neighborhood Watch, AL: 462.675
Montdale Mountain Community Watch, AL: 462.675
Neighbors Organized For Action, Cleveland, OH: 464.425
New Orleans Police Dept., LA: 462.725
NY City Auxiliary Police, NY: 151.16 151.205 151.37 476.8375
Northwest Citizens Patrol, Baltimore, MD: 464.875
Seagate Police, Brooklyn, NY: 155.01
Texas Teenage Crime Watch, San Antonio, TX: 464.25
Town Watch, Upper Darby, PA: 462.575
Volunteer Sheriffs Radio Assn., San Leandro, CA: 154.54 154.57 154.60 155.16 155.22

ly on their two-way radios. New York City also has a uniformed Auxiliary Police force. These are citizens who are specially trained by the NYPD to handle certain situations and spot crimes, then call for police officers. They wear uniforms that are virtually identical to the standard NYPD issue, however, they are not armed and have no police powers.

Still, these groups are starting up and thriving in cities, suburbs, and rural areas. They are close-up, personal, grass-roots, and of the people.

Crimewatch Radio

Driving and walking around trying to spot criminal activity can be dangerous work. To decrease the potential for disaster, patrol members never work alone. They wear distinctive high-visibility uni-

forms and drive in clearly marked vehicles. Two-way radios are valuable. The radios allow the members to contact their own dispatchers, who then summon the police.

GMRS Radios are popularly used by citizens crimewatch patrols. These cover the bands 462.55 to 462.725 MHz (12.5 kHz steps), and 467.55 to 467.725 MHz (25 kHz steps). Business Band radio (especially 151.625, 154.57, and 154.60 MHz), and CB radio are in wide use. Cellphones are in use, too.

Crime On Their Hands

The days of vigilante "hang 'em high" justice are over, or they should be. Modern citizens patrols, ideally should be sufficiently well trained and disciplined to stay out of trouble while safely observing and reporting to law enforcement agencies in-

stances of suspected criminal activity. They should do this without taking any actions beyond simply reporting incidents, then providing additional information requested by the agencies.

Attempts to apprehend, search, question, or arrest suspects are discouraged and could be dangerous, as well as being both ineffective and illegal. They might easily jeopardize a police investigation, destroy evidence, and be counterproductive on many levels. In addition, they could invite civil suits, and even get you arrested along with (or instead of) the criminals.

Seeking out police support, information, and instruction, for any citizen crime-watch activity in advance of the group going into action is an intelligent approach. Initially, you will learn whether the agency is interested in having this help, and the names of the personnel in charge of such matters. You will find out the best way to safely and legally collect crimewatch observation data, and how it should be reported to the agency.

You may already be in monitoring range of crimewatch groups. With your scanner, you can listen in. We are presenting here a frequency sampler of groups that you'll find representative of such groups. There are hundreds of groups now operating. ■

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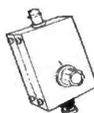
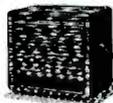
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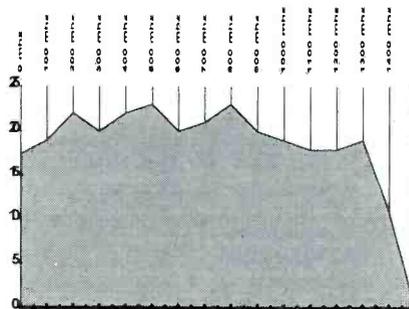
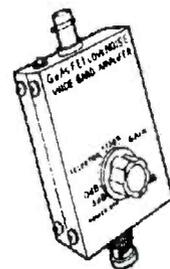


With the purchase of an AR1000XLT, you get our MA100 external mag mount antenna, *plus* our MS100 external speaker, *plus* our MPIF-1 filter to eliminate image and intermod interference. All together, these items represent more than \$98.00 normal retail value. But they're yours free during this limited time offer!

Offer void outside USA & Canada & where prohibited. Limit one accessory package per retail customer.

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Time	Country/Station	Frequencies	Time	Country/Station	Frequencies
	China Radio Int'l	11840		V of Greece (30)	15635, 15650, 17515
	R. Austria Int'l (30)	6015, 6155, 13730, 15410, 21490		R. Tashkent, Uzbekistan	7325, 9540, 15470, 17815
	R. Havana Cuba	6010, 9510		Radiobras, Brazil	125445
	REE, Spain	9530		R. Sofia, Bulgaria	11630
	Channel Africa	15430		HCJB, Ecuador	11925, 15115, 17490SSB, 17890, 21455SSB
0600	R. Korea	7275, 11810, 15170		All India Radio (30)	9615, 11770, 15145
	GBC, Ghana	4915		V of Vietnam (30)	17740, 21605
	V of the Mediterranean, Malta	9765		R. Ulan Bator, Mongolia	11850, 12015
	V of Hope, Lebanon	6280		R. Finland	15400, 21550
	Vatican Radio	6245, 7250			
	R. Australia	11720, 11880, 15240, 17670, 17880	1300	China Radio Int'l	7405, 9715, 11660, 15440
	R. Vlanderen Int'l, Belgium	5910, 9925		R. Tashkent, Uzbekistan (30)	7235, 9715, 15460, 17810
	AWR Europe	7210		R. Pyongyang, N. Korea	9325, 9345, 9640, 13650, 15250
	R. Georgia, Georgian Rep	11805		Polish Radio	6135, 7145, 9525, 11815
	TWR, Swaziland	7200		R. Romania Int'l	11940, 16365, 17720, 17850
0700	R. New Zealand Int'l	9700		FEBC, Philippines	11995
	V of Free China, Taiwan	5950		R. Finland Int'l	15400, 21550
	HCJB, Ecuador	9745, 11835, 17490SSB, 21455 SSB		R. Austria Int'l	15450, 17730
	TWR, Monaco (35)	9480		R. Vlanderen Int'l, Belgium	15530, 17740
	R. Finland Int'l (45)	6120, 9560, 1175		BBC	9515, 12095, 15070, 15220, 17640, 17705, 21470
	Croatian Radio	6210, 9830, 13830		All India Radio	11760, 15120
	KTWR, Guam	15200			
	CKFX, Canada	6080			
	V of Free China	5950			
	BBC	5975, 7150, 9410, 9640, 12095			
0800	R. Australia	15160, 15240, 17630, 17750, 21775	1400	Kol Israel	15640, 17590
	SIBC, Solomon Is.	5020, 9545		China Radio Int'l	7405, 11815, 15165
	R. Austria Int'l (30)	6155, 13730, 15450		R. Japan	9535, 11815
	V of Greece (40)	15650, 17525		R. Iraq Int'l	15250
0900	CFRX, Canada	6070		R. France Int'l	11910, 15405, 17650
	China Radio Int'l	11755, 15440, 17710		V of the Mediterranean, Malta	11925
	R. Australia	5995, 9510, 9580, 13605, 15170, 21735		RTV Morocco	17595
	FEBC, Philippines	11690	1500	R. Pyongyang, N. Korea	9325, 9640, 9977, 13785
	KTWR, Guam	11805		HCJB, Ecuador	11925, 17490SSB, 17890, 21455SSB
	R. Ulan Bator, Mongolia (10)	11850, 12015		BBC	6195, 7180, 7215, 9410, 9515, 9660, 9740, 9750, 9760, 11750, 11940, 12095, 15070, 15260, 15310, 15400, 15420, 17640, 17705, 17790, 17840
	R. Vlanderen Int'l, Belgium	5910, 9905, 13675		R. Japan	9535, 15355
1000	V of Vietnam	12020, 15010		KTWR, Guam	9465
	All India Radio	15050, 17387, 17895		R. Finland Int'l	6120, 9730, 11755, 15440, 21550
	R. Australia	5995, 9580, 21725		V of Greece (30)	15630, 15650, 17525
	NBC, Papua New Guinea	4890		R. Portugal (30)	21515
	R. Korea (30)	11715			
	China Radio Int'l	11755, 15440, 17710			
	AWR Latin America	13750			
	CSM World Service	9455, 9495, 13625, 17555			
1100	R. Japan	6120, 11815, 11840			
	R. Sofia, Bulgaria (30)	11630, 11720, 13670, 17780, 17825	1600	Channel Africa, S. Africa	5960, 15430
11910, 11970	VOIRI, Iran	9525, 9685, 11745,		AWR, Guam	11980
	V of Vietnam	7416, 9732		R. France Int'l	6175, 11705, 12015, 15530, 17620, 17850
	Swiss Radio Int'l	6165, 12030		R. Sweden	15270, 17820, 21500
	R. Pyongyang	6576, 9977, 11335		V of Vietnam	12020, 15010
	Vatican Radio (20)	7250, 11740, 15210, 21670		R. Jordan	9560
	R. Jordan	13655		BSKSA, Saudi Arabia	9705, 9720
	NBC Papua New Guinea	4890		R. Iraq Int'l	15250
	R. Austria Int'l (30)	6155, 13730		R. Pakistan	11570, 13590, 15550
	R. Korea (30)	9650, 9750	1700	R. Japan	7140, 9535, 11815, 17775
1200	China Radio Int'l	9715, 11660, 11795, 15210, 15440		R. Pakistan	11570, 15550
	R. Bangladesh (30)	15200v		R. Canada Int'l	5995, 7235, 13650, 15325, 17820, 21545
	R. Yugoslavia	17740,		R. Algiers, Algeria	9535, 17745
	R. France Int'l	15365, 17650, 21645			

Time	Country/Station	Frequencies
	KSDA, Guam	13720
	R. Netherlands (30)	9605, 21515, 21590
	V of Azerbaijan	9840
	Vatican Radio	15090
	All India Radio	7412, 9950, 11620, 11935, 15080
1800	Kol Israel	7465, 11587
	RAE, Argentina	15345
	Radiobras, Brazil	15265
	R. Iraq Int'l	13680, 15210
	Monitor Radio, USA	9495, 13770, 13840, 15665, 17555, 21640, 13620
	R. Kuwait	9540, 9755, 9825, 11770, 11840, 12050, 13645, 15485
	R. Moscow	
1900	R. Japan	9535, 9640, 11850
	VOIRI, Iran (30)	9022, 9720, 15260
	R. Norway Int'l (Sun)	15355, 15365
	R. Portugal	11740
	HCJB, Ecuador	15270, 17490SSB, 17790, 21455SSB
	R. Austria Int'l (30)	5995, 6155, 9880, 13730
	R. Netherlands (30)	17605, 21590
	AWR Latin America	5980, 9725, 11795, 13750, 15400
2000	CSM World Service	9430, 9455, 13770, 13840, 15665, 17510, 17555
	R. Kuwait	13620
	Vatican Radio	9645, 11625, 15090
	Swiss Radio Int'l	9885, 12035, 13635, 15505
	R. Canada Int'l	5995, 7235, 11945, 13650, 15140, 15325, 17875
	R. Portugal	15250
	V of Indonesia	9675, 11750, 11785
	R. Damascus, Syria (05)	12085
2100	R. Damascus, Syria (10)	15095
	V of Turkey	9445
	REE, Spain	6125
	R. Cairo, Egypt (15)	9900
	R. Nacional, Venezuela (40)	9540
	R. Portugal	15250
	R. Sweden	6065, 9655, 11995
	R. Havana Cuba	15165
2200	Kol Israel (30)	9435, 11587, 11603
	R. Sofia, Bulgaria (45)	7225, 9700, 11720
	R. Ukraine Int'l	7195, 9505
	V of the UAE	9605, 11710, 11815
	R. Yugoslavia	7200, 9505
	Swiss Radio Int'l	6030, 9810, 9885, 12035
	R. Budapest, Hungary	6195, 9835, 11910
	R. Vilnius, Latvia	9675, 9710
	All India Radio (45)	9910, 11745, 11785, 15110, 17830
	R. Moscow	9685, 9720, 9765, 9810, 9870, 11700, 11735, 11770, 11950, 12050, 15425, 21480
	R. Canada Int'l	9755, 11650
2300	AWR, Guam	15610
	V of Turkey	9445
	R. Yerevan, Armenia (45)	11920, 12065, 17660
	R. Netherlands (30)	6020, 6165, 11835
	AWR, Costa Rica	5030, 9725, 11870
	R. Austria Int'l (30)	9870, 13730
	R. Pyongyang, N. Korea	11700, 13650

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- 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.
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CIRCLE 84 ON READER SERVICE CARD

Memories of Radio

Strolling Through The Pages of History

BY ALICE BRANNIGAN

After our glowing description of RCA's former *Radio Central* international transmitting facility at Rocky Point, N.Y., more than a few readers seemed disappointed that we had given little more than passing mention to *Radio Central's* international receiving station on County Road 105 at Riverhead, N.Y.

We had given some coverage to that facility in April of '87 so didn't want to overdo it in '93. We do have an excellent 1930 postcard view of the exteriors of several buildings there. Also, we dug up a previously unpublished view of a bank of shortwave receivers in use at RCA Riverhead.

Tom Kneitel visited this site in the late 1960's, shortly before everything was torn down and the vacant land given to N.Y. State as a nature conservation area. This was long after the RCA facility had been shut down and the buildings left abandoned. Tom took several photos. We ran a few of these here a while back.

This facility received trans-Atlantic broadcast and two-way transmissions between 4 and 22 MHz. The station could

pick up AM, SSB, CW and radiophotos (FAX). Broadcast material was received from Europe and intended for network use. It was picked up on 2 different frequencies simultaneously. Both signals were fed into a mixer. If one signal developed problems, interference, or began experiencing severe fading, the other signal was there as a backup, and could easily be switched into use. Since each program was received on 2 frequencies, and each frequency was received by a diversity receiving system consisting of 3 receivers, the highest quality reception was achieved.

As a typical example of the use of this facility for network radio operations in the early days of WWII, during one 3-week period of 1939, Riverhead delivered 5 international broadcasts to the Mutual Broadcasting System, 98 to CBS, and 110 to NBC. Program material had come in from Moscow, London, Madrid, Paris, Rome, Vienna, Prague, and Berlin.

The network feeds and other received material was fed by landline to RCA offices at 44 Broad Street, in New York City.

More Catching Up

When we ran material about ethnic radio several issues ago, we mentioned the old Amos 'n' Andy radio show. Reader Bill Wheaton, of Texas, wrote in to say that he remembers once hearing that the actor who played one of the title characters was a ham operator. He asked if this was true.

"Amos" was portrayed by Freeman F. Gosden. "Andy" was the creation of Charles J. Correll. Knowing that little bit sent us into more dusty files and records than we would like to see again for at least the next few months. These efforts were rewarded.

When the search was finished, it was learned that Gosden had long been licensed as W6QUT. He was active on the 10 meter band. Gosden had a Collins 30J 250-watt transmitter, and used an RME-69 receiver with a DB-20 preselector. There was a 15-watt mobile unit, too.

For his part, Correll was not a ham. He was a licensed pilot, and in the late 1930's he had his own private plane. As such, he had been issued a radio license with the call



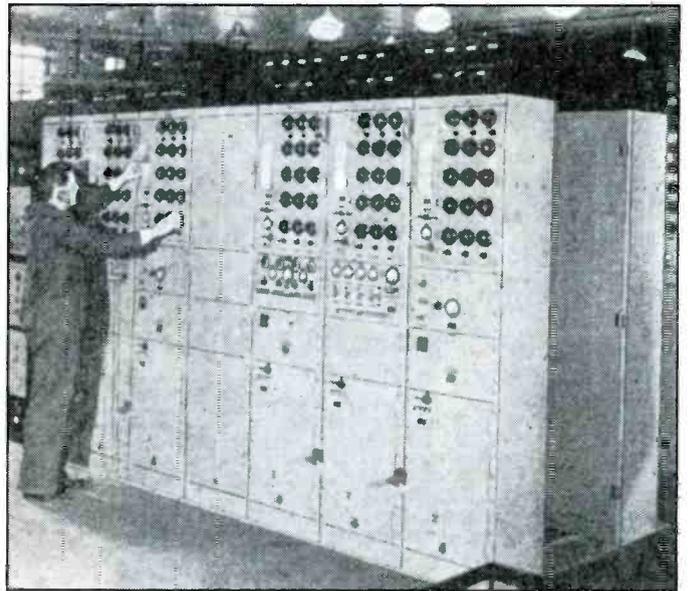
◀ A look at the same buildings shown on the 1930's postcard as they looked in the late 1960's, long after being abandoned. (Courtesy Tom Kneitel.)

▼ A 1930 postcard view of the RCA international receiving station, Riverhead, N.Y.





This large tower and microwave dish stood forlorn at the old RCA Riverhead receiving site in the 1960's. (Courtesy To Kneitel.)



The diversity shortwave receiver at RCA's Riverhead receiving facility during the WWII era.

letters KHCJC for use aboard his aircraft. I tossed this in as an extra.

The things I do to satisfy your (and my) love of this type of trivia!

Everything Old Is New

One of the more popular current TV programs is Fox TV's America's Most Wanted. It's a great idea, but not all that new. More than 50 years ago, W6XAO, Don Lee's Experimental TV station in Los Angeles, used to have the local District Attorney show up in the TV studio to display "wanted" photos on-camera and describe the felons for viewers.

Paris Worldwide

France was one of the early nations rep-

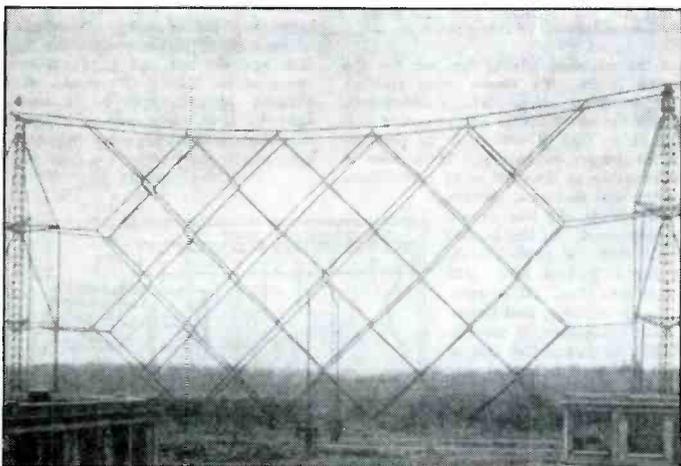
resented on shortwave broadcast frequencies. By 1929, Radio Lyons was on 5172 and 7463 kHz. A station in the city of Nancy was operating on 19355 kHz. Radio Vitus, Paris, was on 8108 kHz, and there was Parisian Radio LL on 4108 kHz. The Societe Francaise Radio-Electrique had a station at Ste. Assise on 12245 and 19417 kHz. These were low-power and experimental stations.

International shortwave broadcasting in France began on a larger scale in 1931. That is when the French Broadcasting Service had its first 10 kW station constructed at Pontoise. The lessons learned there went into the design and construction of a more modern 25 kW facility at Essarts-le-Roi during 1936 and 1937. Tests in late 1937 indicated that changes be made to most of

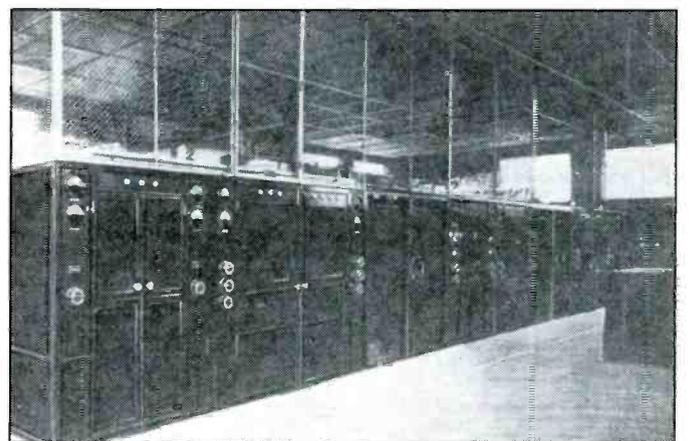
the antenna designs that had originally been planned for this station.

The antennas finally put into use were rhombics installed between 50 and 80 ft. above the ground. The feedlines were supported on 50 foot poles. French Broadcasting Service engineers observed that, although rhombic type antennas had been in use in the USA, this was the first time they had been put to use in France.

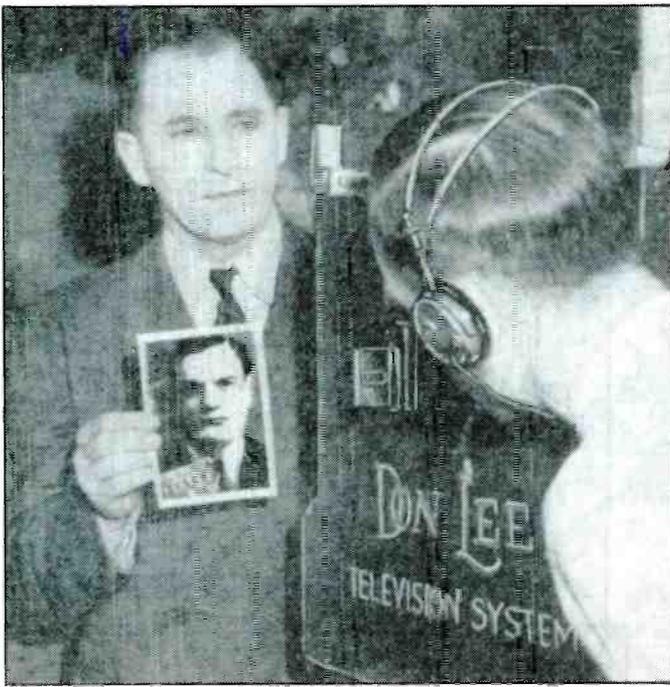
This FBS station was known as Ici Paris Mondial, which translates as This is Paris Worldwide. The name was appropriate because, while the old Pontoise station could operate only on two bands and 3 frequencies, the Essarts station had an array of day and night frequencies. In all, the Essarts station operated on 14 different channels in the 16, 19, 25, 31, and 50 meter bands.



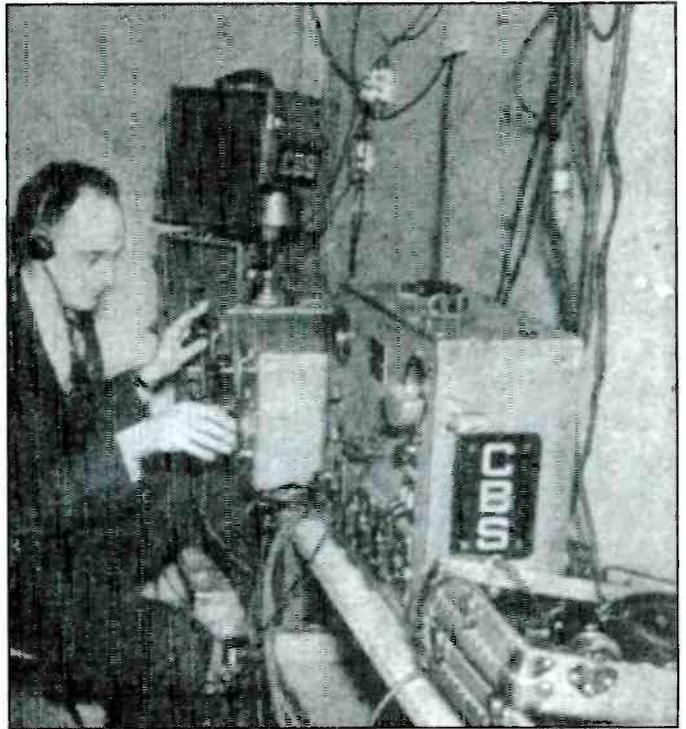
Early experimental French shortwave broadcast station operated in 1929 on 19417 MHz by the Societe Francaise Radio Electricque, in Ste. Assise (near Paris)



The 1938 shortwave broadcast transmitter at Essarts-le-Roi, France, ran 25 kW. It easily reached listeners in North America. Two years later it would be effectively put to use as a pro-Vichy propaganda tool.



Los Angeles District Attorney Burton Fitts displays a felon's photo for the TV camera as he asks viewers to be on the watch for the man. This was on Los Angeles TV station W6XAO in 1940, long before "America's Most Wanted" came up with the idea!



The CBS Forest Hills war news monitoring post as it looked in 1939, with William Whitford at the dials.

The Essarts station commenced full time broadcasting on April 1, 1938. It was heard well in all of its target areas, but its existence under the auspices of the FBS was short-lived. In May, 1940, Nazi Germany invaded France and established a puppet government that was sympathetic to the German cause. This was the infamous Vichy government, and was detested by the French.

Throughout WWII, Vichy engaged in extensive propaganda under the direction of Berlin. The Essarts transmitting facilities were made a part of these activities. Vichy's broadcasts were done under the name

"Station Y," and were widely reported by North American monitors (on 9520 and 11845 kHz). These broadcasts contained an abundance of war news along with heavy-handed commentary. France did not regain its freedom until September, 1944.

This station survived the war, and like most surviving Frenchmen, was made stronger by the experience. In 1948 it was running 100 kW on 9560 kHz. Today, the facility is no longer in operation.

Among The Listeners

DX monitoring during the late 1930's and through the mid-1940's produced war

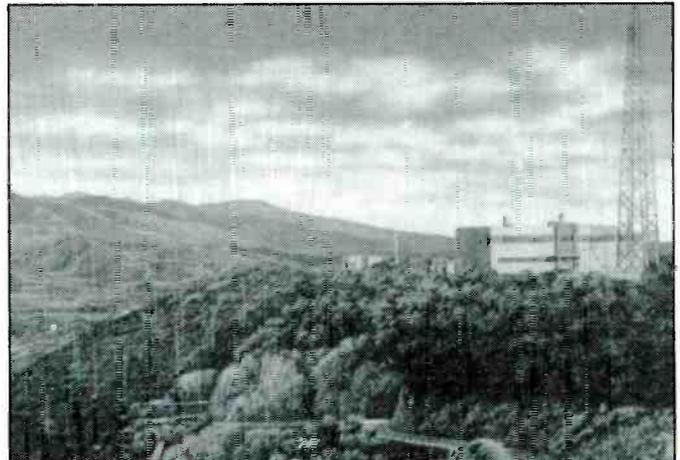
news and views from all points of view as well as from all points of the compass. While many hobby listeners got an earful (those who were not serving in the military), there were commercial DX monitoring posts set up to feed information to radio network news organizations.

In 1939, CBS set up its DX listening post in a 10 by 12 ft. radio shack located in Forest Hills, New York. Engineers ran this post full time, listening for programs beamed to the USA from Europe from all areas. Some programs were recorded for broadcast during news coverage.

When CBS put up the listening post in



Freeman F. Gosden, W6QUT, was the voice of "Amos" in the "Amos 'n' Andy" radio series. He was a very active 10-meter operator.



This is early Don Lee TV station W6XAO, when it was on Mt. Lee, Los Angeles. It became KTLN, then later evolved into KNXT.

Forest Hills, N.Y., the community was a quiet suburban residential area in Queens, New York City. Today there are still some quiet streets, but also plenty of condos and apartment houses.

CBS Studio 9, on the 17th floor of the network's headquarters in New York City, was established solely to collect, analyze, process, and disseminate war news gathered from overseas. The studio and its control rooms had shortwave receivers, translators, political analysts, press tickers, a feed from the Forest Hills monitoring post, as well as other news gathering facilities. Studio 9 had the ability and authority to interrupt network programming in order to rapidly flash war news to stations in the entire CBS radio network.

Were There Pirates?

Martin Farver, of Vancouver, Wash., writes to ask if there were radio pirates in the early days of broadcasting, and what was done to get them off the air.

Yes there were many pirates in the 1920's and early 1930's. The two most famous were "WUMS" and shipboard "RXKR." For more information on WUMS, see POP'COMM for December, '84, and April, '85. For the whole story on RXKR, you can see POP'COMM for August, '83. Some of the other early pirates have also been mentioned to a lesser degree over the years.

Removing the pirates was not always easy. WUMS remained on the air, and openly defi-

ant, for decades. The station wasn't even undercover. It seemed that there was nothing the FCC could do to get its operator to close down the station.

The method used to close down pirates today is about the same as it always has been. The Communications Act forbids the operation of unlicensed radio stations, and this Act is the law of the land. It's as simple as that.

In the early days of radio, pirates tried to defend their activities by questioning whether the government could exercise jurisdiction over radio stations that were running low power because their signals are received only within a small local area within a given state.

Court tests of this concept have held that radio signals are interstate in character, and that the provisions of the Communications Act apply to all stations that produce emissions intended for reception. See *U.S. v. Allison*, Equity No. 780, in the U.S. District Court for the Northern Division of Texas (November, 1933); *Radio Commission v. Nelson Brothers Bond and Mortgage Company*, 289 U.S. 266; *Whitehurst v. Grimes*, 21 Fed. (2) 787.

Later

Hope we can get together next month. Thank you for your support, your contributions of QSL cards from old stations, photos, clippings, questions, station listings, and words of encouragement. Everything is appreciated. ■

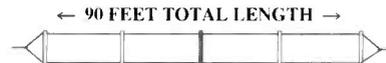
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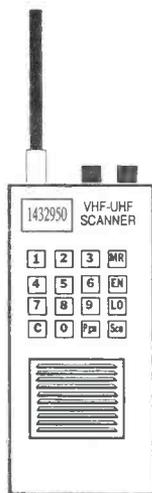
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BOOKS YOU'LL LIKE

BY R.L. SLATTERY

HOW TO GET THE MOST FROM YOUR SCANNER



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Canadian Books

A series of books directed at scanner users in western Canada is being offered by J&M Communications. This includes a 163-page Alberta frequency directory (3rd Edition), an 83-page directory for Saskatchewan (1st Edition), and a 271-page directory covering British Columbia (6th Edition). In addition, there is a 70-page book entitled *How To Get The Most From Your Scanner*.

The frequency guides cover military, police, taxi, power utility, railroad, ambulance, and other services. The front section of each directory has the listings sorted by location, with a sort according to frequency in the rear of the book.

The directories are well done books, and show listings from 27 to 900 MHz, including trunked systems. The directories are spiral bound. The How-To book is directed at new scanner users and provides basic information to familiarize someone with the use of the radio, the types of systems to be monitored, Canadian bands in use, etc.

The books are sold in many Canadian electronics shops, and may also be purchased by mail. The prices shown here are stated in Canadian funds. For mail order, add GST, and \$3 per book postage: British Columbia Directory is \$18.95; Alberta Directory is \$18.95; Saskatchewan Directory is \$12.95; and *How To Get The Most From Your Scanner* is \$9.95.

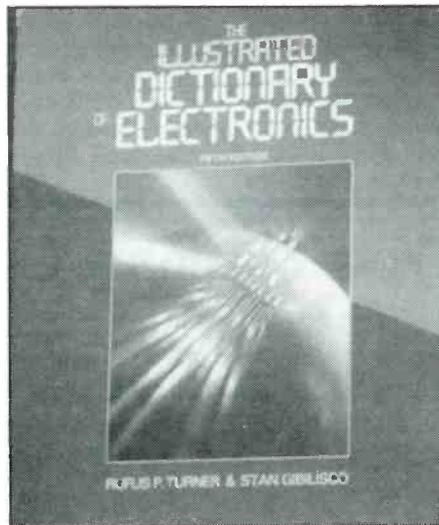
These excellent books are from from John Cain, VE7DBK, at J&M Communi-

cations, 3149 Beverly Crescent, North Vancouver, BC, Canada V7R 2W4. Phone (604) 984-7076; FAX (604) 984-0354. We don't know if the company accepts credit cards.

Wordy Gurdy

The Illustrated Dictionary of Electronics is one of those books that looks like it doesn't miss out on anything. After all, it's now in its 6th Edition, has 722 pages, and contains more than 27,000 listings. It has the heft of a telephone directory when you pick it up!

It's filled cover-to-cover with definitions, abbreviations, acronyms, illustrations, diagrams, schematics, symbols, and conversion tables. Whatever your level of interest in electronics—entry level to engineer—you'll find the information you want. It is precisely and clearly defined so that there



can be no confusion as to what is meant. No other reference source appears to cover as wide a range of subjects as this fine book, which was authored by Rufus P. Turner and Stan Gibilisco.

Here's a book that explains a "planar epitaxial passivated diode," yet is also willing to provide definitions for what "CB radio" and "SWL" means. As I said, it doesn't miss a thing.

The Illustrated Dictionary of Electronics, by Turner and Gibilisco, is Book No. 3345 from TAB Professional and Reference Books, Blue Ridge Summit, PA 17294-0850. The book is \$26.95, plus \$3 postage (\$5 outside the USA), plus applicable sales taxes.

Bugged Out

The Bug Book: Wireless Microphones

& *Surveillance Transmitters*, by M. L. Shannon, is a new 122-page illustrated book. It covers every aspect of RF surveillance transmitters, including information that as far as we know, has never before been published.

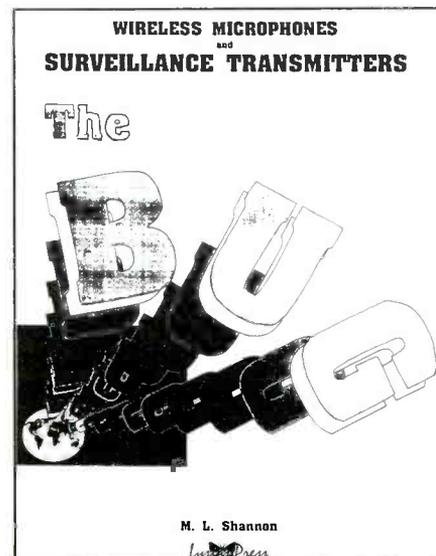
Some of the things covered include what a bug looks like, how they are used, where to get them, types of bugs, how much they cost, how far they really transmit, and how to increase their range. There is information on antennas for bugs, batteries and battery life, using AM and low frequency, and setting up a listening post to monitor for bugs. What about commercial bug detection equipment?

You'll learn how to make a physical search for bugs. A detailed check-list is supplied. Information is given about where to hire a professional de-bugging expert, and how to determine if one is required.

Reviews of a number of bugs are provided, including a crystal controlled model for under \$100, and the Deco VT-75 unit that has created so much interest. There is a bibliography, a glossary of terms, and there are plenty of sources listed.

The author is a professional electronics security expert. His informative book is written so that the average person can easily comprehend the topics covered, yet it is sufficiently comprehensive to be of value to persons with the ability to deal with sophisticated concepts. It is recommended for persons who are interested in the art and science of electronic surveillance, whether they are doing it, or believe it is being done to them. This new book was just published this year, so it's not the same old stuff.

M.L. Shannon's *The Bug Book: Wireless Microphones & Surveillance Transmitters* is \$19.95, plus \$4 shipping and



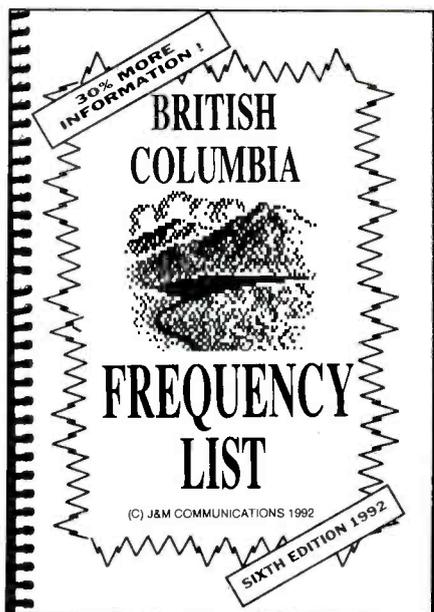
handling (\$5 to Canada) from CRB Research Books, Inc., P.O. Box 56, Commack, NY 11725. Residents of NY State please add \$2.04 tax. VISA/MC welcome. Phone orders: (516) 543-9169.

In Addition...

SCAN Version 2 allows any Amiga computer to control Icom receivers that support Icom's CI-V port. SCAN brings fully automated scanning, logging and receiver control, offering a scanning speed of better than 2,000 channels per second. Scan delays, monitor time limits, and scan speed settings allow intelligent scanning and may be set by the operator. The software is mouse driven and provides many more features than shown here. The system requires at least 1 Mbyte of RAM, and is Workbench 2 compatible. The single radio version is \$149. For more information, contact Future Scanning Systems, P.O. Box 654, Bartlesville, OK 74005. Tel. (918) 333-7474.

Texas Radio Directory is a 58 page listing of various scanner services in the Lone Star State. This covers 200 kHz to 1200 MHz and more than 40 different radio services from police to railroads. It is written and published by David K. Stall, N5MKK, and looks quite thorough, well organized, and useful. The mail order price is \$16.00, which includes postage, shipping, and tax from Luna Lumen Press, P.O. Box 58023, Houston, TX 77258-8023.

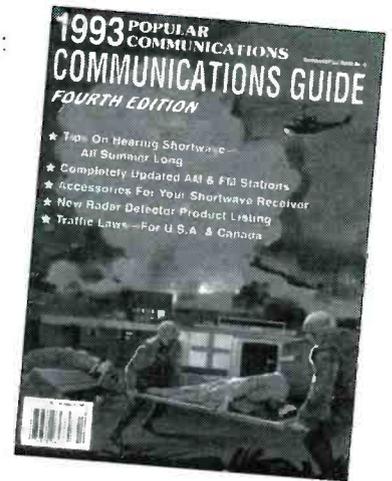
We were very impressed with the first issue of the very fine newsletter of the Houston Area Scanner and Monitoring Club. Lots of news and useful information for scanner owners in the Houston area. We liked this club publication and suggest that scanner owners in the Houston area give consideration to this worthwhile group. Contact: Glen Dingley, 909 Michael, Alvin, TX 77511. ■



IT'S NEW AND COMPLETELY UPDATED! The 1993 Popular Communications Summer Communications Guide.

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BROADCAST DX'ING

BY ROGER STERCKX, KVT1JH

DX, NEWS AND VIEWS OF AM AND FM BROADCASTING

Sspoken Word: AM station WKGT, Pensacola, Fla., has readings from magazines and newspapers. This programming is directed at the blind, as well as those who are visually impaired, or who cannot easily read available printed material for any number of other reasons. Some people without vision problems listen because they enjoy the readings while they work, relax, or drive. The readings are supplied by volunteers. We believe that similar programming has long been carried by special stations in Australia, but we haven't previously known about this type of program material carried by any commercial broadcasters in this country. It's a good idea.

No More Cheap Rent: Transmitter sites for FM and TV stations usually take the high ground. In western states, this often means atop mountain peaks and other high points. Frequently, these locations are situated on public lands administered by the U.S. Forest Service or the Bureau of Land Management, so rentals are paid to the federal government for the use of such transmitter sites.

Federal agencies have long complained that they are being underpaid for the fair market value of these sites by commercial broadcasters, not having gotten substantial raises in their rates for decades. A recent advisory committee suggested that the rates be increased by as much as 800% to 1500% in order to bring them into line with their actual value. Broadcasters agreed that the rates they are paying are on the low side, but balked when they heard the numbers being tossed around for the possible increases.

By the time you read this, a compromise will surely have been reached that will be mutually agreeable to the landlord and all of the tenants.

Two For The Show: San Diego now has a duopoly operation, under the recently

Changed AM Facilities

WFVU	Kentwood, MI	1480 kHz	Dropped days to 2.5 kW.
WLDY	Ladysmith, MI	1340 kHz	Dropped to 610 watts
WVFM	E. Lansing, MI	730 kHz	Increased night power.

Applied To Change FM Facilities

KDEZ	Jonesboro, AR	100.3 MHz	Seeks change to 100.5 MHz, 50 kW.
KQYZ	Lemoore, CA	104.9 MHz	Seeks move to Tipton, CA.
KRAB	Green Acres, CA	106.3 MHz	Seeks change to 106.1 MHz, 25 kW.
WEZX	Scranton, PA	107.1 MHz	Seeks change to 106.9 MHz.
WKTM	Soperton, GA	101.7 MHz	Seeks change to 106.1 MHz, 6 kW.
WMXS	Clinton, NC	107.1 MHz	Seeks change to 107.3 MHz, 13 kW.
WRAJ-FM	Anna, IL	92.7 MHz	Seeks change to 96.5 MHz.

changed FCC station ownership rules allowing multiple station ownership in one market area. The licensee of AM station KGMG and KIOZ-FM purchased AM'er KKLQ and its sister station, KKLQ-FM. The first duopoly ownership took place in Phoenix, Arizona.

Another duopoly arrangement was sealed when Capcities/ABC's WKHX (AM/FM), in Atlanta, recently committed to purchase nearby WYAY (FM), Gainesville, Georgia.

Into The Darkness: The National Association of Broadcasters (NAB) notes that all too many FM stations have gone dark for one reason or another, then do not return to the air within a reasonable amount of time. The NAB suggests that after 6 months of silence, the FCC automatically cancel the licenses of these darkened stations. Apparently, the NAB would also like the FCC to ask stations to describe their activity status at license renewal time so they can decline to renew the licenses of dark stations.

Better Than Dark: Station KDJI/1270, Holbrook, Ariz., operates with 5 kW. The station's location in a marshy area is excellent for sending out a signal. But when a flood engulfed the station, KDJI was off the

AM Call Letter Change Requests

Now	Seeks	
WKRC	WLWA	Cincinnati, OH
WQZZ	WMRB	Columbia, TN
WZLB	WODZ	Rome, NY

Changed AM Call Letters

New	Was	
KASR	KRAD	Perry, OK
KBEQ	KBZR	Blue Springs, MO
KCBC	KPLA	Riverbank, CA
KKAM	KFMX	Lubbock, TX
KMAY	KUUS	Billing, MT
KMRT	KCMZ	Dallas, TX
KNST	KWFM	Tucson, AZ
KVSP	KPRW	Oklahoma City, OK
KWFM	KNST	Tucson, AZ
KZLO	KBMN	Bozeman, MT
WALD	WRIT	Walterboro, SC
WBND	WMLX	Florence, KY
WCMB	WIMX	Harrisburg, PA
WCNV	WCNT	Charlotte, NC
WGNZ	WMMZ	Xenia, OH
WHYM	WZGO	Portage, PA
WKPA	WVZN	Lynchburg, VA
WRIC	WWBD	Bamberg, SC
WRWD	WARW	Cornwall, NY
WSLT	WCNA	Clearwater, FL
WTMZ	WVVO	Dorchester Terr., SC



KNPR

89.5 FM PUBLIC RADIO

CLASSICAL MUSIC • NATIONAL PUBLIC RADIO NEWS



KNPR, Las Vegas, Nevada, is owned by Nevada Public Radio Corp. (Courtesy Cameron LiDestri, KNPR.)

The mobile unit of WTHR/TV-13, Indianapolis. It was snapped in Alexandria, Ind., by R. C. Watts, Louisville, Kentucky.

Applied For Permits To Construct New FM Stations

AL	Dothan	90.3 MHz	25 kW
AL	Smiths	101.3 MHz	6 kW
AR	Camden	104.3 MHz	3 kW
CA	San Luis Obispo	88.5 MHz	3 kW
CA	Templeton	88.5 MHz	3 kW
FL	Marathon	97.7 MHz	6 kW
GA	Mt. Vernon	101.7 MHz	6 kW
IL	Canton	100.9 MHz	6 kW
IN	Clinton	93.9 MHz	
KS	Liberal	102.7 MHz	100 kW
MN	Worthington	93.5 MHz	2.5 kW
NC	Manteo	98.1 MHz	50 kW
NC	Warrenton	107.3 MHz	150 kW
NE	S. Sioux City	107.1 MHz	
SD	Aberdeen	106.7 MHz	100 kW
TN	Jackson	88.1 MHz	750 watts
TX	Plainview	106.9 MHz	31.5 kW
UT	Moab	96.7 MHz	1.6 kW
WA	Kennewick	91.7 MHz	8 kW

FM Call Letter Change Requests

Now	Seeks	
KDOE	KIDZ	Brigham City, UT
WGCB-FM	WTAM-FM	Red Lion, PA
WKNK	WAPC	Edmonton, KY
WLMK	WXPC	Horse Cave, KY
WNHX	WSCY	Moultonborough, NH
WTXI	WKZU	Ripley, KS

Deleted

KOSE-FM Wilson, AR 103.7 MHz 6 kW.

Permits Issued To Construct New FM Stations

AZ	Prescott	90.9 MHz	55 kW
CA	Copperopolis	105.5 MHz	960 watts
CA	Joshua Tree	92.1 MHz	6 kW
FL	Crawfordville	94.1 MHz	6 kW
FL	Dade City	96.1 MHz	3.8 kW
GA	Brunswick	104.1 MHz	6 kW
GA	Unadilla	103.5 MHz	6 kW
HI	Polpu	95.9 MHz	1.13 kW
IA	Britt	99.5 MHz	6 kW
IA	Burlington	103.1 MHz	11.8 kW
ID	Rexburg	91.5 MHz	100 watts
IN	Howe	91.9 MHz	3 kW
KY	Calvert City	95.7 MHz	3 kW
MN	Bemidji	91.3 MHz	60 kW
MN	Brainerd	103.5 MHz	6 kW
MO	Boonville	93.9 MHz	6 kW
MO	Lake Ozark	102.7 MHz	6 kW
MT	Great Falls	91.9 MHz	6 kW
NV	Reno	89.5 MHz	5 kW
NY	Binghamton	91.5 MHz	560 watts
NY	Herkimer	91.5 MHz	350 watts
NY	Whitesboro	97.9 MHz	3.4 kW
OH	Sandusky	89.5 MHz	5.36 kW
OK	Shawnee	95.1 MHz	100 kW
OR	Cottage Grove	100.5 MHz	6 kW
SC	Blackville	97.9 MHz	6 kW
SC	Bucksport	107.9 MHz	36 kW
SC	Sumter	94.7 MHz	3 kW
TN	Tiptonville	101.3 MHz	25 kW
TX	Baxter	93.7 MHz	25 kW
TX	Temple	101.7 MHz	3 kW
WI	Woodman	91.3 MHz	422 watts
WI	Seymour	104.3 MHz	2.55 kW

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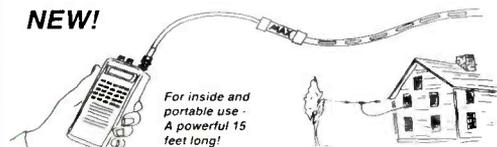
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New FM Call Letters Issued

KAAB	Patterson, CA
KAAP	Bemidji, MN
KBHG	Nolanville, TX
KHWX	Joshua Tree, CA
KKFF	Rexburg, ID
KREL	Copperopolis, CA
KWCP	San Luis Obispo, CA
KWCQ	Sleepy Eye, MN
KWEO	Garberville, CA
WAAD	Trice, FL
WAAE	Brunswick, GA
WAQK	Germantown, IN
WBZC	Pemberton, NJ
WCCP-FM	Clemson, SC
WEKS	Zebulon, GA
WHAZ	Goodman, WI
WJTD	Clinton, TN
WJTE	New Washington, IN
WJTF	Ocean City, NJ
WJTI	Bethany Beach, DE
WJTI	Lafayette Twp., IN
WJTK	Gorham, NH
WJTQ	Springville, NY
WLSO	Sault Ste. Marie, MI
WKTO	Samsula, FL
WOVU	Clarendon, PA

Call Letters Rescinded Or Withdrawn

Call	Current	
KKJZ	KLON	Long Beach, CA
KNJV		Royal City, WA
WLGJ		Manchester, NH
WLLO	WMLX	Florence, KY

air. They lost electricity for several days, and the studios were soaked. The transmitter was ruined in a high water level of 3 feet. KDJI had no backup transmitter, which was particularly bad since the station is the EBS CPCS-1 station for their area. They immediately notified the several stations that relied upon them for EBS messages and told them to monitor another station until they could become operational again. That took 12 days.

While awaiting the arrival of a new 5 kW transmitter, LPB, in Penna., was kind enough to rush KDJI a loaner 100 watt trans-



This triangular KRTY/95.3 sticker is from San Jose, Calif. It was sent by an anonymous reader.

Changed FM Call Letters

New	Was		New	Was	
KASR-FM	KJFK	Perry, OK	WBOB-FM	WCTS-FM	Minneapolis, MN
KATH	KYBS	Livingston, MT	WGGY	WGBI	Scranton, PA
KBEQ-FM	KBEQ	Kansas City, MO	WHKW	WXKS	Louisville, KY
KCKI	KSTM	Henryetta, OK	WHQQ	WEIC-FM	Charleston, IL
KCLQ	KLWT-FM	Lebanon, MO	WJJZ	WEGX	Philadelphia, PA
KDCD	KBIL-FM	San Angelo, TX	WJNN	WUFB	Cape May, NJ
KDUK-FM	KLCX	Florence, OR	WKBZ-FM	WMHG	Muskegon, MI
KGMV-FM	KGMV	Aurora, MO	WKIK	WSVS-FM	Crewe, VA
KHUQ	KAVI-FM	Rocky Ford, CO	WKXB	WVBS-FM	Burgaw, NC
KKYC	KMUL-FM	Muleshoe, TX	WKYL	WPYR	Millington, TN
KLCX	KRCQ	Indio, CA	WLPF	WSIZ-FM	Ocilla, GA
KLEB-FM	KBAU	Galliano, LA	WMHG	WKBZ-FM	Whitehall, MI
KLZK	KLCU	Brownfield, TX	WMMN-FM	WVCW	Barracksville, WV
KMFX	KQLW	Lake City, MN	WMMX	WWSN	Dayton, OH
KMRK-FM	KMRK	Odessa, TX	WNCQ-FM	WNYP-FM	Morristown, NY
KMUL	KLZK	Muleshoe, TX	WPHR	WUFF	Ashtabula, OH
KNDE	KKMR	Sparks, NV	WPME	WLLP	Topsham, ME
KNFX	KVNG	Spring Valley, MN	WQNN	WJWF-FM	Artesia, MS
KNUW	KZTT	Central, NM	WRWD-FM	WRWD	Highland, NY
KONQ	KINF-FM	Dodge City, KS	WRWJ	WLGW	Murrysville, PA
KRUE	KOWO-FM	Waseca, MN	WSLT	WCNA	Clearwater, SC
KSJL-FM	KSAQ	San Antonio, TX	WSEA	WPAW	Pawley's Island, SC
KSPG	KSQB	Clearwater, KS	WTRC-FM	WRHG	Natchez, MS
KSRJ	KDBQ	Santa Cruz, CA	WTUX	WXHT	Meridian, MS
KVVV	KHTT	Healdsburg, CA	WWBD	WWLT	Bamberg, SC
KWND	KVYU	Springfield, MO	WWBL	WRTB	Washington, IN
KXRD	KYUB	Victorville, VA	WWGO	WGGO-FM	Silver Springs, FL
KZCR	KBRF-FM	Fergus Falls, MN	WWPL	WQMR	Federalsburg, MD
KZLO-FM	KZLO	Bozeman, MT	WXXW	WSGQ	Webster, MA
WASP-FM	WXAK	Oliver, PA			

mitter just to get them up and running again. The 100 watt transmitter provided 30 to 40 mile coverage. LPB's help was appreciated by the KDJI staff.

Changes: Processing of FCC applications in the Broadcast Auxiliary Services (Aural & TV Remote Pickup, and Low Power) was transferred to the Private Radio Bureau's Licensing Division, Gettysburg, Penna. FCC Form 313 and the other forms used to apply for and modify licenses, etc., continue to be used. The license format itself has been changed. Construction Permits and Station Licenses, previously issued separately in these services, are now combined.

The address of this facility is: Private Radio Bureau, 1270 Fairfield Road, Gettysburg, PA 17325-7245. If you have questions, call (717) 337-1212.

Compliance Matters: The FCC tells us that broadcast station compliance with the regulations lags in certain areas, and those are the areas where the agency now is fussiest about checking on stations. Specifically, based upon inspections of broadcast stations during fiscal 1992, compliance in the following areas was determined to need improvement: AM directional parameters; AM monitoring points; power tolerance; meters; and the public inspection file.

Broadcasters seeking more information can contact the FCC's Jeff Young at (202) 632-7014.

Gloryoksi!: In case you were curious about what they are playing on Radio-101, Moscow, Russia, it's rock oldies. The

deejays speak Russian and English and the sounds are 24-hours per day of the Rock 'N Roll Graffiti service from Halland Broadcast Services, Glendora, Calif. These are music packages from the 1950's to 1990's containing more than 2,500 songs digitally remastered onto 125 CD's. The complete database on a floppy allows the station to sort and print the playlist every day.

Halland's phone number is (818) 963-6300. Five hundred stations carry Halland's CD music libraries.

Classy Place: A very pleasant letter from Cameron LiDestri, Development Associate, KNPR/89.5, Las Vegas, NV. Cameron had sent in a large assortment of stickers, but none from KNPR. Then one showed up separately from KNPR with the explanation that the station never had a bumper sticker, but now it does. But it is neither funny nor wild, just plain red and blue on a white background. That's because the NPR station plays classical music and is a classy joint. We are pleased to have it to add some class here!

Totals: There are now 4,957 AM stations in the USA, plus 4,808 commercial FM, 1,597 non-commercial FM, plus 1,969 FM translators and boosters. The US has a total of 1,510 TV broadcasters, 4,969 TV translators, and 1,345 low power TV stations.

Come Back: Hope you will join us again. Send along clippings, format changes, bumper stickers, station photos, recent QSL's, and anything else relating to AM/FM broadcasters that you want to share.

NEW PRODUCTS

REVIEW OF NEW AND INTERESTING PRODUCTS



Impedance Matching Patch Cord

BMI, manufacturer of the popular Nite-logger Automatic Recorder Activator, announces the introduction of the RC1A Impedance Matching Patch Cord. The RC1A is designed to simplify recording of the audio outputs of scanners, SW radios, repeaters, portable radios, or any audio device designed to drive a speaker. The RC1A provides the proper impedance match between a nominal 8 Ohm source and a standard 600 Ohm recorder input. The unit provides approximately 20dB of attenuation (unloaded) to prevent recorder input overload and, unlike inexpensive, purely resistive, patch cords the RC1A features both capacitive isolation of the audio signal and proper loading for the source device. Input and output connectors are standard 3.5 mm mini plugs and are compatible with most radios and recorders.

The RC1A is made in the USA and may be purchased directly from BMI or from most amateur, scanner and shortwave dealers. The introductory price is just \$19.95. Direct inquiries to: BMI, 9445 Seven Mile Road, Caledonia, WI 53108; Phone: 414-835-4299; FAX: 414-835-4298; or circle 102 on our Readers' Service card.



Line Alarm—What Your Surge Protector Never Told You

Surge protectors are fine system protection, as far as they go. But, purists and heavy users with a few hundred extra bucks add uninterruptible power supplies to cover the gaps left by surge protectors.

For the rest of us the inexpensive, new Line Alarm which continuously monitors electrical supply voltage and grounds is

probably more practical. The electric power industry generally does a good job of providing dependable, stable power.

Line Alarm is a simple, \$29.95 device that sounds an alarm whenever the 120 volt AC power varies by more than 10%. LED's light to show brownouts at 108 VAC or overvoltage at 132 VAC. Neon lamps indicate proper electrical wiring and grounds. In the event of a problem, simply turn off the equipment.

The Line Alarm should be permanently plugged into any convenient, readily seen electric outlet where it monitors all outlets on that circuit. In addition, the wiring on every socket on every receptacle should be checked, especially since surge protectors are virtually useless without a proper ground connection.

Some areas of the country are especially prone to brownouts and erratic line voltages. In addition, technicians frequently blame erratic voltages and grounding problems for causing random equipment errors and malfunctions. Line Alarm does the kind of monitoring that confirms this or sends them back to look for the real problem (it's probably bad contacts some place in the machine).

Line Alarm, sells for \$29.95, and is designed and manufactured by Power Alarm, Inc., 462 Rusty Drive, Santa Rosa, CA 95401. (707) 579-2364. To order call (800) 786-6610, add \$6.00 for shipping and handling. California residents add 7.5% sales tax. Delivery is four to six weeks. Warranty is 5 years. Return to the Power Alarm, Inc. for replacement. For more information call (707) 579-2364.

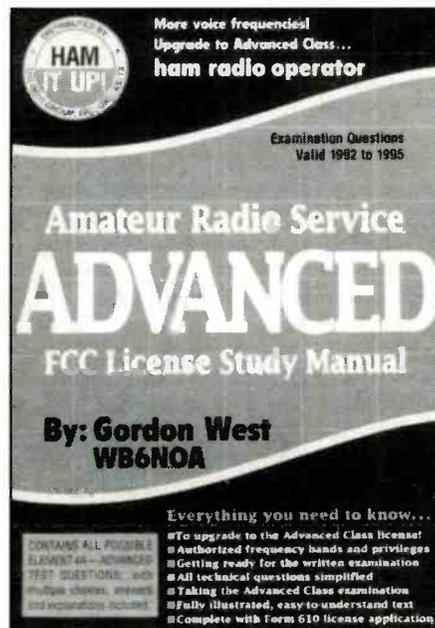
New Advanced Class Book

Amateur radio operators wishing to upgrade to Advanced class may now obtain the 173-page FCC license preparation book, written by Gordon West, WB6NOA. The Advanced book covers all of the 507 examination questions, four possible answers, and West's explanation for every single question.

The Advanced book eliminates the need for students to jump back and forth between the front and back of other books to find out the solutions and correct answers.

West covers each question with a view of why the right answer is correct, and offers tips on how to solve some of the Advanced class math problems. The author gives some formula shortcuts not found in any other publications.

The first 18 pages are devoted to bringing the licensed radio amateur up to date on recent changes within the amateur radio service. Chapter 3 specifically guides the



radio amateur through testing procedures for the upgrade Advanced class exam.

The Advanced book tells you exactly what to bring to the VE test session. The book even contains a convenient tear-out page of formulas.

The Advanced class FCC license preparation book is available through all Radio Shack stores, catalog #62-2415, amateur radio dealers, and mail order from W5YI Group, 800-669-9594. The book sells for \$9.95, and is published by Master Publishing, Inc. Gordon West also authors FCC license preparation books for Novice, Technician-Plus, No-Code Technician, General class, and the new Mobile 2-way Radio Communications book, too.

Morse Code Trainer

Use CopyCode (\$23.00), a Morse code trainer for the Amiga computer, to upgrade your Amateur Radio license. All controls including frequency, volume, weight, character formation and transmission speeds, lesson length, and hide/show text may be set using the mouse. CopyCode contains all the characters on the FCC exam and more. Practice with the 14 predefined character groups or create your own groups using a unique on-screen keyboard. CopyCode contains thousands of random but repeatable sequences of characters, words, Q-signals, CW abbreviations and QSO's. Run multiple copies of CopyCode to practice receiving CW through QRM. For a free three page description of CopyCode's features write, FAX, or call Sensible Software Solutions, 4951-D Clairemont Square, Suite 262, San Diego, CA 92117-2798. Phone (619) 452-1938. ■

SCANNING VHF/UHF

BY CHUCK GYSI, N2DUP

MONITORING THE 30 TO 900 MHz "ACTION" BANDS

There's still a little bit of summer monitoring left for scanner fans. If you haven't vacationed yet, be sure to pack a handheld scanner so you can check out the action on your trip, even if it's just a day trip. To prepare for your summer scanning fun, be sure to check out the articles in the *Summer 1993 Edition of The Popular Communications Communications Guide*.

Paul Godshall of Perkasie, Pennsylvania, wrote to say thanks for the list of new UHF police frequencies for eastern Montgomery County, Pennsylvania, that appeared in this column in the July issue. He says he is interested in seeing information published on new FBI frequencies. I'd love to comply, but as the FBI gradually implements its digitally-encrypted system nationwide, new frequencies pop up all over the VHF high band segment for federal government users.

At one time, FBI radio systems generally were restricted to the upper end of the 163-MHz segment, as well as the lower and middle portions of the 167-MHz segment. When digital encryption was implemented, it wasn't uncommon to find testing pop up in areas such as 170 MHz. Now, you can find the FBI on discreet frequencies ranges such as the 162, 163, 165, 167, 168, 172 and 173 MHz. If there is

an available frequency in the 162-174 MHz federal band, it's possible the FBI might pop up there at one time or another. The FBI also used to have a vast system of UHF links in the 406-420 MHz band to tie together repeaters on VHF, but is gradually phasing out those transmitters in favor of other technology.

The FBI's use of available frequencies ranges widely from one area to another it seems, so it is impractical to list certain frequencies that would be in use anywhere in the United States. It should be noted, however, that no matter where you live, it is possible to hear FBI communications on 167.5625, which is a nationwide mutual-aid type of channel for FBI units. It typically is referred to as channel 4 in most regional systems. While a lot of FBI communications are digitally encrypted these days, there still is some clear voice if you look around. And if you have a CTCSS decoder, if a 167.9 Hz tone shows up on a VHF high band frequency, there is a very good chance that it is FBI communications you are tuned to. Check the information in Kneitel's *Top Secret Registry, 8th Edition*.

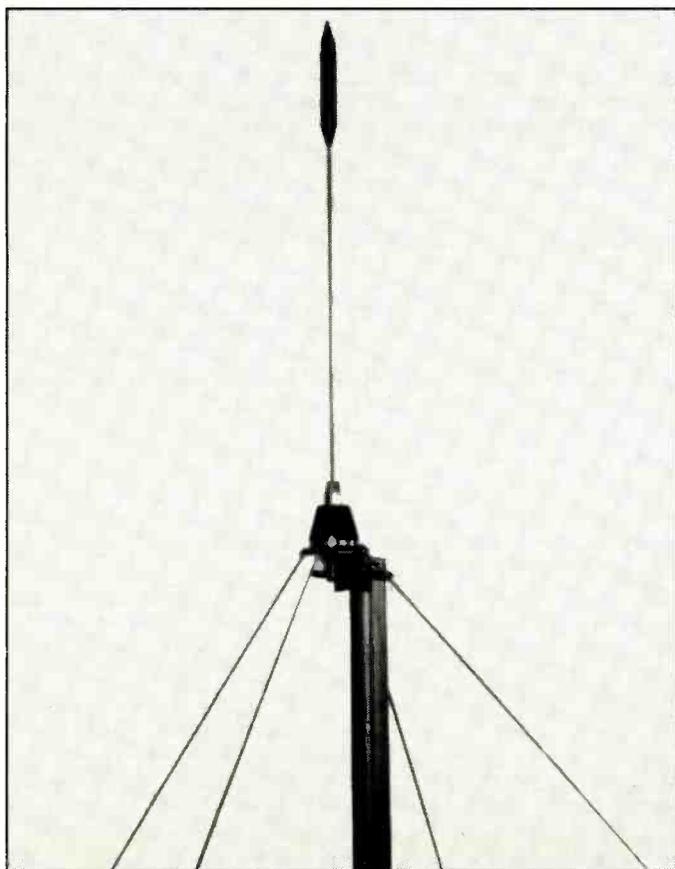
Paul also asks for any information regarding the new Pennsylvania State Police VHF high band radio system, however, the state police have been reluctant in releas-

ing any information on the new system. While the frequencies in the 32-channel system vary a little bit from one troop to another in the state, it seems to be somewhat standardized. If anyone has a map or list detailing what barracks and troops are using what frequencies in the new system, please send them to me at the address at the end of this column.

Paul Blankenship of Stinnett, Texas, says he monitors with an AOR AR1000-XLT handheld scanner with an Antenna Specialists MON-58 antenna atop his home. He says he can hear most stations in a 40-mile radius of his home because the area is mostly flat plains. However, he wants to hear a station about 70 miles away and wants to know how to accomplish this.

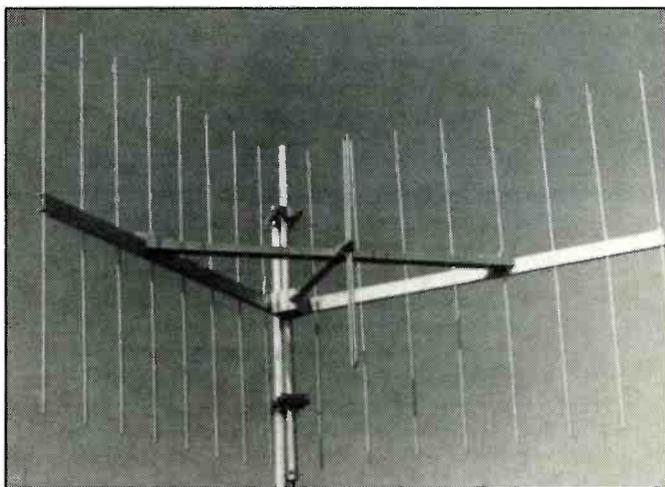
First of all, there may be a reason you aren't hearing the station. The station's power output may be too low for you to ever hear it, no matter what you do. If you can hear it mobile a good distance from where the transmitter is located, then you might be able to tune it in from home with a few tricks. Also, consider that there may be a natural obstruction that keeps you from hearing the signal. Is there a mountain or high rise in the land that would effectively block the signal?

If you want to try to capture the signal,



← An omnidirectional ground-plane type of base scanner antenna like the MON-38 from the Antenna Specialists is fine if you want to hear stations all within a certain radius of your monitoring post.

While much more expensive, this corner reflector antenna for VHF high band from the Antenna Specialists, offers 8 dB gain when concentrated at the signal you want to pick up. Antennas such as this are typically used for communications that are needed along a narrow strip or for point-to-point links. It also would make the difference in hearing a very weak signal on an omnidirectional antenna. A yagi antenna would look like half this antenna, if it were split into two at the mast. ↓



here are a few tips. First of all, omnidirectional antennas are out of the picture. You've got to aim a directional (yagi) antenna at the sought signal. The more elements you have on the yagi antenna, the greater your chances of snagging the station. You also need to get the yagi antenna up as high as possible, even if it means a tall mast or tower to accomplish the task. Yagi antennas aren't generally available from scanner shops. You'll need to check with a local two-way dealer or amateur radio supplier for what you want. The yagi antenna will be operative on one band only, too, such as VHF high band or UHF. Ham yagi antennas are generally cheaper than yagi antennas made for two-way radio users and perform the same (and sometimes are the exact same antenna, but cut lower in frequency for the ham bands at 144-148 and 440-450 MHz).

In addition to a yagi, be sure to use a good coaxial cable. Forget the CB-type RG58U cable as you will lose too much signal before it gets from the antenna to the receiver. Spend a little more on a cable such as 9913, which has a lot less signal loss at VHF and UHF frequencies. Another idea would be to purchase a signal preamplifier designed for scanner users, or even better yet, one designed for the band you want to listen to. If you can't find one of these from a radio supplier, you even can use a preamp designed for TV. Check to see what frequency range the preamp is designed for. Typically you will find them for a range such as 50-900 MHz, which would cover all the TV channels, as well as all VHF high and UHF scanner bands, including the 800 and 900 MHz bands. I know of many scanner listeners who have gotten very satisfactory results from TV preamps on their scanners (between the antenna and receiver).

By improving the ears for your scanner, you will greatly improve your chances of hearing a far away signal. We're not guaranteeing that you will be able to hear the station you want to hear, but you will be much closer with each step you take along the way.

Paul also sends along some of his frequencies for his area of the Texas Panhandle: 154.085, Borger sheriff; 154.965, Stinnett police; 155.655, Borger police; 154.235, Borger fire; 123.000, Borger Airport; 158.775, Fritch fire. Thanks for the kind words, too, Paul, about how you think this column is the best part of POP'COMM.

Andy Williams of Minneapolis, Minnesota, sends in some frequencies that he likes to listen to in his city: 460.025, Minneapolis police/south; 460.100, Minneapolis police/north; 460.175, Minneapolis police/northeast-southwest; 460.250, Minneapolis police/car to car; 460.350, Minneapolis police/detail; 460.500, Minneapolis police detectives; 460.275, Minneapolis metro emergency; 460.425, Minneapolis police/info; 154.340, Minneapolis fire F-1; 154.235, Minneapolis fire F-3; 154.295, Minnesota fire statewide mutual

aid; 155.505, Minnesota State Patrol west metro; 154.935, Minnesota State Patrol east metro; 155.610, Hennepin County sheriff F-1/south; 155.805, Hennepin County sheriff car to car; 155.820, Hennepin County sheriff F-3 info/emergency; 154.100, Hennepin County sheriff F-5/north; 154.755, Hennepin County sheriff F-6/water emergency; 158.805, Hennepin County SWAT; 154.385, Hennepin County fire; 154.355, Hennepin County fireground; 155.400, Air Care helicopter; 461.750, Life Link 3 helicopter.

Andy says that he has been a scanner listener for six years and uses the following scanners: Realistic Pro-2021, Pro-2022, Pro-2011, Pro-41 and Pro-35. Andy would like to exchange frequency information with others in the Twin Cities metro area. You can write to him at: Andy Williams, 3817 25th Ave. So., Minneapolis, Minnesota 55406.

Doug Brown checks in from an area that has a lot of radio traffic these days, the Little Rock, Arkansas, area. Doug lives in Humnoke, Arkansas, and sends in a list of frequencies for the Little Rock area that are of interest, especially since the President hails from that area. Apparently, Little Rock has gone to a digitally encrypted system, so Doug didn't bother to include the information, so here are some others of note: 453.050, North Little Rock police F-1; 453.350, North Little Rock police F-2; 453.800, North Little Rock fire-rescue F-1; 453.950, North Little Rock fire-rescue F-2; 161.040, Union Pacific Railroad Midwest Hump police; 854.4125, Baptist Medcenter Medflight; 38.45, Camp Robinson Army security F-1; 38.60, Camp Robinson Army security F-2; 38.50 and 46.90, Camp Robinson Army range control; 38.35, Camp Robinson Army Air

Guard tac; 464.525, McCain Mall security; 163.200 and 164.600, U.S. Marshal Service; 167.6375, 167.225, 163.8625, 163.9375, FBI. Little Rock area; 166.400, 165.375, 165.7875, Secret Service; 165.2875 and 166.5375, Bureau of Alcohol, Tobacco and Firearms.

Doug is a newly licensed ham and has been a listener for years. If you would like to exchange information with Doug, you can write to: Doug Brown, P.O. Box 254, Humnoke, Arkansas 72072-0254.

Herb Whittred of Medicine Hat, Alberta, says he was monitoring one day earlier this year on 29.62 MHz, a ham frequency, when he heard hams in the northern part of Alberta and Mexico talking with each other through a repeater on that frequency in Massachusetts. He said that the hams couldn't believe that they were able to communicate like that. Actually, for those whose scanners can dip down to 29 MHz, the range from 29.60 to 29.70 is a good place to check for some long-haul signals. While 29.60 is a simplex frequency for direct contacts, the range from 29.62 to 29.68 is for repeater outputs. You're bound to hear faraway hams on faraway repeaters, perhaps even worldwide contacts, when the band is open. The mode here is narrow-band FM, so almost all scanners can hear these frequencies. It's worth a check if you want to hear some long-haul DX on your scanner.

What are you hearing on your scanner? What are your favorite frequencies? Do you have a listening tip you'd like to share with others? How about sending in a photo of your monitoring post for others to see? Write to: Chuck Gysi, N2DUP, Scanning VHF/UHF, Popular Communications, 76 North Broadway, Hicksville, New York 11801-2909.

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It's often been said that professional truckers are the people who brought CB to national attention and popularity in the 1970's. These good folks continue to make extensive use of CB, so we thought it would be a good time to spotlight a new multi-featured CB radio targeted at the long-haul trucker who needs a rugged and reliable heavy duty road radio. This is the Uniden PC-76XL.

The Uniden PC-76XL features a switchable NB and ANL, a meter that reads S/RF/SWR, RX and TX indicators, an ANT warning LED, delta tune, RF gain, and an instant Channel 9 switch.

The MSRP of the Uniden PC-76XL is \$189.95, and it's available from the many dealers who carry Uniden CB products.

You Could Build Them!

As we have covered CB radios from the early days, we haven't mentioned that CB radio kits were available at one time. Yes, strange as it seems now, you could enjoy rolling your own from a prepackaged assortment of parts and simple instructions.

CB kits in the 1960's were popularly offered by Knight, Heath, and EICO. Although there may have been a few other CB kit companies, these three companies sold most of the kits. Some models were particularly well received. CB kits ranged from simple to sophisticated, handhelds to base stations. One of the first CB radio models to go on the market was a kit and it enjoyed a huge success. This was the late 1959 Heathkit CB-1, affectionately called the *Lunchbox* because it looked so much like one. This set had a very hot single channel transmitter but a completely inadequate superregenerative receiver. Eventually there were many home-brew multi-channel transmitter conversions. Also, there was a company known as Essco in New York City. Everybody shipped their CB-1 to Essco in order to get their famous custom superhet conversion done on the receiver section.

Several kits were available factory-wired and tested, although the wired versions cost more.

A Look In The Mail Sack

A letter asks if any reader can supply any literature at all on the Tram Diamond Model 201A AM/SSB. The 1970's CB set was purchased, but came minus any manual or other documentation. If anybody can help, please contact Paul Ceglia, 117 Adams Drive, Fairless Hills, PA 19030. Paul is also seeking any copies of *S9 Magazine* that might be for sale.



The Uniden PC-76XL was designed for professional trucker use.

We heard from Luis, 11-BDE-500, who is in charge of public relations of Spain's Bravo Delta Echo DX group. He tells us that last December, in Puerto Rico, the group used Channel 29-Upper to observe the 500th Anniversary of the Discovery of The Americas. The rig was an RCI-2950 using a Solarcon half-wave vertical. The event was sponsored by the BDE DX group, *Radio Espana*, and the Government of Nerja (Province of Malaga, Spain). A special QSL was issued for the event.

Big Noise From Winnetka

A reader who signs only as *Swamp Fire*, from Winnetka, Ill., brings up a question asked very often around this time of the year, "Why do I hear noise in my CB radio even when there are no nearby cars causing ignition interference or electrical appliances in operation. This noise is at different levels various times of the day." It's a fair question.

Once we rule out two very important noise sources, man-made noise, and any noises generated from within the radio equipment itself, there are still two other big possibilities left to explain the variable noise levels that show up in receivers. Both are rather unearthly. One is atmospheric, the other cosmic.

Atmospheric noise is obvious during thunderstorms. Flashes of lightning in your area produce static crashes in your receiver. But numerous unseen thunderstorms thousands of miles away are able to produce long-range signals that travel to your antenna to produce an average noise level that shifts hour-by-hour, day-by-day.

Even though the origin of atmospheric noise is not completely understood, it is estimated that about 2,000 thunderstorms are in progress throughout the world at any given moment. The greatest number tends to lie in what's known as the equatorial weather front. This region girdles the mid-



Heathkit's GW-12 was a \$39.95 single-channel set you could build yourself from parts.



EICO's Model 772 sold for \$89.95 as a kit, but factory wired and tested for \$119.95

dle of the planet and takes in Central America, East Indies, Equatorial South America and Africa. What's more, the weather front changes position as the day progresses, and changes to the north or south with the sun according to the season.

The curious thing about equatorial thunderstorm activity is that it generates long distance signals to virtually every point on earth. These are regular radio waves. They travel in all directions by groundwave and via skip. Since they reach your antenna at the rate of 10,000 to 20,000 times per second, they are heard as a steady noise, like eggs frying—or background static.

On the other hand, cosmic noise arrives from distances well beyond the atmosphere. It is considered an especially important noise source for frequencies above 15 MHz. If you are a radio astronomer, this can be wonderful. If you are a CB'er, maybe it's not so wonderful.

Researchers have pin-pointed certain hotspots of this cosmic radio activity that seem to originate in our own galaxy, the Milky Way. This main center is located at what astronomers call "right ascension."



The attractive QSL card issued by the Bravo Delta Echo DX group for their special celebration, as described in the text.

Each time that patch of sky swings past your antenna, the noise level increases.

Because the earth is in motion, cosmic noise seems to happen at different times of the day, according to the season.

World's Most Stubborn TV Interference

V.H.L., of Ontario, has a real problem. It is absolutely impossible for the CB radio and TV sets to be used at the same time. The result is lines that completely blot out the TV picture. He's in a remote TV fringe reception area, so the TV signals aren't very strong, even though he is using a boost-

ter. The booster only seems to make the problems worse. The CB rig is running legal power and is filtered externally.

There are a couple of neighbors in his area. They aren't happy either, and have complained to him about CB interference.

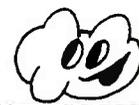
It seems to us that this may be a case of harmonics getting into the TV sets. He didn't mention the channels he watches, but if the trouble is primarily on TV Channel 2, 3, or 5, or between 7 and 13, then it is almost certainly caused by harmonics. A schematic for a harmonic trap is shown here. It can be easily built in a small metal box. Ground the box to the CB radio chassis, also ground the chassis by a short lead



CANADA



QSL



EDMONTON
VE6 ACU

EC 909 ACB CONFIRMING QSO WITH: Pop' Comm.

DATE	TIME	FREQ.	MODE	R (QRK)	S (QSA)	QSL
March 1993	LOCAL: UTC:					PSE TNX

I HOPE TO MEET YOU AGAIN ON THE AIR! GOOD DX
73-51-55-88-62

LLOYD HOFMANN VE6 ACU
YOUR FRIEND: 

One of our regular readers sent along his QSL. That's Lloyd Hofmann, ED-909, also VE6ACU, of Edmonton, Alberta, Canada. Thanks, OM!

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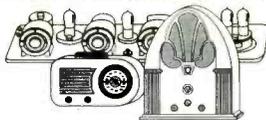
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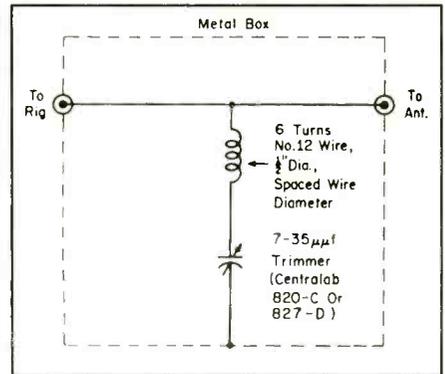
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Allied offered this bulky build-it-yourself Knightkit 1-watt CB handheld Model KG-4000.

to a cold water pipe. And use a low pass filter on the CB radio if that's not the kind of external filter already in use.

A good cold water pipe ground on the TV sets as well as high pass filters could possibly help.

If these measures don't work, then it might be prudent to have the CB rig checked out by a communications technician to see if it needs some work done.

Send along your QSL's, questions, ideas, and shack photos!

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Frequency Coverage	Default Steps
25.000 - 25.995 MHz (AM)	5.0 KHz
26.000 - 28.995 MHz (AM)	5.0 KHz
29.000 - 53.995 MHz (NFM)	5.0 KHz
54.000 - 71.995 MHz (NFM)	50.0 KHz
72.000 - 75.995 MHz (NFM)	5.0 KHz
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
225.000 - 399.995 MHz (AM)	12.5 KHz
400.000 - 511.995 MHz (NFM)	12.5 KHz
512.000 - 549.995 MHz (WFM)	50.0 KHz
760.000 - 823.995 MHz (NFM)	12.5 KHz
849.0125 - 868.995 MHz (NFM)	12.5 KHz
894.0125 - 1,300.000 MHz (NFM)	12.5 KHz

Signal intelligence experts, public safety agencies and *Popular Communications* readers have asked us for a world class *handheld* scanner that can intercept just about any radio transmission. The new Bearcat 2500XLT is just what you've been waiting for. It can store frequencies such as police, fire, emergency, race cars, marine, military aircraft, weather, and other broadcasts into 20 banks of 20 channels each. The new rotary tuner feature enables rapid and easy selection of channels and frequencies. With the AUTO STORE feature, you can automatically program any channel. You can also scan all 400 channels at 100 channels-per-second speed because the Bearcat 2500XLT has TURBO SCAN built-in. To make this scanner even better, the BC2500XLT has AUTO SORT - an automatic frequency sorting feature for faster scanning within each bank. Order your scanner from CEI.

For more information on Bearcat radio scanners or to join the Bearcat Radio Club, call Mr. Scanner at 1-800-423-1331. To order any Bearcat radio product from Communications Electronics Inc. call 1-800-USA-SCAN.

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New FCC Rules Mean Last Buying Opportunity for Radio Scanners

On April 19, 1993, the FCC amended Parts 2 and 15 of its rules to prohibit the manufacture and importation of scanning radios capable of intercepting the 800 MHz. cellular telephone service. Supplies of full coverage 800 MHz. scanners are in *very* short supply. When this inventory is exhausted, there will be no more full coverage scanners available to our U.S. customers. If you have an inquiring mind that wants to know, today could be your last opportunity to own a Bearcat 800XLT scanner. Call Communications Electronics now to order your scanner.

Bearcat® 800XLT-F

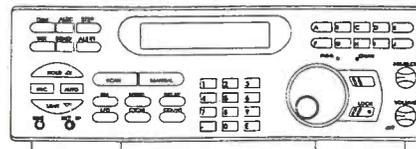
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Frequency Coverage	Steps
29.000 - 54.000 MHz (NFM)	5.0/12.5/25.0 KHz
108.000 - 136.995 MHz (AM)	5.0/12.5/25.0 KHz
137.000 - 174.000 MHz (NFM)	5.0/12.5/25.0 KHz
216.000 - 224.9875 MHz (NFM)	12.5/25.0 KHz
225.000 - 399.9875 MHz (AM)	12.5/25.0 KHz
400.000 - 512.000 MHz (NFM)	12.5/25.0 KHz
806.000 - 823.9875 MHz (NFM)	12.5/25.0 KHz
849.0125 - 868.9875 MHz (NFM)	12.5/25.0 KHz
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The Bearcat 890XLT gives you pure scanning satisfaction with amazing features like Turbo Scan. This lightning fast technology enables the Bearcat 890XLT to scan and search up to 100 channels per second. Because the frequency coverage is so large, a very fast scanning system is essential to keep up with the action. That's why Uniden's latest technology, Turbo Scan is built into our new Bearcat scanners. Other features include VFO Control - (Variable Frequency Oscillator) which allows you to adjust the large rotary tuner to select the desired frequency or channel. *Weather Alert* - Lets your scanner function as a severe weather warning radio. *Auto Store* - Automatically stores all active frequencies within the specified banks. *Auto Recording* - This feature lets you record channel activity from the scanner onto a tape recorder. You can even get an optional CTCSS Tone Board (Continuous Tone Control Squelch System) which allows the squelch to be broken during scanning only when a correct CTCSS tone is received. *10 banks* - Each bank contains 20 channels, useful for storing similar frequencies in order to maintain faster scanning cycles. For maximum scanning enjoyment, order the following optional accessories: P8001 Cigarette lighter power cord for temporary operation from your vehicle's cigarette lighter \$14.95; P8002 DC power cord - enables permanent operation from your vehicle's fuse box \$14.95; MB001 Mobile mounting bracket \$14.95; BC002 CTCSS Tone Board \$54.95. The BC890XLT comes with AC adapter, telescopic antenna, owner's manual and one year limited warranty from Uniden. Order today.



CB/GMRS Radios

The new Uniden GMR100 is a handheld GMRS UHF 2-way radio transceiver that has these eight frequencies installed: 462.550, 462.725, 462.5875, 462.6125, 462.6375, 462.675, 462.6625 and 462.6875 MHz. This one watt radio comes with flexible rubber antenna, rechargeable ni-cad battery, AC adapter/charger, belt clip, F.C.C. license application and more.
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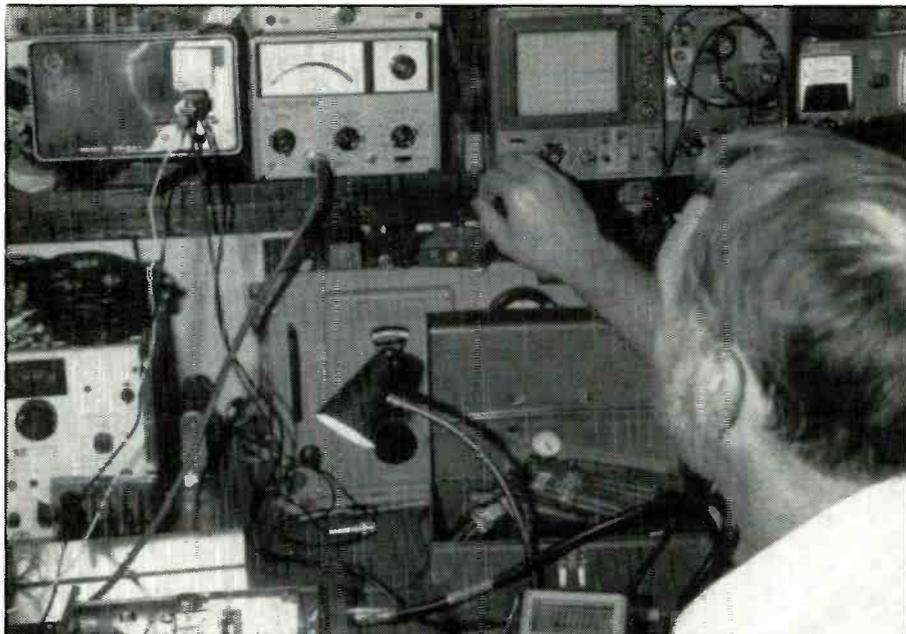
Tracking Down Birdies

The word "birdie" refers to a radio frequency oscillation that may be picked up on a specific frequency that radiates from the central processor unit (CPU) of the same receiver or a nearby oscillator. For those of you with handheld and mobile scanners, a "birdie" is that "dead-carrier" that may cause your scanner to lock on to this mysterious signal, and hold onto it as long as your scanner is turned on. And if you don't know it's an internally generated birdie, you might think that someone has a stuck carrier.

Birdies may also be emitted by other devices that contain a central processing unit (CPU), but may not necessarily be a radio set. The following equipment, found around an emergency command post, may emit radio frequency interference "birdies" over distances beyond 30 feet: Laptop computers; PC compatible fixed computers; Telephones with auto dialing; FAX machines; word processors; electronic phone dialers; "Switcher" power supplies; Battery chargers with "smart" circuitry; Power inverters; Vehicle CPU systems, which include: anti-lock brakes, air conditioning, brake pad monitors, fuel gauges, temperature sensors, and theft alarms.

The FCC calls this equipment "unintentional radiators," and they may require these "birdie producers" to comply with Part 15 specifications that may be met by verification or certification of the product when it is determined that it will not radiate broad-band noise beyond a specific distance—usually less than 3 meters. If it has a running clock oscillator with a base frequency of 9 kHz or greater, it may be subject to Part 15 spurious-radiation standards. Nonetheless, you may find that your emergency handheld transceiver or scanner set is continuously locking up on a "dead carrier" that you know is not a distant stuck transmitter. Worse yet, the dead carrier may land exactly on your primary emergency response channel. You are now going to need to track down where this "birdie" is coming from.

First disconnect your antenna from your transceiver or scanner monitor. Does the noise go away? If it does, this birdie is not being generated within your own set. This is good news for you. Most internal "birdies" fall harmlessly on frequencies not usually monitored by emergency personnel, and some scanner books actually publish the exact frequencies that will be effected. But if you do disconnect your antenna and the dead carrier persists, you're going to

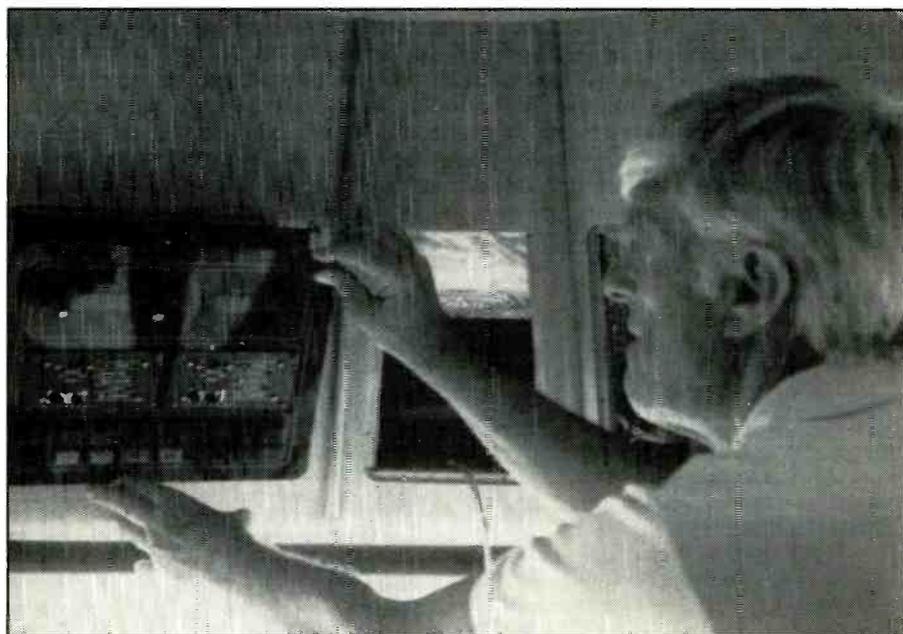


Even your own test equipment may emit birdies on VHF or UHF.

need to go to a completely different brand of equipment to escape the internal interference. But chances are, when you disconnect your antenna, the carrier instantly disappears.

Your next step is tracking down what is

creating this birdie. If you have a fixed base station, it would be illogical to move it around along with its antenna system trying to track down what's causing this interference. It would be much easier to go around your command post, and selec-



UHF birdies were discovered coming from this ungrounded voltage control panel. Shielding and grounding cured the problem.



A FM radio helps track birdies found behind the ambulance instrument cluster.



The Optoelectronics signal "sniffer" will help track down birdies at your communications console.

tively turning on and off different things, and finding out which one is creating the dead carrier. That's one approach.

Another approach to tracking down birdies is to borrow a programmable scanner, tune to the frequency that is giving you the problems, and then begin "sniffing out" for the dead carrier. Sometimes you might not hear anything down at the operating console. This means you need to go to the roof, and start sniffing around until your little handheld is beginning to pick up what your big base station antenna picks up.

Once you have picked up the interfering signal, start moving around toward local equipment plugged into a wall receptacle and see if the signal begins to build. If the signal gets stronger, collapse your telescopic whip, or fold over the little rubber antenna in order to cut down on the amount of reception. And when you get so close to the noisemaker that shielding the antenna does no good, take the antenna off completely.

Most programmable scanners will pick up strong "birdies" within 5 feet of the noise generator. When you get right down to the source, there will be no mistaking that you have found the culprit. Turn it off or unplug the equipment, and chances are the birdie instantly stops. You have found your source of interference.

Now what are you going to do? This big telephone system that is creating the birdie is part of your emergency command post. What to do? If the piece of equipment that is creating the birdie is maintained by an electronics technician on contract, tell them to go into the circuit and better shield the oscillator. You might also ask them to slightly tweak the trimmer capacitor to change the frequency of the birdie providing this does not alter the performance of the equipment. Sometimes just squeezing

the little metal can inside the device is all that's necessary to change the frequency of the offending leaking signal.

In worst case situations, you may need to completely switch brands to something that either doesn't have birdies, or has them on a frequency that you are not tuned into. But one good thing—you have tracked down the source of the interference.

Grounding of the noise-emitting device sometimes helps. Sometimes shielding the inside of the plastic case with conductive paint and then grounding the circuit to an external earth ground helps. You might even need to relocate your base station an-

tenna to another spot at your emergency command post that won't hear this nuisance short-range emission.

And it's going to get worse. As more and more home electronics and business electronics incorporate CPU's running at 9 kHz or higher, over-tones, spurious emission, and harmonics from this equipment may eat your scanner radio reception alive. Part 15 rules are rarely enforced, so it's up to you to track down the noisemaker, and get it off of your primary emergency communications channel. ■

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I Phase; Therefore, I DX

Fighting interference and noise is the name of the game in DX'ing today. Interference levels are higher than they have ever been, and there are multiple noise sources (light dimmers, power lines, motors, etc.) to wipe out weak DX signals. One relatively new technique that top DX'ers are experimenting with is *phasing*. This involves combining the signals from two different antennas to eliminate noise or interference that cannot be eliminated any other way. I've been experimenting with phasing for the past two years for AM broadcast band DX'ing, and phasing has allowed me to hear some stations that were impossible for me to hear any other way.

What is Phasing?

Phasing involves more than connecting two different antennas to your receiver. Instead, you must alter the phase relationships between the signals delivered by the antennas to your receiver.

Let's take a look at what we mean by "phase relationships." In Figure 1, notice that the two signals are identical at each part of their waveforms. When signal A is at a peak, so is signal B; when signal A is at a minimum, so is signal B. We say such signals are "in phase," meaning that peaks and minimums of the two signals happen at the same time. Now look at Figure 2. While the two signal waveforms are identical, they are not in phase as in Figure 1. The peak of signal A occurs at a different time than the peak of signal B, so the signals are out of phase. The two signals in Figure 2 are the same, with the same waveform shape and amplitudes. The only difference is in their phase relationship to each other; one "happens" in time before the other.

What would happen if we were to combine the signals in Figure 2? As long as both signals are on the + or - side of the time baseline, the resulting signal would be the difference between the larger and smaller signals. If one of the signals is on the + side while the other is on the - side, then the signal on the - side will cancel some of the signal on the + side; if the - signal is larger, then the resulting signal will also be on the - side. If both signals are completely "out of phase," as shown in Figure 3, then they will completely cancel each other out.

Phasing antennas is the art of manipulating the phase relationships between signals delivered by two different antennas. Each antenna will usually be carrying multiple signals, such as the desired signal, in-

terfering signals, and noise. These signals will not be at the same level on two different antennas or even present on them. For example, a strong local noise source might be present on two antennas, but a weak, distant signal might be present on just one. Normally the desired DX signal might be covered by the noise source. However, if the phase relationships between the signals from the two antennas can be manipulated so that the source signals cancel out, the weaker DX signal will be left since it is present only on one antenna.

That, basically, is the magic of phasing.

Phasing Loops

The first SWL's to seriously get into phasing techniques were those who tune for DX on the standard AM broadcast band. The large number of stations there and the vulnerability of that band to local electrical noise sources made phasing techniques especially attractive there.

The easiest way to so phasing for AM broadcast band DX'ing is to use two loop antennas. A loop antenna is a physically short length of wire formed into a coil or loop (hence its name) and tuned for resonance at the receiving frequency. One of the loops used for phasing should be a large "air core" loop, similar to the one described in Joe Carr's column in the November, 1992 issue of POP'COMM. The other loop should be a smaller ferrite core type, such as the "loopstick" antenna built into a lot of portables. My own AM band phasing setup consists of an air core loop measuring two feet on each side and a one foot long ferrite core loop. Both loops have FET amplifiers, although I only use one loop

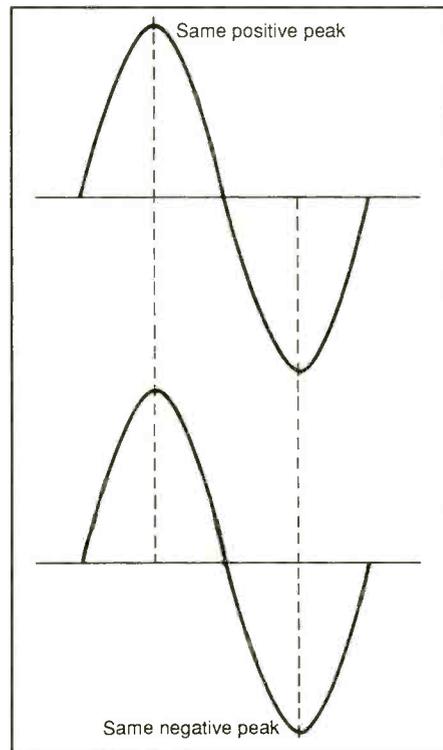


Figure 1: The two signals are in phase with each other.

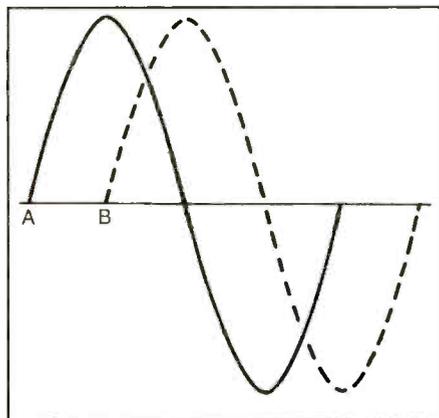


Figure 2: The only difference between these signals is their phase relationships.

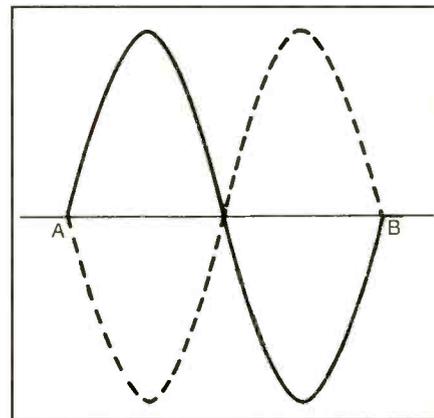


Figure 3: These two signals are opposite in phase and cancel each other out.

with the amplifier "on" during phasing.

My usual phasing arrangement is to connect my one foot long ferrite core loop to my receiver, and use it with its amplifier on. My big air core loop is not connected to my receiver nor to the ferrite core loop, and I leave the air core loop's amplifier off. All I have to do is place the ferrite core loop within one to three feet of the air core loop,

tune the air and ferrite core loops to resonance, and then rotate and/or tilt the loops to change the phasing relationships between the two antennas. No physical connection is necessary since the two loops are "connected" by the phenomenon of inductance. The two loops form a transformer, and changing the tuning and positioning of the loops alters the phase of the signal the larger air core loop induces in the smaller ferrite loop.

The results of my arrangement have been dramatic in some situations, allowing reception of stations that are otherwise impossible using either loop alone. For example, at my location 890 kHz is normally dominated at night by KDXU, a station in St. George, Utah. The major lobe of this station's nighttime antenna pattern is aimed right at me, and I am unable to hear anything else on its frequency at night using either loop alone. By phasing, however, I can often get reception of WLS in Chicago. I am never able to completely eliminate KDXU, but I can reduce it to a level where I can clearly understand and identify WLS and its talk show programming. Another case is 860 kHz, which is dominated by XEMO in Tijuana at my location. The phasing arrangement lets me hear KVVA in Phoenix and other stations to my north and east. And my phasing system is very effective in reducing noise from streetlights and other specific sources.

This system doesn't work miracles. For one thing, the signal strength is less than that from the air core loop. The phase of a signal arriving at both antennas can be affected by ionospheric propagation, and frequent retuning is often necessary to keep an interfering signal reduced in strength. And there are times when it's just impossible to "phase out" an interfering signal no matter what I do. However, phasing has been an invaluable addition to my set of AM band DX'ing tools.

Phasing at Shortwave

Ham radio operators have been using phased antennas for years. These usually involve quarter-wavelength vertical antennas spaced a multiple of a quarter-wavelength apart and phased together either through sections of coaxial cable that are some fraction of the desired operating frequency or through a phasing network device. A phasing network unit typically consists of two antenna inputs and a resistor, capacitor, and inductor in series for each antenna input. After passing through the series circuit, the two inputs are combined through a resistor network or matching transformer to form one signal. The inductor and capacitor in each signal path can alter the phase of each signal by storing signal energy as magnetic or electric fields, thereby causing a delay in the signal's passage through the circuit. The resistor is usu-

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August—1993

Freq.	Station/Country	UTC	Notes	Freq.	Station/Country	UTC	Notes
2390	La Voz de Atitlan, Guatemala	0230	SS	6075	R. Super, Colombia	1000	SS
3200	R. 9 de Abril, Bolivia	0100	SS	6090	R. Bandeirantes, Brazil	0100	PP
3205	R. West Sepik, Papua New Guinea	1130		6100	Deutsche Welle, Germany	0400	GG
3215	R. Oranje, South Africa	0300	EE/Afk	6116	LV del Llano, Colombia	0130	SS
3220	HCJB, Ecuador	1000		6120	R. Japan	1130	via Canada
3230	SABC, S. Africa	0400		6130	GBC, Ghana	0700	
3250	R. Luz y Vida, Honduras	0200		6135	Swiss Radio Int'l	0230	
3270	Namibian Bc Corporation	0300		6145	HRTV, Croatia	0800	
3280	LV del Napo, Ecuador	0305	SS, close	6155	Radio Austria Int'l	0830	
3285	LV del Rio Tarqui, Ecuador	0900	SS	6165	R. Netherlands, via Bonaire	0030	
3300	R. Cultural, Guatemala	0200		6170	La Voz de la Selva, Colombia	0300	SS
3316	SLBS, Sierra Leone	0600		6185	R. Educacion, Mexico	1000	
3320	R. Suid Afrika, S. Africa	0400		6205	HCJB, Ecuador	0800	
3325	R. Maya, Guatemala	1130		6219	Radio Bosnia-Herzegovina	0200	irregular
3355	R. Botswana	0245	s/on	6220	R. Sofia, Bulgaria	2130	Bulg.
3365	R. Rebelde, Cuba	0300	SS	6250	R. Nacional, Equatorial Guinea	0500	SS
3375	R. Nac. Ecuadora, Brazil	0130	PP	6270v	R. Patria Libre, Colombian clandestine	0030	SS
3384	Icelandic State Broadcasting Service	0330	Icelandic	6305	La Voz del CID (anti-Castro)	0800	SS
3395	Channel Africa, S. Africa	0400		6560v	Iraqi Radio	0330	AA
3925	R. Tampa, Japan	1030	JJ, /3945	6900	Voice of Meteorology, Turkey	0530	TT
3980	VOA via Germany	0600		7100	Voz Res. Galo Negro, clan	2300	PP
4000	R. Cameroon, Bafoussam	0430	FF	7105	REE, Spain	0430	SS
4300	R. Naylamp, Peru	1030	SS	7115	V of Pujiang, China	1130	CC
4460	CPBS-1, China	1300	CC	7140	R. Italia Int'l	0700	
4610	R. Iraq Int'l	0255	s/on, AA	7150	R. Vilnius, Lithuania	0000	
4635	R. Dushambe, Tadzhikistan	0200	local lang.	7170	ORTS, Senegal	0600	s/on, FF
4705	Estacion Laser, Peru	0900	SS	7175	RAI, Sicily	0700	Ital
4755	Educadora Rural, Brazil	0230	PP	7180	R. Ukraine Int'l	0100	
4760	R. Frontera, Venezuela	0130	SS	7195	R. Sofia, Bulgaria	0700	
4765	RTVC, Congo	0355	s/on, FF	7215	R. Denmark via R. Norway	0530	DD
4770	R. Nigeria, Kaduna	0500		7235	Deutsche Welle, Germany	0400	AA, via Malta
4770	R. Centinela del Sur, Ecuador	1030	SS	7250	Vatican Radio	0600	/6245
4780	RTV Djibouti	0345	AA	7255	V of Nigeria	0500	
4800	R. Lesotho	0330		7260	R. Netherlands via Russia	0930	
4805	Rdf. Amazonas, Brazil	1000	PP	7265	VOA Relay, Botswana	0300	sign on
4820	LV Evangelica, Honduras	0200		7275	ELBC, Liberia	0700	
4830	R. Tachira, Venezuela	0200	SS	7285	RT Malienne, Mali	0700	FF
4845	ORTM, Mauritania	0630	FF	7315	BBC via Uzbekistan	0100	
4845	R. K'ekchi, Guatemala	0230	SS, local	7345	R. Prague (& Slovensko R. at 0130)	0100	
4870	ORTB, Benin	0530	FF	7365	KNLS, Alaska	0800	ign on
4875	V of Jinling, China	1100	CC	7370	R. Flanders Int'l, Belgium	0030	
4885	R. Clube do Para, Brazil	0100	PP	7445	V of Asia, Taiwan	1400	CC
4890	R. France Int'l, Gabon relay	0400	FF	7465	Reshet Bet HS, Israel	0100	Hebrew
4895	LV del Rio Aruca, Colombia	0200	SS	7475	RTT Tunisienne, Tunisia	0500	AA
4904.5	R. Nat. Tchadienne, Chad	0430	FF	7550	R. Korea, S. Korea	2230	
4915	R. Cora, Peru	1030	SS	7705	RAI, Italy, SSB feeder	0400	II
4915	GBC, Ghana	0600		9022	VOIRI, Iran	0030	EE
4920	R. Quito, Ecuador	0300	SS	9165	R. Omdurman, Sudan	0255	sign on, AA
4935	R. Tropical, Peru	1000	SS	9275	Icelandic State BC	2300	Icelandic
4950	R. Bahai, Ecuador	1030	SS	9345	R. Pyongyang, N. Korea	1300	
4950	Voice of Jinling, China	1200	CC	9420	Voice of Greece	0130	GG/EE
4970	R. Rumbos, Venezuela	0200	SS	9445	Voice of Turkey	2330	TT
4976	Ondas del Orteguez, Colombia	1000	SS	9455	KHBI, No. Marianas	1000	
4980	Ecoss del Torbes, Venezuela	0200	SS	9475	R. Cairo, Egypt	0200	
4985	R. Brazil Central	0100	PP	9490	R. Nadezhda, Russia	1530	RR
4990	R. Nigeria, Lagos	2230		9505	R. Tacna, Peru	1030	SS
5010	R. Garoua, Cameroon	0600	FF	9510	R. New Zealand	0930	
5025	R. Journal Tranaamazonica, Brazil	0900	PP	9510	R. Havana Cuba	0600	
5025	R. Rebelde, Cuba	0200	SS	9520	R. Veritas, Philippines	1000	CC
5030	R. Continente, Venezuela	0330	SS	9535	Swiss Radio Int'l	0700	
5035	Rdf. Centrafricaine, Cent Af Rep.	0430	FF	9545	Solomon Is. Bc Corp.	0700	
5047	RTV Togolaise	0524	s/on FF	9555	R. Veritas Asia, Philippines	1430	
5055	TIFC, Costa Rica	0300		9560	Radio Finland	0230	
5075	Caracol Bogota, Colombia	0400	SS	9560	R. Jordan	1600	
5097	R. Eco, Peru	0200	SS	9565	R. Universo, Brazil	0900	PP
5800	R. Nueva Cajamarca, Peru	1000	SS	9570	R. Portugal	0230	
5882	Vatican Radio	0030	Italian	9575	Radio Medi Un, Morocco	0730	FF
5900	R. Vlaanderen Int'l, Belgium	0600	(ex-BRT)	9575	RAI, Italy	0100	
5945	VOA via Russia	1400	CC	9580	R. Tirana, Albania	0230	
5950	V of Free China via WYFR	0230		9590	R. Georgia, Georgia	0430	
5960	R. Monte Carlo, Monaco, via Canada	0400		9600	HCJB, Ecuador	0500	
5975	R. Macarena, Colombia	1100	SS	9600	R. UNAM, Mexico	1300	SS
6005	RIAS, Germany	0700	GG	9605	UAE Radio, Abu Dhabi	2200	s/on
6010	R. Inconfidencia, Brazil	0730	PP	9615	R. Cultura, Brazil	0700	PP
6015	R. Austria Int'l, via Canada	0645		9625	CBC Northern Service, Canada	0300	
6050	BBC via Cyprus	0530		9640	VOIRI, Iran	1500	sign on, Farsi
6060	Radio Havana Cuba	0600		9645	Faro del Caribe, Costa Rica	0400	SS
6060	R. Nacional, Argentina	0530	SS	9655	China Radio Int'l	1200	
6070	CFRX, Canada	0800		9655	R. Nacional, Colombia	2300	SS

Freq.	Station/Country	UTC	Notes	Freq.	Station/Country	UTC	Notes
9660	ABC, Australia	0900		13655	R. Flanders Int'l, Belgium	2300	Dutch
9690	China Radio Int'l, via Spain	0300		13660	R. Havana Cuba (USB)	0200	USB EE
9695	R. Sweden	0200		13675	UAE Radio, Dubai	1630	
9695	Channel Africa, S. Africa	0330		13685	Swiss R. Int'l	0700	
9700	R. New Zealand	1030		13685	R. Vlanderen Int'l, Belgium	1900	sign on
9705	R. Mexico Int'l	0330	SS	13750	Kol Israel	1500	Heb.
9718	SLBC, Sri Lanka	0100		13755	R. Australia	1200	
9735	R. Nacional, Paraguay	2300	SS	13785	R. Pyongyang, N. Korea	1500	
9740	R. Canada Int'l	0630		13855	INBS, Iceland	1400	Icelandic
9746	R. Bahrain	2000	AA QRM-	15010	V of Vietnam	1230	
HCJB				15084	VOIRI, Iran	0430	Farsi
9750	R. Korea, So. Korea	1200		15090	Vatican Radio	2245	s/on
9750	R. Canada Int'l	0530		15100	FEBC, Philippines	1400	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		15170	R. Australia	0900	
9815	Radio Havana Cuba	0200	SSB	15170v	Radio Tahiti	0500	FF/TT
9835	KHBN, Palau	1300		15185	R. Finland Int'l	2300	
9835	Adventist World R., via Russia	1300		15200v	R. Bangladesh	1230	EE
9840	R. Kuwait	2100	AA	15220	Channel Africa, S. Africa	0600	(ex R. RSA)
9845	FEBC, Philippines	1600		15240	R. Australia	0900	
9860	R. Netherlands via Russia	1100		15250	Iraqi Radio	1400	EE
9870	KTTWR, Guam	1400	JJ	15265	Radiobras, Brazil	1800	
9885	Swiss Radio Int'l	0200		15270	Deutsche Welle via Rwanda	2330	GG
9930	R. Vlanderen Int'l, Belgium	0030		15325	R. Japan via Fr. Guiana	0300	
9977	R. Pyongyang, N. Korea	1100	s/on	15335	R. Romania Int'l	1430	
10059	V of Vietnam	1500	VV	15340	R. Japan, via Gabon	2000	RR
10233	RAI, Italy, feeder	0100	II	15345	RAE, Argentina	2130	
11530	Wings of Hope, Lebanon	1200		15345	RTM, Morocco	1400	Berber
11550	RTT Tunisia	1800	AA	15345	RAE, Argentina	1300	SS
11603	Kol Israel	2230		15355	R. Japan via Gabon	1500	
11620	All India Radio	2000		15360	Deutsche Welle, Germany	2100	
11650	China Radio Int'l (R. Beijing)	1500	RR	15400	UAE Radio, Dubai	0345	
11685	BSKSA, Saudi Arabia	2130	AA	15415	Libyan Jamahiriya Broadcasting	1500	AA
11690	FEBC, Philippines	1100		15420	BBC via South Africa	1745	sign on
11695	Radio France Int'l	0530	FF	15430	Channel Africa, S. Africa	0430	
11700	R. Art, Russia	1600	RR	15470	R. Tashkent, Uzbekistan	1200	
11705	R. Sweden	2330		15475	Africa Number One, Gabon	2100	FF
11710	RAE, Argentina	0100		15505	Swiss Radio Int'l	1500	
11715	China R. Int'l, via Mali	2000		15505	R. Kuwait	2245	AA
11720	R. Sofia, Bulgaria	0400		15555	R. Pakistan	1620	slow EE
11725	R. Korea, S. Korea	1000	SS	15570	R. Ukraine Int'l	1500	
11740	Vatican Radio	0700		15575	BBC via Cyprus	1300	
11740	R. Portugal	1900		15615	Rashuth Hashidur service, Israel	1700	Hebrew
11745	Channel Africa, S. Africa	0200		15635	V of Greece	1230	
11755	R. Finland Int'l	0130		15640	Kol Israel	1400	
11765	R. Sofia, Bulgaria	2300		15770	INBS, Iceland	1430	Icelandic
11785	VOA Thailand relay	1300		16000	VNG, Australia (time stn)	0800	
11790	VOIRI, Iran	1200	Urdu/EE	17490	HCJB, Ecuador	1900	USB
11795	UAE Radio, Dubai	1600		17535	HCJB, Ecuador	0000	USB
11795	R. Norway	2300		17550	R. Flanders Int'l, Belgium	1400	
11800	RAI, Italy	0100		17595	R. Cairo, Egypt	1200	
11800	Channel Africa, South Africa	0430		17605	R. Vilnius, Lithuania	0000	
11805	R. Globo, Brazil	0830	PP	17630	Africa No. One, Gabon	1430	FF
11810	FEBA, Seychelles	0330	lang.	17650	R. France Int'l	1400	
11820	R. Sweden	0100		17670	R. Cairo, Egypt	1800	AA
11830	Voice of Russia	1230	RR	17690	R. Ukraine Int'l	0100	
11830	R. Anhanguera, Brazil	0000	PP	17690	R. Yerevan, Armenia	0345	
11840	R. Tirana, Albania	0230	s/on	17730	Vatican Radio	0628	s/on
11855	R. Canada Int'l	1330		17740	R. Yugoslavia	1200	
11860	R. Iraq Int'l	0400		17740	R. Sweden	1300	EE
11870	R. Yugoslavia	0040		17745	Radio Portugal	1330	PP
11870	AWR, Costa Rica	0100	SS	17745	R. Tashkent, Uzbekistan	1200	
11880	R. Australia	1600		17750	Radio Nacional	1800	PP
11890	R. Exterior Espana, Spain	0630	SS	17760	R. Filipinas, Philippines	0230	
11920	BSKSA, Saudi Arabia	1500	AA	17770	R. New Zealand Int'l	0445	
11938	V of People of Cambodia	0030		17815	R. Cultura, Brazil	0100	PP
11940	R. Romania Int'l	1300		17815	RTV Morocaine	1700	
11955	R. Nacional, Angola	0600	PP	17825	R. Japan	0300	
11960	RTV Malienne, Mali	0900	FF	17860	Qatar Bc Service	1300	AA
11965	V of the UAE	1800	AA	17870	R. Sweden	1500	
11970	R. Havana Cuba	0130		17875	R. Canada Int'l	2130	
11980	R. Ukraine Int'l	0230	Ukrainian	17880	R. Finland Int'l	1300	
11985	UAE Radio, Dubai	2100	AA	17900	R. Portugal	2000	PP
11995	R. Sweden	2200		21490	Radio Austria Int'l	1430	
12015	Radio France Int'l, via Gabon	1600		21460	R. Ukraine	1430	RR
12035	Swiss Radio Int'l, via Gabon	2200		21505	BSKSA, Saudi Arabia	1600	AA
12025	R. Netherlands, via Khazakstan	0300		21545	R. Canada Int'l	1500	
12050	R. Cairo, Egypt	0300	AA	21550	R. Finland Int'l	1430	
12085	R. Damascus, Syria	2005		21605	R. Yugoslavia	1230	
13605	Radio Australia	2300		21625	Radio Sweden	1330	
13620	R. Kuwait	2000		21645	R. France Int'l	1230	
13630	RFPI, Costa Rica	2300		21675	R. Kuwait	1500	AA
13635	Swiss Radio Int'l	2130		25820	R. France Int'l	1430	FF
13650	R. Pyongyang, N. Korea	0000					

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- R-7100, R-9000
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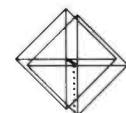
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**WLS CHICAGO'S
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190 N. State Street, Chicago, Illinois 60601
11-16-92

Mr. Harry Helms

San Diego CA

Dear Mr. Helms:

This is to verify your reception of WLS radio on October 25, 1992, at 1:30 a.m..

WLS is one of twenty-five Class I-A stations in the United States and operates with 50,000 watts on 890 kHz with a non-directional antenna on an unlimited schedule. When propagation conditions are good, WLS is frequently heard in Europe and Central America, as well as all 50 states, Canada, and Mexico. The FCC protected nighttime service contour of 0.5mV/m, 50% of the time, serves over 30 states and Canada. The daytime groundwave 0.5mV/m signal reaches five states and the 0.1mV/m contour reaches seven states.

WLS operates with a non-directional antenna, day and night. The main antenna in use today at WLS was built in 1938. The design was optimized to minimize the selective fades that occur in the distant ground wave coverage areas between the skywave and groundwave signals. The antenna stands today as it was originally designed. It is 179 meters tall - just a little over one half wavelength.

The WLS transmitter site is located in Tinley Park, Illinois, some 42 kilometers south and slightly west of downtown Chicago.

Thank you for your interest in WLS, good luck and good DX in the future.

Sincerely,

Warren Shulz
Chief Engineer
WLS Radio

THANKS FOR DETAILED REPORT!

00001

Capital Cities/ABC Owned Stations

A QSL that is the direct result of using phasing techniques.

ally a variable type and controls the amount of inductance or capacitance present in the signal path and therefore, controls the amount of delay.

Phasing antennas for transmitting is not an easy proposition, as any ham who has tried to use phased verticals can attest. However, things get a lot easier when we are concerned only with receiving. Any two non-identical antennas can be phased together to eliminate interference on shortwave frequencies. Phasing is generally not as effective as on the AM broadcast band, mainly because signals can arrive from multiple angles and paths at shortwave. However, it is still highly effective against local noise and can be a big help in eliminating many interfering skywave signals.

Unfortunately, phasing at shortwave frequencies is more complex than on the AM broadcast band. You'll need a phasing network of some sort, and that generally means you'll have to build your own. A relatively simple, high performance unit was described by Mark Connelly in the 1989

edition of Fine Tuning Proceedings (available from Fine Tuning Special Publications, c/o John Bryant, Route 5, Box 14, Stillwater, OK, 74074; send along a self-addressed stamped envelope with your query). No phasing networks are commercially available in North America at present, but one is available in Europe. This is a device known as the "QRM Eliminator" manufactured by S.E.M. Electronics of Britain. Their address is Union Mills, Isle of Man, United Kingdom.

You will probably need to use a preamplifier to boost the signal from a shortwave phasing unit, since the usual arrangement is to use relatively short antennas for phasing. Short, random length antennas have the sort of badly skewed receiving patterns that are ideal for phasing, but their signal pick-up is usually too low for good DX without a preamplifier.

We're still in the infancy of using phasing techniques for better DX. Hopefully, these ideas will inspire you to experiment with them.



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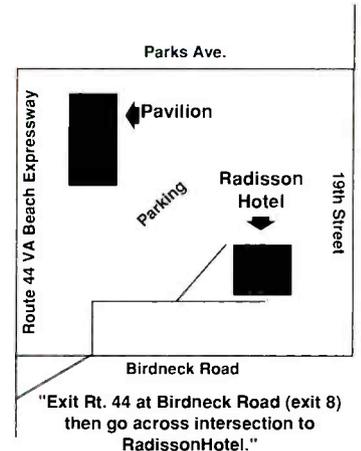
- ★ Antenna Construction Tips and Techniques with Bill Price
- ★ Buying a Receiver by Dick Robinson of Electronic Equipment Bank
- ★ PopComm "Listening Post" get-together with PopComm columnist and SW authority Gerry Dexter
- ★ The Future of SW Broadcasting, with world-renowned shortwave and propagation authority George Jacobs
- ★ How to QSL What You Hear by columnist Gerry Dexter
- ★ Pirate Radio – Hearing the Action with Pat Murphy of WNIS Radio
- ★ SWLing – What You Need To Know with shortwave expert, Dr. Harold Cones
- ★ Worldwide NASA and Satellite Comms with PopComm columnist and NASA authority Don Dickerson
- ★ SW Broadcasting – It's Two-Way Communication with noted international broadcaster Ian McFarland

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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. Registration in the Radisson Hotel, Friday, October 1 from 2 to 8 p.m.

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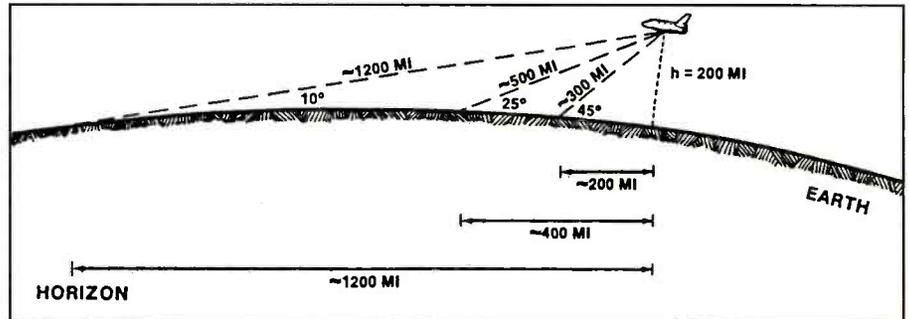
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INSIDE THE WORLD OF SATELLITE COMMUNICATIONS

Shuttle Amateur Radio Experiment

The Amateur Radio Satellite Corporation (AMSAT-NA) is having a banner year. US Space Shuttle flights STS-55, 56, 57, 58 and 60, all originally scheduled for '93, all have one thing in common. Each has carried, or will carry, one or more Amateur Radio Operators into space. The official NASA program which allows Amateur Radio operations from space is called the Shuttle Amateur Radio Experiments (SAREX). During SAREX missions, Amateur-Astronauts, to coin a phrase, transmit a voice and data (PACKET) from the shuttle in the two meter band. There have been three SAREX missions already this year, and two more missions, STS-58 and 60, were originally scheduled for October and November of this year but may have slipped into the first part of next year by now. STS-60 will carry the first Russian to fly on the US shuttle, Sergei Krikalev. He, too, is an Amateur-Cosmonaut (U5MIR) and a veteran of the Russian space program. Russian cosmonauts are now being allowed exclusive use of their MIR call signs. This means they can now operate from their homes or club amateur stations as well.

The first Amateur in space was US astronaut Owen Garriott. The year was



Approximate slant distances to shuttle.

1983, mission STS-9, his call, W5FLF. Since his flight, 20 US amateurs have operated from the space shuttle. Not to be outdone, the Russians have also orbited 20 amateur-cosmonauts on MIR. The Russians began their program in 1988. Many of these astronauts and cosmonauts have been from third world countries. The US has had visitors from NATO countries on the shuttle while the Russians took a more international approach and had visitors from both NATO and East Bloc countries. The Russian and American spacecraft use both voice and Packet on 145.550 MHz.

SAREX missions are currently using the following frequencies: Downlink 145.550 MHz, uplink 144.95 and 144.91, 144.93, 144.95, 144.97 MHz in North America and worldwide, with the exception of Europe. Europe's frequencies are as follows: Downlink 145.510, uplinks 144.70, 144.75, 144.80 and 144.950 MHz.

AMSAT has shown that Amateur Radio is a useful addition to manned space flight missions as well as being an inexpensive back-up communications system. AMSAT has proposed to NASA that a permanent Amateur Radio station be included on the

SAREX Frequencies

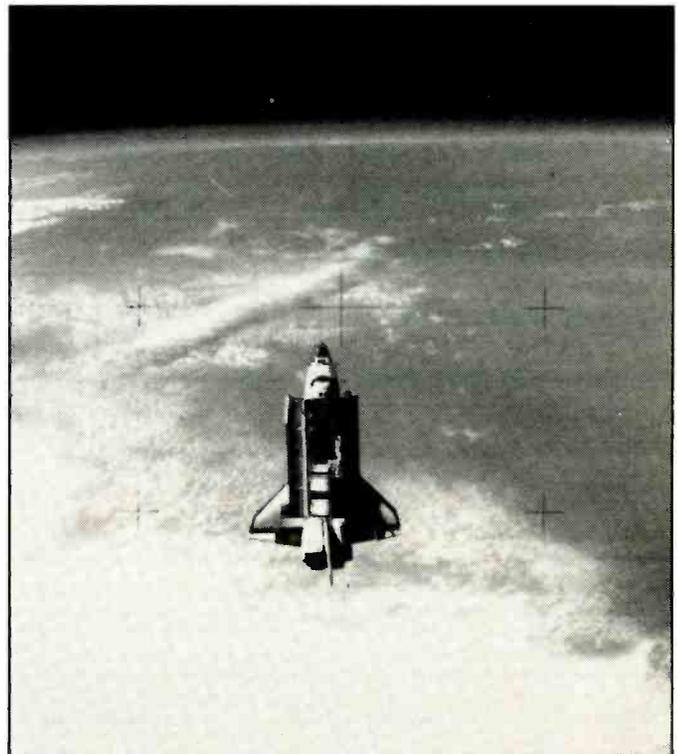
Area	Downlink	Uplink
North America	145.550 MHz Primary 144.950 MHz	144.490 MHz
Europe	145.510 MHz Primary 144.750 MHz	144.490 MHz
South America	145.550 MHz 144.950 MHz	144.490 MHz
Asia/Pacific	145.550 MHz Primary	144.910 MHz

Shuttle Re-Broadcast Live Audio

	Goddard SFC	Johnson SFC
WA3NAN:	3.860 MHz	W5RRR: 3.940 MHz
	7.185 MHz	7.225 MHz
	14.295 MHz	14.280 MHz
	21.295 MHz	21.395 MHz
	28.650 MHz	28.650 MHz
	147.450 MHz	146.640 MHz

SAREX Frequency Allocations

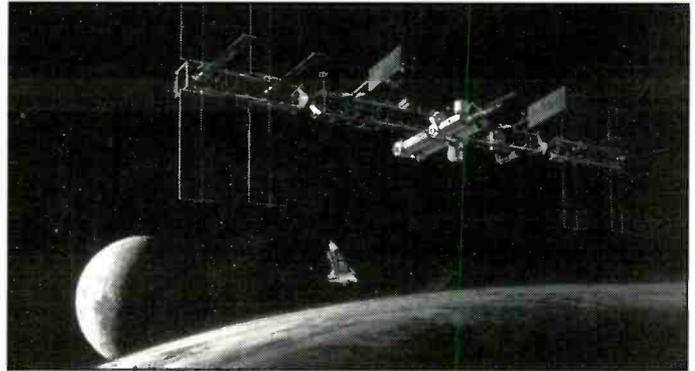
Downlink	Uplinks
145.550 MHz	144.910 MHz
145.510 MHz	144.910 MHz
145.590 MHz	144.970 MHz
	145.030 MHz
	145.510 MHz
	145.570 MHz
	145.630 MHz
	145.690 MHz



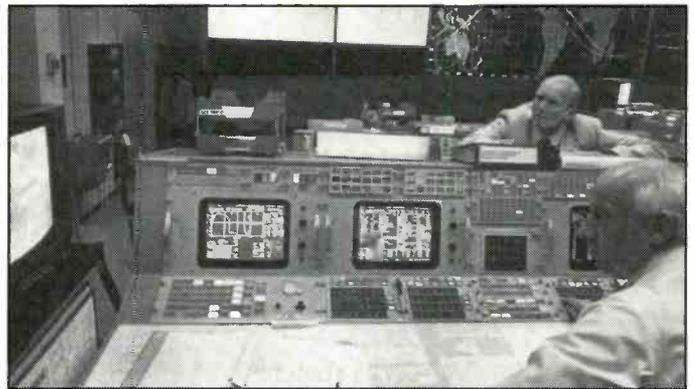
A view of the STS-7 Challenger taken from the Shuttle pallet satellite (SPAS-01).



Garriot talks to a "ham" operator on Earth via his amateur radio system onboard Columbia.



An artist's rendering of an international space station to be placed into orbit in the mid 1990's.



The integrated communications system console in the mission operations control room of the Johnson Space Center. (Photo courtesy The Johnson Space Center).

planned US space station Freedom. The proposal includes plans for outside antennas. Current shuttle missions use an indoor, window-mounted antenna. STS-59, which will carry two German Amateur-Astronauts, have plans to have an outside antenna on the spacelab module that fits into the shuttle cargo bay. The Germans will be operating from spacelab while the Americans will be operating from the shuttle with the indoor antenna. They will compare results to see if the outdoor antenna has any real advantages for space operations.

Becoming an Amateur-Astronaut has become so popular with US space travelers that there are more requests for SAREX assignments than NASA can schedule. As a result, a second unofficial class of operators now fly on shuttle missions. Those who get permission to take their own equipment on shuttle flights operate for fun during their off hours. This is quite separate from the more regimented SAREX projects.

It is not difficult to monitor shuttle communications, or MIR space station communications as both use a downlink of 145.550 MHz. When the shuttle is using voice mode the callsign will likely be that of the astronaut or the commander of the flight. On STS-56 the callsign used for voice was KB5AWP. This was Commander Ken Cameron's call. When in Amateur TV mode the call will be W5RRR/S. This call is also used for Slow Scan TV (SSTV)

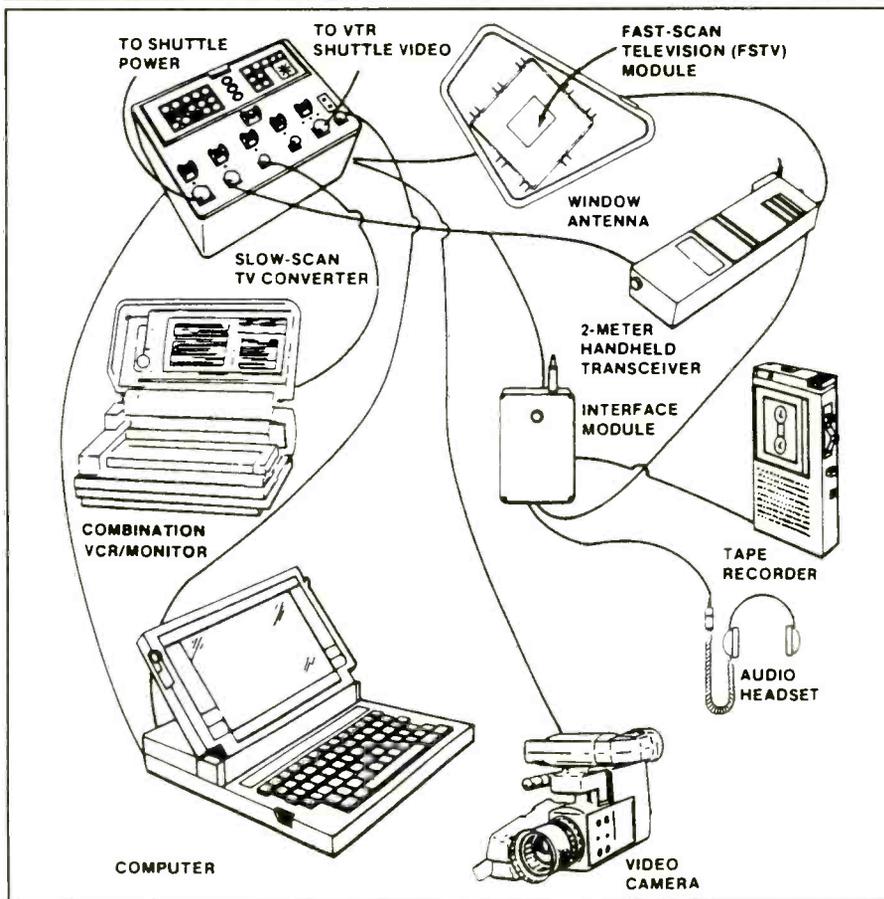
mode. When you hear Packet transmissions from the shuttle you will notice the callsign is W5RRR-1.

All you need to listen in on voice transmissions from the shuttle is an FM scanner or 2 meter Ham transceiver. An outdoor antenna is helpful but not necessary as space communications are line-of-sight. As you monitor the downlink frequency you will hear something only when the satellite signal is of useable quality with respect to your location. When the signal suddenly appears, and it will be sudden, it is called AOS or Acquisition of Signal. The loss of the signal (LOS) will be just as sudden as the shuttle drops below your horizon. The shuttle will fly approximately 200 miles above the earth's surface. This will give it a maximum usable range of 1,200 miles downrange. I use a discone antenna on my scanner for monitoring space frequencies and have a combination of a vertical and a horizontal beam I use with my two meter transceiver.

If you are interested in intercepting the data and TV modes from the shuttle or MIR you will need the appropriate equipment. Packet is the simplest. All you need to intercept or operate Packet is a TNC to add to your radio, a computer and software. There are two computers that enjoy a great deal of popularity among Hams. The IBM and IBM compatibles and the Commodore C-64. There are plenty of C-64's on the used market at very low prices. This makes this

a very popular way to enter the Packet arena. There is still plenty of Packet, Ham and satellite software still available, too. When you track the spacecraft it is easy to plan your contact attempts if you are a Ham. You will want to pick an appropriate uplink frequency and listen on 145 and 550 downlink. Then type in "C W5RRR-1" after the command prompt and try to be the first to capture the shuttle's attention. The same approach is true when trying to contact MIR. Current call signs begin with an R. R2MIR-1 is presently being used for MIR packet contacts. SWL's can receive a QSL card for monitoring a shuttle transmission. The report should include: time, date, mode, frequency and a QSO number if you talked to the astronauts or made a Packet connection. QSL reports should be sent to the following address: STS-QSL, c/o Vienna Wireless Society, PO Box 418, Vienna, VA 22183.

Non-US stations should include appropriate IRC's with your report. SWL's can also obtain a QSL for an intercept of MIR communications. The same information should be included in your report and it should be sent to: Sergei Samburov, RV3DR, Prospect Kosmonavotov, 0.36, KW96, Kaliningrad City, Moscow, 14170 Russia. Be sure to include an SASE and two IRCs with your report. Russia is suffering from 2,500% inflation and a shortage of paper products so the IRC's and



Sarex operational configuration.

SASE are essential if you have any hope of getting a card.

The Sarex missions usually include radio contact with several schools and other special groups or institutions. The French Air-Force Academy was on the original schedule for STS-55. STS-55 was postponed at the last second due to a fuel problem at T -3 seconds. The April launch of STS-56 was also aborted at T -11 seconds. This will mean another re-shuffling of SAREX launch schedules.

The Goddard Space Flight Centers and Johnson Space Flight Centers both promise to re-broadcast all live NASA voice communications with the shuttle crews. NASA Select TV is broadcast on Satcom F-2R, transponder 13, located at 72W, on a frequency of 3960.0 MHz with an audio on 6.8 MHz. COMSTOR computer updates (a BBS) of shuttle TV schedules is available by dialing (713) 483-5817. A voice update can be heard by dialing (202) 755-1788. Richard D. Baker of Ohio also reports NASA Space link is on line at (205) 895-0028 with a format of 8 data bits, no parity and 1 stop bit. The JSC BBS (713) 483-2500, uses the same format. After connect type 62511 for access.

Remember, your questions, comments and suggestions are always welcome. Be sure to let me know if you get a QSL from space. N9CUE @ KK9G.#CEIN. IN. USA.NA.

See ya next month.

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CIRCLE 11 ON READER SERVICE CARD

TELEPHONES ENROUTE

BY TOM KNEITEL, K2AES

WHAT'S HAPPENING WITH CELLULAR, MARINE & MOBILE PHONES

Yet another reader has written to express disbelief that I could possibly have made a statement with which he disagreed. The statement that L.T. Chandler of Kissimmee, Fla., seemingly thought some lunatic wrote and then signed my byline to an item that appeared last April. At that time, I had written that years from now the cellular industry hoped to be completely digital, and that I felt it would be a slow-phase-in process. As he said, "I can't believe that you wrote that!"

To support his disbelief, L.T. sent me a small clipping from an Orlando newspaper describing how a cellular service in Orlando had introduced digital service in February, and how it provides "higher quality signals, more call capacity, services and privacy than conventional analog cellular." They had 1,000 people signed up for this digital service.

Right now, optional digital service is available throughout Florida, as well as in metro Chicago. Essentially, my statements made in the April issue still stand as true, notwithstanding Mr. Chandler's disbelief that I could possibly have made them.

Of course, the Orlando newspaper merely hypes the tired old standard cellular industry claims about the wonders that are to be wrought by the miracle of digital. Hey, the cellular industry wants people to buy these new expensive phones, folks. Mr. Chandler, for one, bought the story, hook, line, and sinker. Remember, these are the same people who sold the public the analog cellular service "privacy" snake oil. Most people bought it.

Digital has been tested in metro New York City by Metro One, the non-wireline carrier, and will be made available along with analog in coming months.

The Orlando story didn't mention this, or that NYNEX Mobile Communications, the wireline (and dominant) cellular carrier in the metro New York City market, decided that digital still has far too many problems for them to bother with it for the present. NYNEX found no improvement in sound quality, and they thought the cell phones were far too costly.

According to a report in *Newsday*, by Josh Quittner, the GEO of NYNEX described digital as "a lot of vaporware." He said, "It's not ready for prime time. It doesn't provide anything for the consumer that's better than what he's got today."

NYNEX employees who tried using the digital phones said car-to-car conversations sounded "awful," and, "like swirling wind in a storm." Although nearly 85 percent of the NYNEX cell sites could easily be adapted to handle digital, the company has no

plans for the immediate future to introduce the technology.

Mr. Chandler should have realized that my comments in April were obviously related to digital on a national basis, and not just in the one city in which he happened to reside. Whether anybody chooses to believe I meant what I wrote, or was only kidding, I stand by my words. Within the cellular industry, thusfar digital doesn't seem to be perceived as that big a deal, or as impending as it appears in the general news media, or industry ballyhoo and hype. Anybody want to buy some snake oil? Wanna buy a duck?

A Familiar Question

For the umpteenth time, we will respond to the questions regarding the frequencies assigned to specific cellular carriers in different cities, and why we don't give them when we mention their names. That's because all non-wireline cellular companies are authorized to operate on the same frequencies. All wireline cellular companies are authorized to use the same frequencies.

Non-wireline cell sites can operate on the "A" group of frequencies, which are 869.04 to 879.99 MHz, and 890.01 to 891.48 MHz, 30 kHz channel spacing. Wireline cell sites operate in the "B" group, which are 880.02 to 889.98 MHz, and 891.51 and 891.54 MHz, 30 kHz chan-



The day is coming when about half the cellular time will be taken up with data comms.

nel spacing. Specific companies may elect not to use all of the available frequencies. Each individual cell site uses only a portion of the company's total active frequencies. Scanners tuning cellular frequencies, but

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operating with 5 kHz or 12.5 kHz spacing will detect most or all of the active channels in range.

Is Data Cellular & A Computer?

It is estimated that by 1995, perhaps half of cellular airtime will be taken up with data transmissions. Compare this with 7 percent of cellular air time now used for data transmissions.

What this means for the 10 million cellular users, and 41 million laptop PC users, is the ability and freedom to access and retrieve information anywhere, including a job site, a car or RV, on vacation, or a boat.

A number of companies are presently expanding their applications for portable PC's and cellulars. Special services such as inventory management, order entry, package tracking, etc. are being developed to make use of this combo technology. Mobile offices are gradually becoming more and more of a reality. It's a workaholic's dream come true.

Last May, Comcast Metrophone, a cellular carrier, held a Cellular Data Expo designed to explore new ways in which portable computers and cellphones can be used together to enhance business efficiency and profits. This expo was held in Wayne, Penna. Perhaps this excellent idea will become a yearly event. You might wish to check with them to see if and when they

have plans to do this again. They are: Comcast Metrophone, 480 E. Swedesford Road, Wayne, PA 19087-1867. Their phone is: (215) 975-5123.

Cellular Technology Personal Security

A personal security service that quickly locates and protects people wherever they are (at home, in a car, on foot) has been developed. Using portable and mobile cellphones and a cellular home alarm system, Help Express Service quickly locates and talks to the subscriber. In emergency situations ranging from health crises, carjackings, to stolen car recoveries, trained company field officers are dispatched directly to assist the subscriber.

In a sudden or unexpected situation, it isn't always possible to dial 9-1-1. The touch of a button on any *Helpfon* puts the entire Help Express system into action. The subscriber's location is pinpointed on an electronic map, communications are opened with the subscriber, and dispatch field response units are sent. The two-way talk capability allows subscribers to get instant assurance of aid status, first-aid advice, or other help requested.

For personal protection, a portable unit fits into a pocket or a purse. It is also a fully functioning cellphone. A home unit with the features of a conventional home security system is available. The monthly charge

for the various services costs as little as \$10 to \$20 per month for the complete package of monitoring and dispatch services; home, car, and personal. On completion of the San Diego Pilot program, Help Express will expand to other areas, beginning with Southern California.

For more information, contact: Help Express, Inc., 550 West B Street, Suite 250, San Diego, CA 92101-3537. Phone (619) 235-6085.

Cellular Monitoring Hardware

Thought you would be interested in the Moncell, a portable covert cellular monitoring system. The manufacturer tells us it is designed for licensed and bonded agency or law enforcement use. It can be placed in any briefcase along with a tape recorder and a dialed number recorder. It will operate from house current or from a vehicle's cigarette lighter.

Moncell can monitor generally or a specific number can be targeted. It is offered by Protele Systems, Hollywood, Fla. Phone number: (305) 420-9964. In case you're wondering, it sells in the \$4,000 price range.

We are always interested in receiving news clippings, also letters expressing either belief or disbelief. In addition, press releases relating to equipment and services are invited. ■

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CIRCLE 11 ON READER SERVICE CARD

THE EXCITING WORLD OF RADIOTELETYPE MONITORING

The RTTY Ranch, site of my antenna farm, recently acquired a satellite dish antenna, thereby providing another medium for monitoring RTTY and FAX transmissions. I went this route in order to follow the press and other stations that abandoned HF Radio years ago for the Clarke Orbit birds. Before purchasing the system, I had a sky survey made from my back yard to determine if anything blocked the dish antenna's view of all North American satellites. Nothing did, and the 7 1/2-foot dish was installed in March.

Since then I've found it very time consuming to check all of the transponders on some 43 satellites for the sounds of RTTY and FAX stations. No longer was it a matter of simply twirling a radio knob to tune in RTTY stations. A spectrum analyzer will have to be purchased to make the hunting easier.

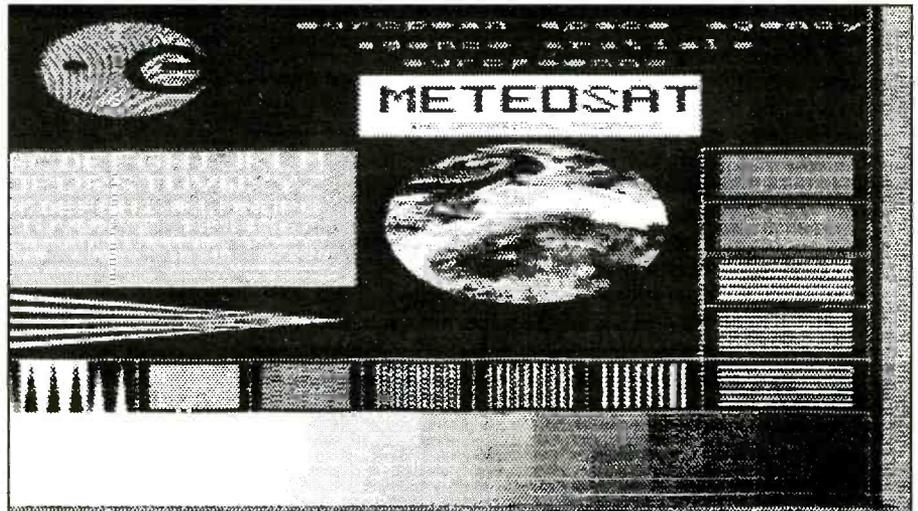
While finding RTTY and FAX stations is tedious, setting up the necessary equipment is easy. I connected an audio cable from the unclamped baseband video output of the satellite receiver to the antenna input of my Japan Radio Corp. NRD-535D, a shortwave radio receiver with FM tuning. FM, along with upper and lower sidebands, is needed to hear satellite audio signals. The usual connection between the radio receiver and the RTTY or FAX decoder is made, but satellite weather stations require the FAX decoder to be in AM mode instead of FM, which is used for HF Radio weather stations.

The first day I had the dish antenna I learned how to tune in satellite television stations. On the second day I searched for satellite radio stations and heard many of them, along with supermarket promos that shoppers often hear when buying groceries. Day three was spent hunting for the RTTY and FAX stations. I found two weatherfax broadcasts within four hours, but no RTTY stations. Several days later, I came across some idling RTTY stations, but never caught them sending anything.

The weatherfax stations were on Space-net 3, Transponder 17. The familiar radiofax sounds were heard when the radio receiver was tuned to 1882.5 kHz and 1927.5 kHz, both FM. Both stations operate 24 hours daily and retransmit satellite weather photos from Meteosat. Different weather photos are sent on each frequency.

Most transmissions, such as the NOAA-11 weather satellite photo shown in this column, are at 120/576, but some, such as the Meteosat test chart shown here, run at 240/440.

Those of you who monitor RTTY or FAX stations on the satellites are invited to send loggings or printouts to this column.

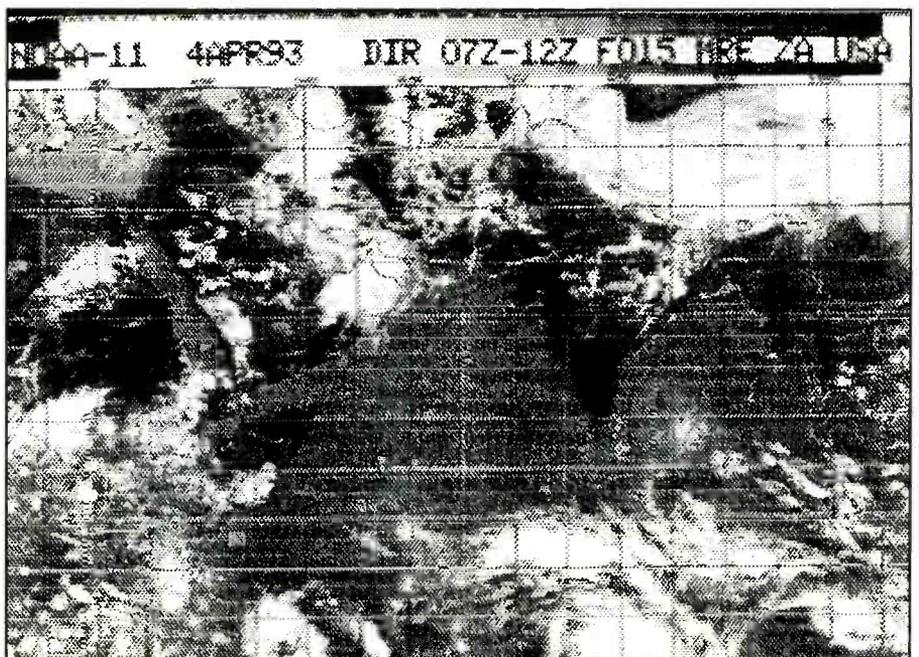


Weatherfax test chart moved at 0326 UTC on Spacenet 3, Transponder 17, 240 LPM/440 IOC. (From Robert Margolis)

Please include the station ident, time of intercept, satellite ident and transponder number, frequency readout on your receiver or scanner, or the readout on an SPCPC receiver, and mode (LSB, USB, or FM). Loggings of other types of transmissions, such as TV, radio, and telephoned systems, should go to Donald Dickerson's "Satellite View" column in POP'COMM.

Whozit I: A test tape from an unidentified station heard on 11147.5 kHz at 1211 UTC included the usual RY's shtick along

with "one quick brown fox jumps over one little lazy dog's tail," "fig test: 11/22/ 33/ 44/55/66/77/88/99/00/1/2/3/4/5/ 6/7/8/9/0 qrk qru hrs qtc pls reply by org." The 50-baud transmission was badly garbled, and, as is usual with this hobby, every time the ID would appear, that would be the time for the worst case garbling. One moment I saw "PFA12 de 88213 IWD217." The next time round IWD217 appeared as "IAD:17," which caused my temperature to rise a bit with anger. The



Indian Ocean weatherfax chart ran at 1630 UTC on Spacenet 3, Transponder 17, 120/576. (Printout from Robert Margolis)

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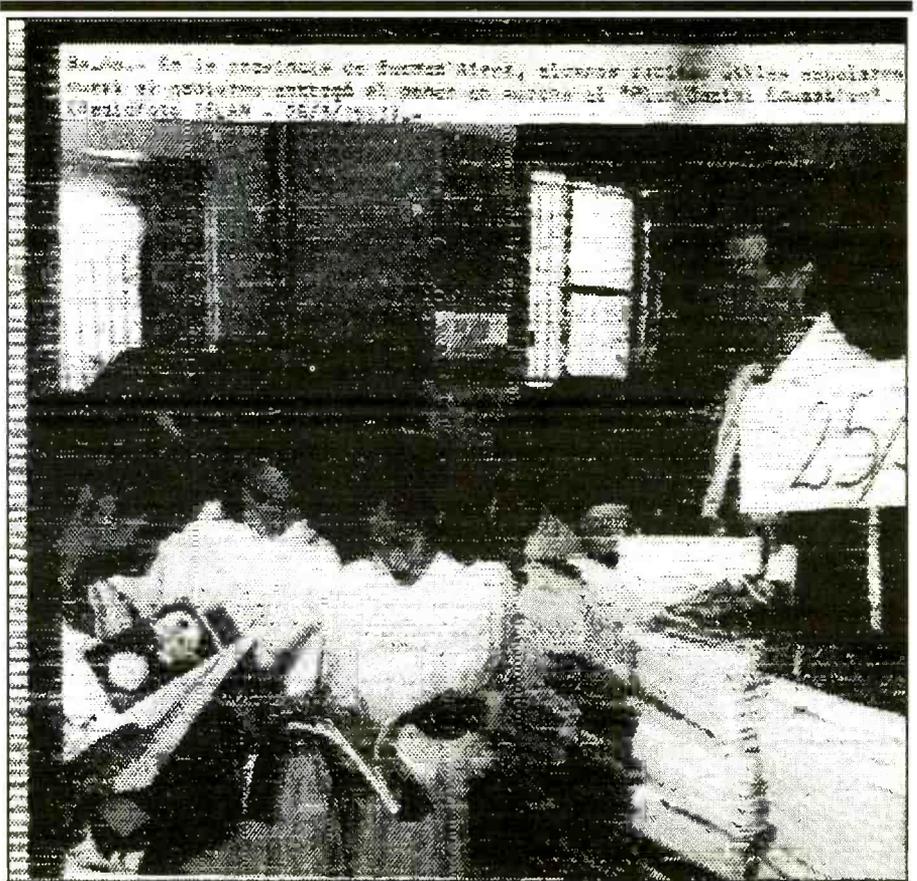
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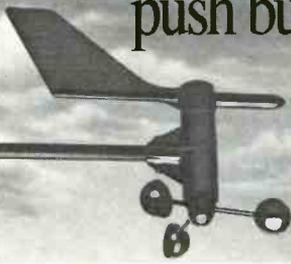
1:30pm-5:30pm, PST: Voice Only
6:00pm-1:00pm, PST: BBS & FAX Only

CIRCLE 56 ON READER SERVICE CARD



POP'COMM readers? (Faxphoto from LRO64, Telam, Buenos Aires, Argentina, was logged by Robert Margolis.)

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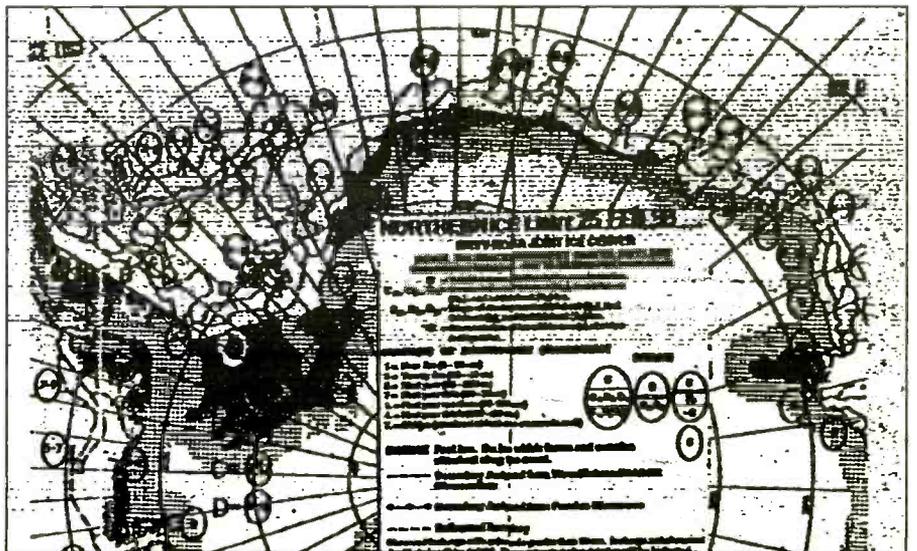
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CIRCLE 60 ON READER SERVICE CARD

entire test was repeated three more times until 1226 UTC, and then some some badly garbled messages containing English words and lots of five-figure groups, possibly coded messages and not coded weather. The station's signal gradually faded away until it blended in with atmospheric noise at around 1310 UTC.

Whozit II: Another unidentified station was heard on 16240.2 kHz at 2002 UTC,

sending 45-baud traffic that contained no recognizable word patterns, just long strings of letters. I suspected this was in an Asian language that didn't use the Latin alphabet. The most frequently used letters that appeared on printouts I made were G,H,M,N,P,Q,W,Y, and Z. Similar type traffic also was seen when this station went to Morse Code on a couple of occasions with messages on 16241.5 kHz.



Northern ice limit chart of ZRO4, Pretoria Meteo, RSA, sent on 18238.0 kHz at 0812, 120/576. (From Robert Hall, RSA)

THIS IS DCF49 TESTING
 THE QUICK BROWN FOX JUMPS OVER THE LAZY DOG 1234567890
 THIS IS DCF49 TESTING
 THE QUICK BROWN FOX JUMPS OVER THE LAZY DOG 1234567890
 THIS IS DCF49 TESTING
 THE QUICK BROWN FOX JUMPS OVER THE LAZY DOG 1234567890
 THIS IS DCF49 TESTING
 THE QUICK BROWN FOX JUMPS OVER THE LAZY DOG 1234567890
 THIS IS DCF49 TESTING
 THE QUICK BROWN FOX JUMPS OVER THE LAZY DOG 1234567890

Test broadcast from Mainflingen, Germany, was monitored by Ary Boender of The Netherlands, on 129.1 kHz at 2230 UTC, 200 baud ASCII.

In the January RTTY column, Robert Hall of South Africa said he wanted to know what RTTY mode displaced the radiofax broadcasts of the Russian Antarctic weather station at Molodezhnaya Base on 18490.2 kHz. He said he experienced difficulties decoding the mode even though his decoder synchronized to ARQ-S4 and spewed out something unintelligible.

Eddy Waters of Australia says he may have the answer: "The station Hall refers to is using Torg 11, which is used by the Russians. I have logged this mode on several different frequencies. The baud rate is 100 and the shift is 500 Hz. The station he refers to transmits weather information in the same format as a normal 850/50 baudot station.

"This one gives weather information for Kerguelen Island, Marion Island and others in that part of the world. Also, weather information from AMMC (World Meteorological Center) in Melbourne, Australia, is given. I have also seen Torg stations broadcasting information regarding GOES satellites."

Stax of Fax Dept.: The radiofax schedule issued daily at 0000 UTC by Naveast-oceanen at Norfolk Naval Base, VA, underwent a redesign that was unveiled around April 1. When I first saw the new design I thought someone had mistakenly sent his grocery store receipt over the airwaves. The type size was very tiny, about 6 point, and reading it was an eyestrain. A magnifying glass was definitely needed. The old schedule measured 6 3/4 inches by 9 1/4 inches, the new one, 2 3/4 inches by 7 inches, making it handier to carry in a wallet—along with the telephone number of an optometrist.

All the weather charts on the redesigned schedule are sent at the same transmission times as they were on the old schedule. Strangely, a typo that has appeared for many years on previous schedules remains uncorrected. On those schedules, which went into effect March 29, 1989, and May 19, 1992, the word "satellite" was misspelled "satellie" at transmission times 1115 and 2315 UTC. I suspect that the misspelling was not caught this time round because apparently the old schedule was scanned into a personal computer and only shrunk in size.

There were many days in April when

the schedule was not sent at 0000 UTC, nor was anything sent in place of it, with the exception of a two panel weather chart on only one day. No explanation was ever given by the Navy for the deviation from the schedule.

Nearly every month I receive a letter from someone telling me of difficulties he has in tuning in RTTY stations while using Advanced Electronic Applications's PK-232MBX Digital Multi-Mode Controller with his computer. Recent writers include Donald Waddell of Illinois and Bob Chase of New Hampshire.

I sympathize with their plights but I cannot be of help because I'm not familiar with that product or most other RTTY/FAX decoders that are computer controlled. I do not have the luxury of trying out all the various decoders that are on the market. While it's an honor to be the first one people turn to when they need help, I'm not the right person. Questions of this nature should be addressed to either the manufacturer or the dealer from whom the product was purchased, if the answers are not found in the manuals.

I will say this about the PK-232MBX, it receives only Morse Code, Baudot, ASCII, Amtor, Packet and Fax. Other RTTY modes mentioned in this column, including ARQ-E, ARQ-E3, ARQ-M2, ARQ-M4, ARQ-S, DUP-ARQ, FEC-A, FEC-S, POL-ARQ, SWED-ARQ, and Torg, for example, are featured with decoders that will cost hundreds, and even thousands of dollars more than the PK-232MBX. If you're new to RTTY monitoring, learn to become proficient with simpler decoders such as the PK-232MBX before you decide to tackle the more difficult modes and invest more money in doing so.

RTTY Intercepts

2832.7: GNK1, Norwich R., England, w/kg an un-ID vessel, ARQ at 2112. (Ary Boender, NLD)

2845.0: PBB, Den Helder Navrad, NLD, w/availability chart, 75 baud at 2108. (Boender, NLD)

2892.3: MTO, Royal Navy, Rosyth, Scotland, w/available channels list at 2106, 75 baud. (Boender, NLD)

5381.5: REYWLC, Guardia Civil, QTH in Spain unknown, w/kg RETWLB, Guardia Civil, Burgos, at 1903, ARQ. (Boender, NLD)

5904.3: AFS, Offutt AFB, Elkhorn, NE, w/KAWN wx data, 75 baud at 0516. (Robert Hall, RSA)

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CIRCLE 52 ON READER SERVICE CARD

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
RYRY	"RYRY . . ." test tape
SS	Spanish
tfc	Traffic
w/	With
wx	Weather

7429.0: Telam. Buenos Aires, Argentina, w/nx in SS, 50 baud at 0248 (Hall, RSA) & at 1018. (Ed.)
7457.0: LRO42. NA. Buenos Aires, Argentina, w/nx in SS at 1021, 75 baud. (Ed.)
7524.1: TYE, ASECNA, Cotonou, Benin, w/test tape at 0242. ARQ-M2/96 (Hall, RSA)
7610.0: 3XA, Conakry Air, Guinea, w/RYRY, 50 baud at 0236. (Hall, RSA)

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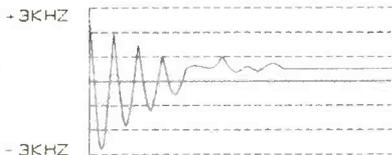
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7626.0: TZH42. ASECNA, Bamako, Mali, w/RYRY, 50 baud at 0129. (Ed.)
8192.0: 9MR, Johor Baharu Navrad, Malaysia, w/RYRY to Lekir at 1050, 75 baud. (Fred Hetherington, FL)
8380.0: 7TGE, Mostefa Ben Boulaid (Algerian liquified gas [nitrogen] carrier), w/Telex in FF at 0320, ARQ. (Ed.)
8415.0: UOV5, the Russian ship Aziya, w/msgs to Nakhodka Radio, ARQ at 0943. (Ed.)
8416.6: NMO, USCG, Honolulu, HI, w/navareas at 0445. FEC. (Hall, RSA)
8428.6: ZSC, Capetown R., RSA, w/high seas & coastal wx, FEC at 0930. (Hall, RSA)
8599.0: MTO, Royal Navy, Rosyth, Scotland, w/availability tape at 0100, 75 baud. (Hetherington, FL)
10106.3: Un-ID French Mil. w/RYR RYR, le bricks, & msg in FF, ARQ-E/72 at 2130. (Hetherington, FL)
10798.2: FUF, French Navy, Fort de France, Martinique, w/5L grps to RFFA, ARQ-E3/96 at 2140. (Ed.)
11069.0: Un-ID w/" +003+003+003 . . ." 0133, 72 baud. (Ed.)
11206.0: LOL, Buenos Aires Navrad, Argentina, w/msgs in SS & 5L grps, 75 baud at 1103. (Ed.)
11241.7: Egyptian Emb., Washington, DC, w/nx in EE & AA, ARQ at 2103. (Ed.)
11330.0: Un-ID North Korean diplo w/5F msg & msg in KK, 50 baud at 0217. (Ed.)
11414.0: "V5G," MFA, Bucharest, Romania, w/tfc in Romanian at 2230, ROU-FEC/164.5. (Eddy Waters, AUS)
11430.0: HMF55, KCNA, Pyongyang, North Korea, w/nx in FF at 2150, 50 baud. (Ed.)
11471.0: SNN299, MFA, Warsaw, Poland, w/msgs in Polish & 5L grps, POL-ARQ at 2245. (Waters, AUS)
11480.8: PWPP, Un-ID Brazilian warship, w/RYRY & SGSG to PWB33, Belem Navrad, Brazil, at 2135, 75 baud. (Ed.)
12207.0: Un-ID w/5L grps at 1547, 100 baud. (Ed.)
12599.5: VAI, Canadian CG, Vancouver, BC, w/wx, FEC at 1920. (Hetherington, FL)
12681.3: Un-ID w/wx rpt in EE covering 41N to 57N, 75 baud at 1100. Ended w/"END TED/TFC.LA" Not seen the same time the foll 2 days. (Hetherington, FL)
12691.3: Un-ID w/wx compiled by CWHF, CWHX, & KWBC, 75 baud at 1130. (Hetherington, FL)
12730.7: GYU, Royal Navy, Gibraltar, w/availability chart, 75 baud at 2000. (Hetherington, FL)
14467.3: DDH8, Pinneberg Meteo, Germany, w/plaintext wx in GG, 50 baud at 1432. (Ed.)
14481.7: RFTJ, French Navy, Dakar, Senegal, w/sports nx in FF at 1539, ARQ-E3/48. (Ed.)
14613.8: RFFDBS, French Army, Mayenne, France, w/"non protege" tfc to RFFA, ARQ at 1402. (Ed.)
14736.5: CLP1, MFA, Havana, Cuba, w/nx in SS & FF, 50 baud at 2058. (Ed.)
14785.0: ATP65, MEA, Delhi, India, w/RYRY & CQ, 50 baud at 1516, foll by nx in EE at 1519. (Ed.)
14814.5: SAM, MFA, Stockholm, Sweden, w/a msg to Rome & 5L grps, SWED-ARQ at 0710. (Waters, AUS)
14824.5: CLP1, MFA, Havana, w/5F grps to India & prensaminrex in EE & FF to N. Korea, Iraq, Yemen, & African embs, 75 baud at 2030. (Ed.)
14915.3: 5KM, Bogota Navrad, Colombia, w/IANTN tfc to ZPK & HDN, 50 baud at 2004. (Ed.)
16016.0: CLP1, MFA, Havana, w/5F msg to Cairo, 50 baud at 2012. (Ed.)
16077.4: FDY, French Air Force, Orleans, France, w/le bricks, 10 count, & RYRY, 50 baud at 1526. (Ed.)
16111.0: HBD20, MFA, Berne, Switzerland, w/5L grps, ARQ at 1212. (Ed.)
17444.8: AFS, Offutt AFB, Elkhorn, NE, w/plaintext wx, 1439-1500, 75 baud. (Ed.)
16073.7: Swedish Emb., Managua, Nicaragua, w/tfc in Swedish, SWED-ARQ at 1356. (Ed.)
16303.7: OMZ, MFA, Prague, Czech Republic, w/tfc in Czech to Bonn & London, 100 baud at 1522. (Ed.)
16385.0: Un-ID w/5F grps, 50 baud at 1346, foll by coded msg in CW. (Ed.)
16814.5: UPB, Provideniya R., Russia, w/a Telex in EE to EVZA, ship Makeevka, FEC at 0016. (Ed.)
18030.0: OMZ, MFA, Prague, Czech Rep., w/nx in Czech, 100 baud at 1148. (Ed.)
18043.0: Un-ID w/5F grps, 75 baud at 1248, foll by s/off in CW at 1253. (Ed.)
18060.8: MTO, Royal Navy, Rosyth, Scotland, w/available channels list at 1256, 75 baud. (Ed.)
18196.0: Un-ID w/5L grps, 75 baud at 1749, ending w/QRU QRU SK SK at 1751. (Ed.)
18242.0: ZRO4, Pretoria Meteo, RSA, w/coded wx, 75 baud at 1300. (Ed.)
18300.0: OMZ, MFA, Prague, Czech Rep., w/diplo tfc in Czech & EE, 100 baud at 1200. (Ed.)
18320.0: OMZ, MFA, Prague, Czech Rep., w/nx in Czech, 100 baud at 1245. Same nxcast as one seen an hour earlier on 18030 kHz. Was foll by 2 5F msg to Washington, DC, emb., & a Telex re UNICEF to New York City consulate. (Ed.)
18450.5: French Emb., Brasilia, Brazil, w/encryption & msg in FF, ARQ-6-90/200 at 1357. (Ed.)
18702.3: DFS70, PIAB, Bonames, Germany, w/nx in SS "fer mittleamerika," FEC-A/96 at 1541. (Ed.)
18755.9: JPA24, Interpol, Tokyo, Japan, w/tfc in EE re found opium, ARQ at 0830. (Hall, RSA)
19022.5: PWX33, Brasilia Navrad, Brazil, w/RYRY, SGSG, 1234567890, & 0987654321, 75 baud at 1917. (Ed.)
19026.5: PWX33 w/merchant ship report to CXR, 75 baud at 1930. (Ed.)
19074.5: CLP1, MFA, Havana, Cuba, w/5F msg at 1826, 50 baud. (Ed.)
19194.3: CLP1, MFA, Havana, w/circulars in FF & SS at 2045, 50 baud. (Hetherington, FL)
19196.7: Gough Island Meteo, Tristan da Cunha, w/personal 2: way chitchat on mark tone only, ARQ-M2/96 at 1640. (Hall, RSA)
19197.3: Un-ID, probably an RSA offshore wx sta. (Gough Island or Marion, or ???), heard at 1159, ARQ-M2/96. (Hall, RSA)
19200.3: 9BC32, IRNA, Teheran, Iran, w/nx in EE, 50 baud at 1135. (Hall, RSA)
19226.5: German Emb., Windhoek, Namibia, w/crypto to MFA, Bonn, ARQ-E/96 at 1108. (Hall, RSA)
19635.0: "P6Z," MFA, Paris, France, w/5L grps to "G8T," "L4N," & "D2T," 100 baud at 1345. (Hetherington, FL)
19756.7: MFA, Jakarta, Indonesia, w/tfc to Damascus, Syria; and Riyadh & Jeddah, Saudi Arabia, ARQ-S6/96 at 1048. (Ed.)
19812.0: HGX21, MFA, Budapest, Hungary, w/coded msg, DUP-ARQ at 1100. (Waters, AUS)
19932.0: "MNG," French Emb., Managua, Nicaragua, w/msgs at 1641, ARQ-6-90/20. RFGW, MFA, Paris, w/5L grps to Latin American embs at 1725. (Ed.)
20553.9: Un-ID French Mil., idling 1308-1452, then a brief msg re code words "exercice Sea Turtle (Oman)." & "exercice Maple Flag (Canada)." ARQ-E/72. Circuit ID was LXI. Anyone know whozit? (Ed.)
20616.0: OMZ, MFA, Prague, Czech Republic, w/nx in Czech at 1400, 100 baud. (Hetherington, FL)
22014.0: CLP4, Cuban Emb., Bissau, Guinea-Bissau, w/5L grps to Burkina Faso & Havana, 50 baud at 1545. (Hetherington, FL)
22348.5: Un-ID, Manila, Philippines, w/nx in EE at 1507, ARQ. Ended 1518 w/"ok pre nil na muna ako maligo kn na athintay ka na damahal mo a Imbas. (pause) OK C U bukas bibi brk." (Hetherington, FL)
23103.5: Un-ID Yugoslav diplo w/crypto after LCLCLC..., 75 baud at 1610. Moved to 23079.0 kHz at 1612 & continued xmsn until 1619. (Ed.)
23358.6: RFFA, Mindefense, Paris, France, w/5L grps to Cayenne, French Guiana, ARQ-E/96 at ??? (Hetherington, FL)
23623.0: Moscow Meteo, Russia, w/coded wx, Torg-11/100 at 0800. (Waters, AUS)
23691.8: DGX69, MFA, Bonn, Germany, w/world nx in GG at 1235, FEC-A/96. (Hetherington, FL)
25238.0: HBD20, MFA, Berne, Switzerland, w/nx briefs in GG at 1445, ARQ, foll by 5L grps at 1504. (Hetherington, FL)

LISTENING POST

BY GERRY L. DEXTER

WHAT'S HAPPENING: INTERNATIONAL SHORTWAVE BROADCASTING BANDS

The Russian, ex-Soviet radio scene continues to produce changes that are unexpected, to say the least. The latest is the rumor that Radio Moscow International may be taken over by Russian Radio and Television—the Russian state broadcasting origination. In itself, that seems like no big deal. But if it happens (and it may have by the time you read this) the Radio Moscow we've known and loved over the years will be renamed "The Russian Wave." Like that TV commercial where Shakespeare has several false starts before coming up with "wherefore art thou, Romeo?"—"The Russian Wave" just hasn't got the right ring to it!

A "Radio Bosnia-Herzegovina" program is being carried on WHRI-7315 on Saturday evenings (Sunday UTC) at 0100. The first fifteen minutes or so are in English. It's unclear whether there's much connection, if any, with the real Radio Bosnia-Herzegovina.

Slovak Radio now has an English broadcast directed specifically at North American listeners. It airs at 0000 on 5930 and 9580, using transmitters of the former Czechoslovakia. The station can be addressed at Mytna 1, 81290, Bratislava, Slovakia.

One of the rarest countries on the shortwave broadcast bands is active again. Radio Comoro in the Comoros Islands has reportedly reactivated on 3330. It was heard by a European DX'er running to 2100 sign off: a time at which it is highly unlikely to be heard here. It's also scheduled to sign on at 0300.

The new Voice of America relay facility at Tangier, Morocco may very well be active by now. Once it is fully operational

the site will use a total of ten 500 kW transmitters. The old Tangier relay facility will be closed once the new one is completely operational.

Broadcasts have resumed from CKFX, Vancouver, which relays mediumwaver CKWX on 6080. CKFX shortwave has been on the air since the early 1940's and has operated continuously until the ten watt transmitter broke down several months ago.

The new Dominican Republic station on 6205, once believed to be ID'ing as "Radio Estrella" is actually ID'ing as Radio Quisqueya.

Summer's a good time to be checking for Radio Cook Islands.

There'd been some doubt about the status of the station but it is, indeed active on 11760, running until 1000. Make enough late night checks and you may very well turn this one up. It's one of the few Pacific island stations of the Radio Tahiti genre left which airs its own island programming.

We've just had word that WWCR shortwave was destroyed in a fire on April 4th. Both active transmitters plus the third, which was about to go into service, were lost. The studios, offices and the building which housed everything burned to the ground. The cause of the fire and a damage amount weren't available at this writing. Only a studio operator and a minister were at the station when the fire broke out about 1:30 in the morning. A WWCR spokesman said the building's sprinkler system failed to operate.

SOME NOTES FROM CENTRAL AMERICA: Dr. Adrian Peterson of Indiana toured Central America early this year and sent us some notes on the shortwave scene there:

TIFC in Costa Rica was in the process of finishing a new transmitter site at Heredia, near San Jose. TGNA is putting a new AM transmitter on the air near Guatemala City and the old one will be modified for shortwave use, perhaps for the 31 meter band, which TGNA used years ago.

AWR Latin America has five transmitters active at its Cahuita site on Costa Rica's Atlantic coast, a facility that was once owned by the infamous Radio Impacto. Shortwave outlets on 9722.5 and 13750 are based here, AWR's 5 kW transmitter at Alajuela is to be moved to the AWR Guatemala site, which currently has a 10 kw (which is operating at only about 3 kW) transmitter on 5980.

Thanks to Dr. Peterson for this info from on-the-scene!

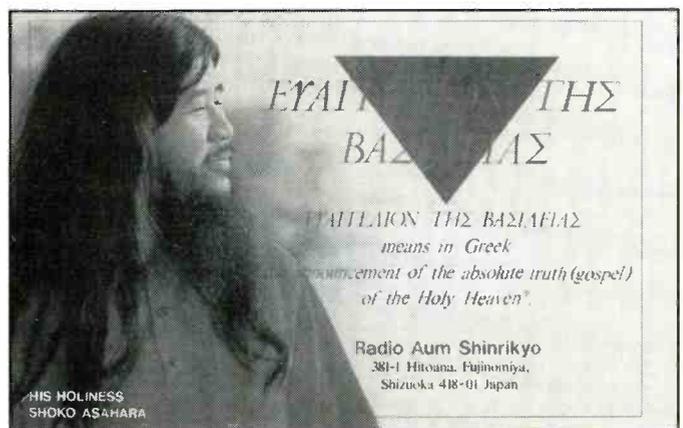
CLUB LIST: The Association of North American Radio Clubs has produced a new listing of its member clubs, 18 of them in all, covering everything from longwave to shortwave listening to scanning. The list is a great way to find out what clubs are out there, their specialties and costs. You can get a copy by sending a self-addressed, stamped envelope with your request to: ANARC Club List, 2216 Burkey Drive, Wyomissing, PA 19610.

LISTENING POST GET TOGETHER: Yours truly will hold a get-together for *Listening Post* readers and reporters at the upcoming PopCom Worldwide SWL Conference at Virginia Beach this October. We'll talk about shortwave broadcast listening and DX'ing, try and answer any questions you may have and just get to meet each other! Hope you're planning to be there!

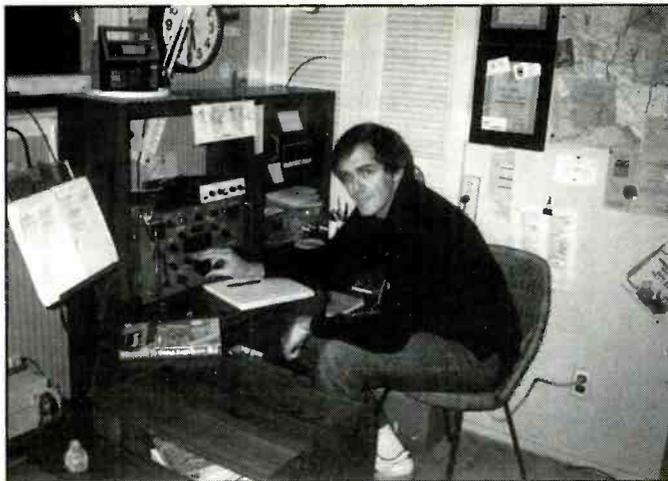
Keep those letters coming! We wel-



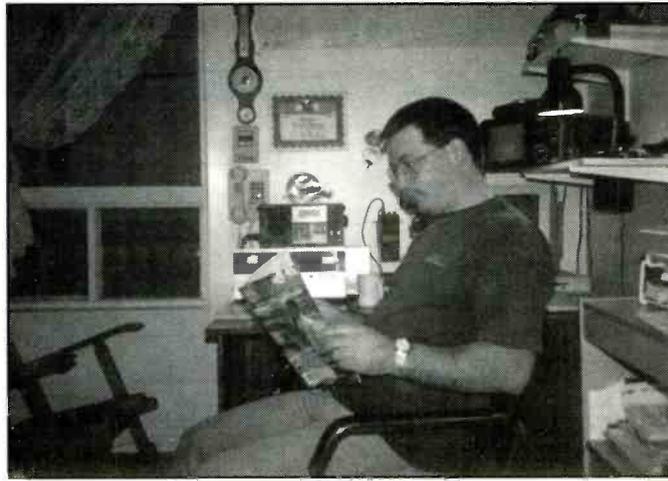
This Radio Canada 35th anniversary commemorative QSL is in the collection of Errol Urbelis, New York.



Radio Aum Shinrikyo, produced in Japan, is one of many stations and program services now broadcast via Radio Moscow transmitters. Thanks to Sheldon Crook, Guam.



Here's Elliot Straus in his New Jersey shack, doing some DX'ing with what looks like one of those great old R390 receivers.



Paul-Guy Raymond of Quebec monitors using a Realistic DX 440 and DX-160. The shack also contains two Realistic scanners and a computer.

come your loggings, spare QSL's, program schedules, station information and what have you.

Shack photos are always sought, too. Logs should be by country, be double spaced (at a minimum) and must include your last name and state abbreviation after each item. We cannot use reports which don't follow those three simple rules!

Here are this month's logs. All times are in UTC. Broadcast language is assumed to be English unless specified otherwise - (SS = Spanish, RR = Russian, FF = French, etc.)

SWBC Loggings

Alaska: KNLS 7365 at 0826 with religious music. (Dokulil, CA)

Albania: Radio Tirana. 9670//11745 at 0116 in Albanian. (Moser, PA)

Algeria: Radio Algiers, 15205 at 2200 with Arabic music. (Urbelis, NY)

Antigua: BBC relay. 5975 at 0316. (Low, TX) 6175 at 0301. (Sooy, NJ) 9640 at 0709. (Dokulil, CA) Deutsche Welle relay, 6075 at 0612 and 9670 at 0515. (Mullican, TX) 6160 at 0902 in EE and 2000 sign on in GG on 17810. (Dokulil, CA) 9545 at 0315. (Low, TX)

Argentina: RAE, 11710 with ID in several languages at 1100. (Mullican, TX) 0218 with UN news. (Moser, PA)

Ascension Island: VOA relay, 21490 at 2144. (Foss, AK)

BBC relay, 6005 at 0204. (Moser, CA) 15260 at 0045, 15400 at 1735, 17880 at 2003. (Dokulil, CA)

Australia: Radio Australia, 5985//9580 at 0906. (Mullican, TX) 5995 at 1420. (Zamora, CA) 6020 at 0822, 7240 at 0831, 9710 at 0810, 11910 at 1908. (Dokulil, CA) 9580 at 0800. (Shipiro, CA) 11720//15240 at 0254. (Vaage, CA) 11800 at 1548. (Jensen, IA) 15240 at 0610. (Badie, AZ) 21525 at 0600. (Crook, Guam) 21740 at 2256. (Low, TX) ABC Radio, 4920 at 1920. (Crook, Guam) 1145. (Straus, NJ)

Austria: Radio Austria Int'l, 6015, via Canada at 0533. (Sooy, NJ) 9870 at 0330. (Dokulil, CA) Here and 9875 at 0136. (Gentry, IL) 13730//17730 at 1231. (Moser, PA)

Belgium: Radio Vlanderen Int'l, 5900//11695 at 0730. (Moser, PA) 9930 at 0034. (Dokulil, CA)

Bolivia: Radio San Miguel, 4925.4 at 1000 in SS

with time checks, music. (Straus, NJ) (Take care looking for this one - a number of Latin stations active in this frequency area lately. Editor)

Botswana: Radio Botswana, 4830 at 2155 to 2200 sign off with religious talk, prayer and off. (Straus, NJ) 4830//7255 at 0245 with IS. anthem to sign on jst before 0300. (Moser, PA)

VOA relay, 7265 at 0245 with opening of Somali program. Also 12808 at 2138 in Hausa to 2159 sign off. (Lamb, NY) 15495 at 2108. (Vaage, CA) 15600 at 0504. (Foss, AK)

Brazil: Radio Bandeirantes, 9645 at 0357 in PP with ID, jingle. (Lamb, NY)

Radio Universo, 9565 at 0407 in EE with folk music, "Universo Network." (Lamb, NY)

Radio Cultural do Para, 5045 at 0845 in PP with talk, cock crows, time checks. (Straus, NJ)

Radio Nacional/RadioBras, 15445 at 1239; 1256. (Moser, PA; Gentry, IL)

Bulgaria: Radio Sofia, 7290 at 0400 with announcement, interval signal, schedule. (Low, TX) 9560//11720 at 1843. (Moser, PA) 9700 at 0125. (Gentry, IL)

Canada: Radio Canada Int'l, 5960 at 0059. (Marx, OH) 9535 at 0222, 9755 at 0100, 11940 in FF at 0014, 15260 in FF at 1938, 17820 at 1708 and 17875 at 2000. (Dokulil, CA) 11705 at 2205 via Japan. (Crook, Guam) 11880//15150//17820 at 2130 sign on. (Zamora, CA) 11945 at 2006. (Moser, PA) 13820 at 2016. (Jensen, IA)

CBC on 9625 at 1605. (Marx, OH)

Radio Korea via Sackville on 9650 at 1154. (Moser, PA)

BBC via Sackville at 1720 on 15260. (Dokulil, CA) CIQX/CIQC on 6005 at 0602. (Mullican, TX)

CFRX, 6070 at 2348 with CRFB relay. (Jensen, IA)

China: China Radio Int'l, 9770, via Mali, 0029. (Jensen, IA) 11680 (via French Guiana) at 0400. (Badie, AZ) 11715, via Mali at 0007. (Dokulil, CA) 11755 at 1000 in Tibetan and 11795 at 1200. (Crook, Guam) 17735 at 1503. (Moser, PA)

Sichuan People's Broadcasting Service, 6060 at 1403 in CC. (Low, TX)

CPBS-1, 7440 in CC at 1340. (Northrup, CA)

Taiwan Two service, 9170 at 1320 in CC. (Northrup, MO)

Colombia: Radio Nacional, 9655 at 0311 in SS with "Musica del Caribe". Off at 0340. (Lamb, NY)

La Voz del Cinaruco, 4865 at 0400 with SS ID. (Mullican, TX) 0548 in SS. (Low, TX)

Caracol, 5075 in SS at 0518. (Sooy, NY) 0835. (Dokulil, CA)

Costa Rica: Radio For Peace Int'l, 7375 and 7385USB at 0320. (Gentry, IL) 7375 at 1004. (Mullican, TX)

Adventist World Radio, 11870 with news at 0001. (Vaage, CA)

Croatia: Croatian Radio, 13830 at 2204 with four minute EE news segment. (Straus, NJ)

Cuba: Radio Havana Cuba, 6010 at 0306, 9510 at 0537, 9651 at 0400 sign on. (Sooy, NJ) 9655 at 0208. (Gentry, IL) 11760 at 0440. (Seefeldt, WI) 15165 at 2127. (Marx, OH)

Radio Rebelde, 5025 in SS at 2319. (Low, TX)

Cyprus: BBC relay, 11955 at 0231. (Lamb, NY)

Cyprus Broadcasting Corp. via BBC relay facility, 9770 at 2215 with IS. man with Greek ID, dramatic program, song and sign off. BBC runs to 2214. (Robertson, MS) (Weekends only, editor)

Czech Republic: Radio Prague, 7345 at 0320, 0400. (Moser, PA; Sooy, NJ)

Denmark: Radio Denmark via Radio Norway, 9565 at 0330 sign on with EE ID, into DD to close at 0358. (Vaage, CA) 15220 and 17730 at 1930 with EE ID. into DD. (Gentry, IL)

Ecuador: HCJB, 6205 with ID at 0601, 11925 at 0512. (Mullican, TX) 9745 at 0110. (Seefeldt, WI) 15155 at 0034 and 15250 at 2330. (Dokulil, CA) 17790 at 1653. (Moser, PA)

Egypt: Radio Cairo, 9475 at 0205. (Gentry, IL; Sooy, NJ) 9900 at 2204. (Moser, PA) 17745 at 1724 in AA. (Dokulil, CA)

England: BBC, 5975 (via Antigua) at 0544. (Badie, AZ) 7325 at 0337. (Marx, OH) 9640 (Antigua) at 0545. (Sooy, NJ) 9515 (via Canada) at 1318, 15070 at 0815. (Foss, AK) 15260 (Ascension) at 0014 and 17840 (Antigua) at 1610. (Jensen, IA) 15360 (Singapore) at 0700. (Crook, Guam)

Equatorial Guinea: Radio Africa, 7190 at 0545 with religious program, ID 0556. (Robertson, MS)

Finland: Radio Finland Int'l, 15400 at 1355; 1450. (Gentry, IL; Badie, AZ)

France: Radio France Int'l, 11670//21645 at 1233. (Moser, PA) 15215 via Japan at 1020. (Crook, Guam) 17620 at 1600. (Gentry, IL; Low, TX)

French Guiana: Radio Japan relay, 15325 at 0324. (Moser, PA)

Gabon: Africa Number One, 17630 at 1450 in FF. (Pappas, ND)

Germany: Deutsche Welle, 6025 in AA, GG at 0400, 6085 (via Canada) at 0320, 7275 at 0425 and 9735 at 0210. (Sooy, NJ) 6145 at 0148 sign off. (Marx, OH) 9565 at 0110 and 15135 in GG at 1715. (Dokulil, CA) 13780 at 0717 in GG. (Foss, AK) 15270//15410 at 1030 in GG. (Vaage, CA) 15595 at 1600 sign on. (Zamora, CA) 17765 at 1106. (Moser, PA) 21680 at 0920. (Crook, Guam)

Guyana: GBC, 4915 at 0535 in unidentified language, then into EE news. (Sooy, NJ) 0615 with news, ID. (Gentry, IL)

Greece: Voice of Greece, 9375//9420 at 0330.



Here's another of Radio Korea's colorful QSL's, courtesy of Sheldon Crook in Guam.

9420 at 0132, ID. (Marx, OH) (Gentry, IL) 9395 at 0340. (Seefeldt, WI) 9425. 2330 news and off 2345. (Straus, NJ) 15635//17515 at 1237. (Moser, PA)

Guam: Adventist World Radio/KSDA, 15610 at 0000 with religion. (Crook, Guam)

Guatemala: Radio Cultural, 3300 at 0303 with ID, frequency, religious program. (Badie, AZ) 0314. (Gentry, IL)

Radio K'ekchi. 4844.3 at 0110 in SS with religious program, ID at 0132. (Robertson, MS)

Hawaii: WWVH time station, 5000 with time signals by woman at 1117. (Moser, PA) 10000 at 0429; 0600. (Marx, OH; Seefeldt, WI)

Hungary: Radio Budapest, 9835 at 0319. (Moser, PA) Here and 11910 at 0305. (Gentry, IL)

Iceland: Icelandic National Broadcasting, 15770 in Icelandic at 1400 to 1430 with news, weather, local announcements. (Urbelis, NY)

India: All India Radio, 7412 at 1335 in unidentified language. (Northrup, MO) 11620 with ID at 1800. news. (Dokulil, CA) 1837. (Moser, PA)

Iraq: Radio Iraq Int'l. 11860 at 0354 in EE with music, news, comment. Into AA at 0414. (Lamb, NY)

Israel: Kol Israel, 9545 at 2005 with news. (Moser, PA) 0501 with news. (Sooy, NJ)

Italy: RAI domestic service on 7705USB in II at 0425 with "Notturmo Italiano" program, "Radio Due" ID, news, IS, pops, opera. Also at 0000 with news in II. EE, FF, GG. (Lamb, NY)

RAI. 15245 at 0053 in II with news, IDs. EZL music, IS. Into SS at 0100. 15385//17780 at 1740 in II to Africa. Off with bird IS at 1748. (Lamb, NY) 11800 at 0119 sign off. (Gentry, IL)

Japan: Radio Japan, 5960, via Canada, at 0346. (Marx, OH)

9535 at 1430. (Northrup, MO) 11815 at 2125, 15170 at 0710 with a phone interview with me. 17860 at 0700 and 21610 at 0515. (Crook, Guam) 15195 at 2105. (Vaage, CA) 15230 at 0530. (Shipiro, CA) 17810//17825 at 0302. (Lamb, NY)

Radio Tampa, 3945 at 0839 in JJ with domestic news. (Dokulil, CA)

Kuwait: Radio Kuwait, 13620 at 2033. (Vaage, CA) 15495 at 2217. mix with VOA, definite ID, AA music. (Urbelis, NY) 21675 at 1436 in AA. (Moser, PA)

Latvia: Radio Riga, 5935 at 2130 with news. Into GG at 2135. (Straus, NJ)

Lebanon: Wings of Hope at 1258 with "Revival Time", ID 1300. (Pappas, SD) 0150 to 0200 sign off with Gene Scott. (Straus, NJ)

Lesotho: Lesotho National Broadcasting Service, 4800 at 0357 in Sesotho with news, ID by woman at 0400. (Robertson, MS)

Libya: Radio Jamahiriya, 15235 in AA at 2100 to 2200. (Urbelis, NY)

Lithuania: Radio Vilnius, 7150 at 0010 with news and sports to 0030 close. (Straus, NJ)

Luxembourg: Radio Luxembourg, 15350 at 2015 in GG with DJ and US oldies, commercials, IDs. (Urbelis, NY)

Madagascar: Radio Netherlands relay, 9895//15150 at 1504. (Moser, PA)

Malta: Deutsche Welle relay, 9565 at 0101. (Moser, PA)

Monaco: Trans World Radio, 9480 at 0742 with discussion. (Moser, PA)

Mauritania: ORTM, 4845 at 0735 with news in FF and tribal languages. Also at 2250 with AA. (Robertson, MS)

Namibia: Namibian Broadcasting Corp., 3270 at 0428 in unidentified language, religious music, ID 0445. (Robertson, MS)

Netherlands: Radio Netherlands, 6020 at 0317. (Low, TX) 11655 (via Madagascar) at 0040, 11835 at 0105 (Dokulil, CA) 13700 at 2209. (Foss, AK) 21515 at 1900. (Shipiro, CA)

Netherlands Antilles: Radio Netherlands relay, 6165 at 0030. (Marx, OH) 9630 at 0758 and 21590 at 1915. (Dokulil, CA) 9715 at 0550. (Sooy, NJ) 15315 at 2300 in GG. (Vaage, CA)

New Zealand: Radio New Zealand Int'l, 9700 with Bellbird IS, ID, news at 0700. (Mullican, TX) 1055 with promos, frequencies, relays. (Straus, NJ) 15120 at 1930 and 17770 at 0343. (Dokulil, CA)

BBC via Radio New Zealand, 9700, 1100-1130 daily. (Urbelis, NY)

Nigeria: Voice of Nigeria, 7255 at 0500. (Shipiro, CA) 0531 with news of Nigeria. (Moser, PA) 0630 with news. (Mullican, TX)

North Korea: Radio Pyongyang, 6576 at 1107, news items against the South. (Moser, PA) 9977 at 1100. (Crook, Guam) 11335 at 0025 with ID. (Gentry, IL) 13650 at 0000. (Dokulil, CA)

Northern Marianas: KFBS, 9495 at 1115 in CC. (Crook, Guam)

KHBI/Christian Science Monitor World Service, 15665 at 1807. (Dokulil, CA) 17865 at 0204. (Lamb, NY)

Norway: Radio Norway Int'l, 9565 in NN to EE ID at 0329 sign off. (Vaage, CA) 15320 at 1615. Into NN at 1630. (Sooy, NJ)

Oman: BBC relay, 9590 at 2347. (Dokulil, CA)

Pakistan: Radio Pakistan, 9418 and 11570 at 1700 with news, commentary, Urdu music, Koran. (Urbelis, NY) 11570 at 1737. (Dokulil, CA)

Palau: Voice of Hope Asia, 9830 at 0802 with religious program in Mandarin. (Crook, Guam)

Papua New Guinea: NBC, Port Moresby, presumed, 4890 at 1215 in unidentified language, possible ID, local music, fade. (Lamb, NY)

Radio Western Highlands, tentative, 3375 at 1204 in unidentified language with talks, rock and country in local language. (Lamb, NY)

Radio Northern, presumed, 3345 at 1121 in unidentified language with talks, possible ID, country, local music. (Lamb, NY)

Radio Sandau, 3205 at 2000. (Crook, Guam) (Don't bother to check for this in North America at this hour! Editor)

Peru: Radio Andina, 4995.8 at 1020 with Peruvian topics, SS talks, time checks. (Straus, NJ)

Radio Tropical, 4935 at 1030 with "Tropical" IDs, time checks, SS talks and music. (Straus, NJ)

Philippines: Radio Pilipinas, 15190 at 1745 with news. (Dokulil, CA)

Radio Veritas, 11790 at 1055 in Vietnamese. (Crook, Guam)

FEBC, 11690 at 0920 with "Computer Corner." (Seefeldt, WI) 11995 at 1415 with news, request for letters. (Straus, NJ)

VOA relay, 15155 at 1254. (Moser, PA) 17820 at 2219; 2254. (Vaage, CA; Lamb, NY)

Poland: Polis Radio Warsaw, 11840 at 1600 sign on, schedule, "News From Poland" (Moser, PA)

MFJ SHORTWAVE ACCESSORIES REMOTE ACTIVE ANTENNA

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CIRCLE 72 ON READER SERVICE CARD

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/iou
SA	South America/n
SS	Spanish
UTC	Coordinated Universal Time (ex-GMT)
v	Frequency varies
w/	With
WX	Weather
YL	Female
//	Parallel Frequencies

Portugal: Radio Portugal Int'l. 9570//9705 at 0245. (Marx, OH) 11740//17900 (new)//21655 at 1938 in PP with IDs, sports, disco, marches, soccer game, anthem and off 2101. (Lamb, NY) 21515 at 1539 in PP. (Moser, PA)

Romania: Radio Romania Int'l. 9690 at 1945 with "Romanian Itinerary." (Moser, PA)

Russia: Radio Moscow, 5905 at 0656. 5960 at 0816. 7175 at 0631, 7270 at 0631. (Dokulil, CA) 9615 at 0515. (Marx, OH) 9620 at 0520. (Sooy, NJ) 12020 at 1232. (Moser, PA) 12050 at 0358. (Vaage, CA) 17690 at 2146. (Zamora, CA)

Radio Aum Shinriyko, Japan, via Russia, 9685 at 2030-2058 followed by Radio Moscow. (Urbelis, NY) Yakutsk Radio, Yakutsk. 7200 at 0714 in RR. (Foss, AK)

Petropavlovsk Radio, 4485 in RR at 0748. (Foss, AK)

Golos Rossii. 17665//17770 at 0053 in RR with baroque and jazz. ID, IS, anthem, news. (Lamb, NY) Radio Netherlands via Irkutsk, 9860 at 1203 in Indonesian. (Lamb, NY)

Radio Vedo. 13710 at 1510 in RR. (Low, TX) Rwanda: Deutsche Welle relay. 17800 at 1100. (Moser, PA)

Saudi Arabia: BSKSA, 9870 at 1759 in AA with local music, ID, anthem, news. (Lamb, NY)

Seychelles: BBC relay, 15420 at 0330 "This Week in Africa." (Urbelis, NY) 1204. (Moser, PA)

Sierra Leone: SIBS, 3316 at 2215 to 2258 sign off, EE news, vocals. (Straus, NJ)

Singapore: BBC relay, 9740 at 1525. (Zamora, CA) 15280 at 0212. (Lamb, NY) 15380 at 0206. (Moser, PA)

South Africa: Channel Africa, 7270//15430 at 0432. 11800 at 0443 in FF. 11900//15440 at 1755 sign on with IS, ID, into FF. (Lamb, NY) 15430 at 0525. (Gentry, IL)

Radio Suid Africa, 4810 at 0336 in Afrikaans. (Lamb, NY)

South Korea: Radio Korea, 9570 to 1500 off. (Zamora, CA) 9750 at 1215. (Moser, PA) 11945 at 0625. (Crook, Guam) 15155 at 0645. (Foss, AK) 15575 at 1945 in GG; 0100 in EE. (Dokulil, CA; Straus, NJ)

Spain: Spanish Foreign Radio, 6055 at 0313. (Sooy, NJ) 9530 at 0000; 0515. (Dokulil, CA; Seefeldt, WI)

Sri Lanka: SLBC on 9720 at 2000. (Moser, PA) VOA relay, 11705 at 0147, 15250 at 0118. (Lamb, NY)

Sudan: Radio National Unity, 9165 at 1500 with time pips (running about 20 seconds late) news, frequent IDs, peace announcements. Islamic meditations. (Zamora, CA)

Swaziland: Trans World Radio, 11740 at 0430 with EE sign on, program list, religious program. (Robertson, MS)

Sweden: Radio Sweden, 9695 at 0205. (Gentry, IL) 11705 at 0200 sign on. (Moser, PA)

Switzerland: Swiss Radio Int'l. 6135 at 0154. (Marx, OH) 6165 at 0700, 9650 at 0117, 17630 at 0018 and 17635 at 1719. (Dokulil, CA) 7480 at 1335 via China. (Northrup, MO) 9885 at 0027. (Jensen, IA) 21490 at 1520. (Moser, PA)

Syria: Radio Damascus, 12085 at 2009. (Moser, PA) 12085//15095 at 2120 with news. (Straus, NJ)

Tahiti: Radio Tahiti, 11827//15175 (ex 15171) at 0300 in FF with ID, news, into TT with drums and news at 0304. (Lamb, NY) 0220 with music, comments in FF. (Badie, AZ)

Taiwan: Voice of Free China, 5950 at 0330. (Seefeldt, WI) 9680 at 0300. (Marx, OH) 9730 at 2300 in CC. (Crook, Guam)

Voice of Asia, 9280 at 0800-0930 in CC with CC pops. talk. (Urbelis, NY)

Thailand: Radio Thailand (extremely tentative) 9540 at 1200 with ID that sounded like "This is Thai Radio" and into Asian language. (Moser, PA)

VOA Relay, 9680 at 1538 with CC to 1700 close. (Zamora, CA)

Togo: Rdf. Togolaise, 5047 at 0525 with chime IS to sign on, FF. (Moser, PA)

Turkey: Voice of Turkey, 9445 at 2301; 0430. (Moser, PA; Gentry, IL)

Tunisia: Radio Television Tunisienne, 7475 at 0415 in AA, //12005. (Sooy, NJ)

Ukraine: Radio Ukraine Int'l. 4825 at 0130 with "Ukrainian Diary." (Straus, NJ) 9860//11960 at 2209 and 17690 at 0104. (Moser, PA)

United Arab Emirates: UAE Radio, Dubai, 13675 at 1345; 1605. (Straus, NJ; Gentry, IL) 21605 at 1330; 1604. (Robertson, MS; Sooy, NJ)

UAE Radio, Abu Dhabi, 11710 at 2305 with news, ID. (Gentry, IL) 11975 and 11985 at 2200 with AA music, ID. (Urbelis, NY) 21510 at 0710 with Koran. (Crook, Guam)

United States: KCBI, 9815 at 0254 with test tones, ID 0300, open carrier. (Lamb, NY) KJES, Texas, 7510 at 0419. (Sooy, NJ)

Uzbekistan: Radio Tashkent, 15470 at 1331 with quiz, world news. (Moser, PA) 1215 to 1228 sign off in EE. (Straus, NJ)

Vatican: Vatican Radio, 6095//7305 at 0255. 6185 at 0509 in Romanian, 6245 at 0604, new 7310 at 2310, new 9695 and new 11625 at 0459 with IS, ID. (Lamb, NY) 7250 at 0601. (Gentry, IL)

7305 at 0300, 15090 at 1736. (Dokulil, CA) 7310 at 2245, 9600 at 2255. (Crook, Guam) 9660 at 0800. (Urbelis, NY)

Vietnam: Voice of Vietnam, 15010 at 1316 in FF. (Gentry, IL)

Yemen: Yemen Radio TV on 7190 at 0325 with music, man in EE, ID at 0330. (Moser, PA)

Yugoslavia: Radio Yugoslavia, 7200 at 2200 with news, sports. (Straus, NJ) 9505 at 2202 with Balkan news. This transmitter is in Bosnia. (Moser, PA) 9580 at 0117 with ID, news about Yugoslavia. (Gentry, IL)

And that's a wrap. A king size serving of thanks to the following reporters this month:

Scott Gentry, Matteson, IL; Brad D. Low, Jacksvonville, TX; Sheldon Crook, Dededo, Guam; Paul Jensen, Mason City, IA; Tom Robertson, New Albany, MS; Mark A. Northrup, Gladstone, MO; Jeff Seefeldt, Wausau, WI; Marina Pappas, Huron, SD; John Marx, Parma, OH; Bjorn F. Vaage, Granada Hills, CA; Elliot Strauss, NJ; Cliff Mullican, Ferris, TX; Kenneth G. Sooy, Sr., Oceanville, NJ; Larry R. Zamora, Highland, CA; William Moser, New Cumberland, PA; Marie Lamb, Brewerton, NY; Marty Foss, Pitkas Point, AK; Don Shipiro, Culver City, CA; Clark R. Badie, Glendale, AZ and Errol Urbelis, Kings Park, NY.

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

COMMUNICATIONS CONFIDENTIAL

YOUR GUIDE TO SHORTWAVE "UTILITY" STATIONS

In the April column I couldn't answer the question raised by Corey Soderland, RI, regarding the term, "CONSOLAN TUK." Well, one of our readers did come through. Perry Crabill, VA promptly advised me to check the September 1990 *POP'COMM* for an article by Ralph C. Craig that described a 1950 air navigation system which provided assistance in tracking and identifying aircrafts.

I also had received a letter from the author of the article and I offer my most humble apology to him for failing to recall his fine article.

I must confess to another boo-boo on my part and that concerns the May 1993 column where I neglected to give credit to John Vylasek, VA for the photo of the USCG Cape Henry Light Station (Beacon CB, 292 kHz.). Sorry, John.

A nice letter was received from David Sabo in South Korea. Here are some excerpts from his letter. "I know it's been a long time since I have sent in any items but things have kept me pretty busy. I've moved and am back in Korea again.

My interest in SWL'ing and radios in general has been up and down over the past year or so. Got interested in computers for a while, although I never completely lost interest in SWL'ing. I did some QSL'ing since coming overseas, and have had moderate success.

I got bit by the SWL bug again about a month ago, and have been spinning the dial ever since. Listening conditions at my present location are abysmal. Nothing at all like the primo reception I had back in California. I'm right in the middle of Seoul and within two miles of Seoul Tower, the source of most of the radio and TV broadcasting here in the capital. Sometimes the QRM is too much for my R-5000. On top of that, living in an apartment imposes some severe limitations on setting up an antenna. The only good thing is that I'm on the 13th floor. I've tried various setups since moving into the apartment, and was even using a window screen as an antenna. Lately I've taken to just throwing a length of wire out the window at night and letting it hang down as far as nobody will notice. It means I only have about 10 or 15 feet of antenna but it's better than anything else I've tried. It is a "random" antenna in every sense of the word!"

Tom Severt in England wrote, "I am kicking myself for not listening to the trans-Atlantic air traffic control freqs when the German airliner was hijacked to New York."

Another source of details on air emergencies can be the frequencies used for air-



View of the NDB at Front Range Airport, Denver, CO. The ID is FT (ex-FTG) and it is now a L.O.M. operating on 321 kHz. Photo from Patrick Griffith, CO

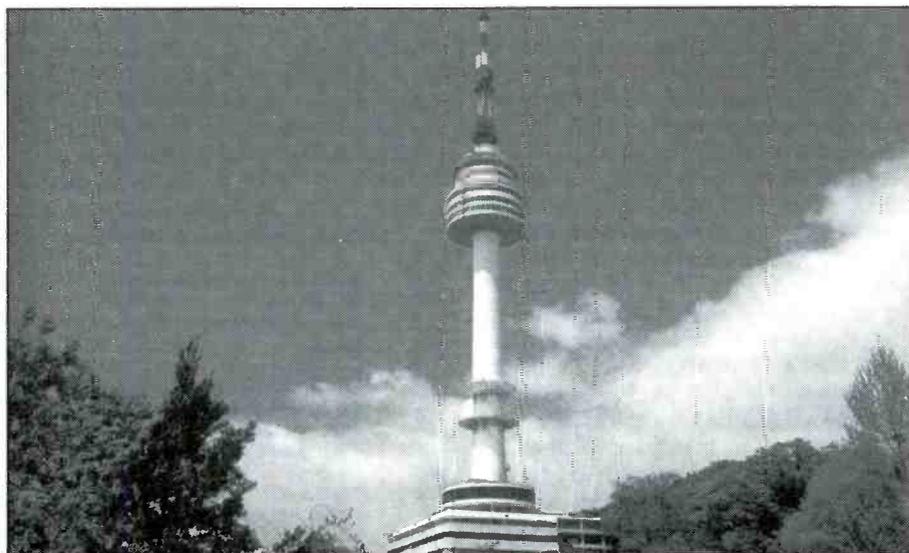
line company operations. These are known as Long Distance Operation Control (LDOC) frequencies.

Marcelo Toniolo Dos Anjos, Brazil indicated in his most recent letter that he is the editor of the Utility DX'ing column which appears in the monthly publication "Atividade DX" put out by the DX Clube Paulista. For further information their address is: C. Postal 592, Sao Carlos—SP (Brasil), 13560-970. Note that all of their publications are in the Portuguese language.

In a note from Corey Soderlund, RI he mentioned that he has been a SWL'er for about 10 years on and off but recently has

become more serious about the hobby. "My shack is a pretty simple one consisting of an AOR AR3000, ICOM R71A, and a Realistic DX-160 that my Grandfather gave me at age 7, my first rig. My antenna is an Eavesdropper."

We were rejoined by another former contributor, Gary Hamlin, NY who advised. "It has been a long time since I've sent any of my Ute loggings but for a while, I couldn't devote too much time to monitoring unfortunately, but now I'm back at it as often as possible. I'm still using the ICOM R71A, but have changed antennas and now have a simple 100' longwire,



This tower in Seoul is the source of most of the radio and TV broadcasting in Seoul, Korea. David Sabo says he lives only 2 miles from the tower and experiences lots of QRM when trying to monitor Utility transmissions.

CGL



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THIS WILL VERIFY YOUR RECEPTION OF
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JUNEAU SFO
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PFC for beacon reception from the collection of Steve McDonald, Canada.

which works well enough."

Russ Lundquist, IA indicated "I have been a scanner listener for three years and presently have a PRO-27, PRO-38, PRO-2006, and BC-200XLT but just recently I purchased a shortwave radio, Sangean ATS-803A so that I could tune in some utility stations."

Welcome to the column, Russ, and we await some loggings from you.

Ary Boender in the Netherlands reports he has been hearing a lot of UNHCR Naval operations in the Adriatic sea off the Yugoslavian coast. Two active frequencies were 2840 and 5310 kHz. Much of the activity concerned tracking and checking various maritime vessels. All of the UNHCR comms were in USB mode.

Courtesy of Richard Baker, OH, here are some US Navy and US Coast Guard changes. Oceanographic Unit Two which was on the USNS Tanner was to be disestablished in March '93.

The USS Capodanno (FFT 1093) was slated for decommissioning in July '93. The USS Laboon (DÎG-58) was christened at Bath Iron Works, Bath, Maine in February 1993. The USS Alexander Hamilton (SSBN-617) was decommissioned at the Puget Sound Naval Shipyard in Bremerton, WA in February '93. The USS Stephen W. Groves (FFG-29) shifted homeports from Mayport, FL to Pascagoula, MS in January 1993. USCGC Blackhaw (WLB-390), call NODI, was to be replaced by the USCGC Buttonwood (WLB-306), in duties in San Francisco Bay so it is assumed that the address for the Buttonwood will be the same as that formerly used for the Blackhaw. The address is: U.S. Coast Guard Base, Yerba Buena Island, San Francisco, CA 94130. By-the-way, many of you may not be aware that the Blackhaw was used in the Paramount film "The Hunt For Red October." The Blackhaw was black in

color so with the addition of a red star painted on the bow of the cutter plus the crew wearing fur hats and Soviet naval uniforms, the Blackhaw appeared to be a Soviet icebreaker.

Richard Baker also had some advice regarding QSL requests to the Cambridge Bay Flight Service Station. "The Station Manager at Cambridge Bay said that they welcome QSL requests but requesters would be sure to include a PFC as they have no local QSL card." Richard added he always includes a SASE with the proper mint stamps attached.

Here is the address for the above mentioned station: Cambridge Bay ICAO Flight Service Station, Transport Canada Area Station Manager, Bag Service 500, Cambridge Bay, NWT, X0E OCO, Canada.

The final item in the letter from Richard Baker dealt with the frequencies for Operation Able Manner, the USCG/USN operation which began in January to encircle Haiti. USCG used 5399 and 6236 kHz. The US Navy used 5399.5, 5400, 5403, 6686, and 8972 kHz. All were USB mode.

Before we turn to the logs for this

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
tf	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)

month, here is one more alert reader who drew my attention to the meaning of "Consolan." M. Bye, apparently of Weathernews America, sent a FAX to the POP'COMM office which had a description of the navigation system.

Thanks to all those who contributed and welcome back to all you folks who have rejoined us.

I plan on attending the SWL Conference to be held in conjunction with the Virginia Beach Hamfest/Computer Fair on 2-3 October. Hope to see a lot of you there.

Ute Intercepts. All UTC.

50: OMA50, Time Signal station, Liblice, Czechoslovakia at 1100 in CW. (Boender, Netherlands)

100: LORAN-C station (prob Sylt, Germany) w/pulses at 1100. (Boender, Netherlands)

198: Beacon DIW, Dixon, NC at 0522. (Sooy Sr., NJ)

215: Beacon DLZ, Delaware Municipal, OH at 0420. (Vylasek, OH)

219: Beacon SA, San Antonio, TX at 1107. (Crabill, VA)

245: Beacon AN, North Island NAS, San Diego, CA at 1930. (Tomkinson, CA); Beacon FS, Sioux Falls, SD at 0500. (Vylasek, MN)

257: Beacon PLO, Portland, IN at 0437. (Vylasek, OH)

266: Beacon BR, Atlanta, GA at 0340. Logged in GA. (Sooy Sr., NJ)

278: Beacon XSD, Tonopah, NV; Beacon OS, Los Angeles (International-Romen), CA. (Polhamus, CA)

282: Beacon GWF, Fox Field, CA at 1231. (Vaage, CA)

285: Beacon NE, Newport Bay Light 3, CA at 0701. (Vaage, CA)

286.5: Beacon NP, Nieuport, Belgium light at 1520. (Boender, Netherlands)

292: Beacon DP, Dana Point Light #5, CA. Hrd 24 hrs. (Tomkinson, CA)

293: Beacon OB, Brussels, Belgium National airport at 0950. (Boender, Netherlands)

294: Beacon SB, Santa Barbara, CA. (Polhamus, CA)

298: Beacon HL, Cape Henlopen, DE at 0435. (Sooy Sr., NJ)

298.5: Beacon AD, Ameland, Holland Light at 0123. (Boender, Netherlands)

302: Beacon V. Point Vicente, CA light. (Polhamus, CA)

307: Beacon AV, Avalon Harbor, Santa Catalina Island, CA. Hrd 24 hrs. (Tomkinson, CA)

309: Beacon WW, Deurne (Antwerpen airport), Belgium at 0938. (Boender, Netherlands)

314: Beacon VM, Venturi Marina South Jetty Light 2, CA at 0714. (Vaage, CA)

315: Beacon LMS, Lima (Duesseldorf), Germany at 0141; Beacon STK, Stadskanaal, Holland at 0933. (Boender, Netherlands)

316: Beacon. Mill, Caddo Mills (Municipal-Hunt), TX at 0045. (Low, TX)

319: LEC, Console beacon (navigation type), Stavanger, Norway in CW w/pulses at 0135. (Boender, Netherlands)

320: Beacon BAR, Banner Elk, NC at 1147. (Crabill, VA)

329: Beacon CH, Charleston, SC at 0457. (Vylasek, OH); Beacon AAA, Lincoln, IL at 1150. (Crabill, VA)

332: Beacon JI, Port Huron, MI at 1157. This is new id, ex-PHN. (Crabill, VA)

336: Beacon NIK, Nicky (Brussels Int'l airport), Belgium. (Boender, Netherlands)

338: Beacon RYN, Ryan airport, Tucson, AZ at 0615. Used to have WX-C. (Tomkinson, CA)

341: Beacon CCI, Springfield, OH at 0505. (Vylasek, OH)

341.5: Beacon BUN, Bruno (Brussels Int'l. airport), Belgium at 0928. (Boender, Netherlands)

344: Beacon XX, Abbotsford, BC, Canada at 1123. (Tomkinson, CA)

347: Beacon NID, China Lake, CA at 1248. (Vaage, CA)

350: Beacon CBG, Cambridge, MN at 0541. (Vylasek, MN)

353: Beacon LI, Little Rock, AR at 1215; Beacon F7, Georgian Bay/Parry Sound, Ontl., Canada at 1124. (Crabill, VA)

359: Beacon BO, Boise, ID. (Polhamus, CA)

362: Beacon SC, Sherbrooke, PQ, Canada. (White, ME)

363: Beacon RNB, Millville, NJ at 0657. (Sooy Sr., NJ)

366: Beacon YMW, Maniwaki, PQ, Canada. (White, ME); Beacon PNI, Ponape (Int'l—Senyavin Island), Caroline Islands at 0554. (Vylasek, MN)

367: Beacon JEY, Jersey, UK at 0655. (Sevart, England)

370: Beacon GR, Iles de la Madeleine, PQ, Canada. (White, ME)

374: Beacon SA, Sable Island, NS, Canada at 0650. (Sooy Sr., NJ)

375: Beacon EMC, Winnemucca Municipal, NV at 1312. (Vaage, CA)

376: Beacon ZIN, Great Inagua, Bahamas at 0644. (Sooy Sr., NJ)

378: Beacon CPM, Compton Heliport, CA. Hrd 24 hrs. (Tomkinson, CA)

385: Beacon NA, Natashquan, PQ, Canada. (White, ME)

386: Beacon STD, Stad, Holland at 0049. (Boender, Netherlands)

391: Beacon TGE, Teuge (Deelen), Holland at 0056. (Boender, Netherlands)

395: Locator OA, Schiphol, Holland at 0057. (Boender, Netherlands)

397: Beacon BE, Benton Harbor, MI at 0627. (Crabill, VA)

400: Beacon TRX, Trenton, MO at 0632. (Crabill, VA); Beacon QQ, Comox, CFB, Canada at 1105. (Tomkinson, CA); Beacon MDS, Madison, SD at 0603. (Vylasek, MN)

401: Beacon Y8, St. Nicephore, PQ, Canada. (White, ME)

403.5: Beacon MRV, Merville/Caionne Aerodrome, France at 1025. (Boender, Netherlands)

413: Beacon OEG, Yuma Proving Grounds, AZ at 1327. (Vaage, CA)

414: Beacon CSS, Washington Courthouse, OH at 0546. (Vylasek, OH); Beacon BC, Baie Comeau, PQ, Canada. (White, Canada)

423: Beacon CKP, Cherokee, IA at 0610. (Vylasek, MN)

432: NMG, USCG, New Orleans, LA w/end of NOTAM's bcs't & msg saying next best to be at 1550 UTC. (Margolis, IL)

525: DAN, Norddeich, Germany w/DECCA repot in CW at 2120. (Boender, Netherlands)

526: Beacon ZLS, Stella Maria, Bahamas at 0427. (Sooy Sr., NJ)

1610: Wisconsin Travelers Radio Broadcast, Kenosha, WI in AM at 1135. Operated by Wisconsin Division of Tourism. w/OM giving sked of events throughout the state & phone nbr for State "Getaway Guide." (Margolis, IL)

1615: GCC1, Cullercoats, UK w/id in CW + phasing in ARQ at 2147. (Boender, Netherlands)

1620: WNWZ910, Emergency Services & Disaster Agency, Bensenville, IL. w/OM giving list of city phone nbrs for emergency services & sked of community events. (Margolis, IL)

2182: NQAS, USS Aires PHM-5 w/NMA10, USCG Grp Mayport re meeting CG 42' boat to transfer a patient. VCN, Cap Aux Meules Canadian CG w/gale warning & channels for further info. USB mode at 0633. (Baker, OH); SDJ, Stockholm, Sweden radio announcing navigational warning and DAN, Norddeich, Germany announcing nav. wrngs. Both in USB at 2135: At 2150 LGP, Bodo, Norway w/tfc list in USB and SZMZ, MN Manto V. clg Limnos, Greece. also USB: At 2233 in USB SAG, Goteborg, Sweden w/tfc list & wx on 1712 kHz. (Boender, Netherlands)

2670: USCG Group Moriches, NY w/assistance of USCGC Jefferson Island provided navigational aid to fishing vessel Wallaby at 1228, USB mode. (Caldicott, MA); USCG Boston at 0445 in SSB w/Hi Seas & Notices to Mariners til 9599. (Sooy Sr., NJ)

2941: At 0153 Kiev, Ukraine, 0155 Rostov, Ukraine, 0200 Riga, Latvia, 0210 Moscow, Russia &

UTC	FREQ	STATION	CALL	REMARKS
1103	2670.0	USCG, GROUP CAPE MAY, NJ	NMK	WX, NTM
1130	6501.0	USCG, COMMSTA PORTSMOUTH	NMN	OFFSHORE WX,
1130	8764.0	USCG, COMMSTA PORTSMOUTH	NMN	OFFSHORE WX,
1130	13089.0	USCG, COMMSTA PORTSMOUTH	NMN	OFFSHORE WX,
1145	2670.0	USCG, COMMSTA HONOLULU	NMO	O/S WX, F/CA
1145	6501.0	USCG, COMMSTA HONOLULU	NMO	O/S WX, F/CA
1145	8764.0	USCG, COMMSTA HONOLULU	NMO	O/S WX, F/CA
1210	2670.0	USCG, GROUP MORICHES, NY	NMY42	WX, NTM
1220	2670.0	USCG, GROUP MOBILE, AL	NOO	WX, NTM, REM
1233	2670.0	USCG, GROUP FORT MACON, GA	NMN37	WX, NTM
1235	2670.0	USCG, GROUP NEW ORLEANS, LA	NMG2	WX, NTM
1240	2670.0	USCG, GROUP CORPUS CHRISTI, TX	NOY8	WX, NTM
1250	2670.0	USCG, GROUP GALVESTON, TX	NOY	WX, NTM
1303	2670.0	USCG, GROUP CAPE HATTERAS, NC	NMN13	WX, NTM
1333	2670.0	USCG, GROUP HAMPTON ROADS, VA	NMN80	WX, NTM
1403	2670.0	USCG, COMMSTA SAN FRANCISCO (CAMSPAC)	NMC	OFFSHORE WX,
1403	2670.0	USCG, GROUP EASTERN SHORE, VA	NMN70	WX, NTM
1420	2670.0	USCG, GROUP ST PETERSBURG, FL	NMA21	WX, NTM
1503	2670.0	USCG, GROUP HUMBOLT BAY, CA	NMC11	WX, NTM
1505	2670.0	USCG, GREATER ANTILLES SECTION, SAN JUAN	NMR1	WX, NTM
1530	6501.0	USCG, COMMSTA GUAM	NRV	OFFSHORE WX,
1533	2670.0	USCG, GROUP MONTERREY, CA	NMC6	WX, NTM
1550	2670.0	USCG, GROUP MIAMI BEACH, FL	NCF	WX, NTM
1600	6501.0	USCG, COMMSTA PORTSMOUTH	NMN	OFFSHORE WX,
1600	8764.0	USCG, COMMSTA PORTSMOUTH	NMN	OFFSHORE WX,
1600	13089.0	USCG, COMMSTA PORTSMOUTH	NMN	OFFSHORE WX,
1620	2670.0	USCG, GROUP CHARLESTON, SC	NMB	WX, NTM
1620	2670.0	USCG, GROUP MOBILE, AL	NOO	WX, NTM, REM
1630	4426.0	USCG, COMMSTA SAN FRANCISCO (CAMSPAC)	NMC	OFFSHORE WX,
1630	8764.0	USCG, COMMSTA SAN FRANCISCO (CAMSPAC)	NMC	OFFSHORE WX,
1630	13089.0	USCG, COMMSTA SAN FRANCISCO (CAMSPAC)	NMC	OFFSHORE WX,
1630	17314.0	USCG, COMMSTA SAN FRANCISCO (CAMSPAC)	NMC	OFFSHORE WX,
1635	2670.0	USCG, GROUP NEW ORLEANS, LA	NMG2	WX, NTM
1640	2670.0	USCG, COMMSTA BOSTON	NMF	MARINE INFOR
1640	2670.0	USCG, GROUP CORPUS CHRISTI, TX	NOY8	WX, NTM
1645	6501.0	USCG, COMMSTA KODIAK, AK	NOJ	OFFSHORE WX,
1650	2670.0	USCG, GROUP GALVESTON, TX	NOY	WX, NTM

Here is another installation of the Marine & NTM schedules of the USCG Comm-Sta's or Groups. List contributed by Richard Baker, OH.

at 0205 S. Petersburg, Russia. All in USB w/VOLMET. (Boender, Netherlands)

3458: Beijing VOLMET in USB at 1348. Was computer-generated OM voice in EE. (Sabo, S. Korea)

3484: Air Traffic New York at 0513 in SSB w/aero wdx for Phila. * NY. (Sooy Sr., NJ)

3777: Unusual HAM comms in SSB 0630-0657. Alphanumeric id foll by "United Nations." made many contacts during band opening w/Europe, Africa, Mexico, USA, Japan & others. Specified "Broadcasting from the United Nations, New York." (Sooy Sr., NJ)

4011: NNN0ADE (Amateur) KG5SI) in USB w/Navy MARS net at 0146. (Low, TX)

4098: AT & T ship/shore pp in USB at 0325. Hrd other half of pp on 4390 kHz USB. (Gentry, IL)

4146: CommSta Honolulu. NMO, wkg F/V Peter Wood? re man overboard, obtaining info. new Captain. cud not advise if man cud swim (QSY'ed from 6501/6200 kHz)

4387: WOO, Manahawkin, NJ w/tfc list at 0400 in USB. (Gentry, IL)

4402: KMI, Inverness, CA in USB at 0400 w/tfc list. (Gentry, IL)

4426: NHNC, USCGC Harriet Lane WMEC-903, simplex w/pp thru NMN, CommSta Portsmouth to Flight Surgeon re crewman injured by falling hatch cover. Hrd 0737 in USB. (Baker, OH)

4543: YL/GG rptng Romeo Delta at 2000 w/electronic tones. Then at 2005 520/9 Gruppen, 208134, 208/34 Gruppen 520/63 Gruppen and into 5F grps. (Mason, England)

4585: S. Carolina CAP units Crescent 19, Crescent 61 and Crescent 347 passing tlc in USB at 0108. (Hamlin, NY)

4627: Louisiana CAP Gulf Coast Hurricane Net, led by Magnolia 30, in USB at 0119; Arkansas CAP stas Dogwood 1 wkg Dogwood 132 in USB at 0145. (Hamlin, NY)

4821: YL rptng Golf Kilo from 2130-2135. Then GG 5F mgs for 856. 571, 316. These addresses were formerly used by DFC 37/DFD21 which closed Dec '92. Former recipients have transferred to other 2L stations. (Mason, England)

4835: NNUUL, USS Constellation CV-64 w/Norfolk Shipyard Control re pp. Constellation completed

SLEP (Service Life Extension Program). Hrd at 2340 in USB. (Baker, OH)

5045: YL/EE in AM w/5F grps at 0011. (Davey, IN)

5096: U/i 479 in CW at 1945 w/5F grps. (Boender, Netherlands)

5198.5: HMCS Moresby in USB at 0120 w/OM dictating exercise mgs to CFH, Canadian Forces, Halifax, NS. (Margolis, IL)

5310: 4UG wkg 3XE in USB at 0219. RAF tracking comms. (Sevart, England)

5315: Every Wednesday YL/GG w/453 x3, 08712, 027 from 1900-1905. After 5 tones into 5F grps. / w/7830 kHz. (Mason, England)

5598: Numerous REACH flights checking in w/Santa Maria between 2000-0000 in USB. Also between 0012 & 0015 the full commercial flights wkrd NY w/position reports & SELCAL checks: Cubana 973, KLM 758, Cubana 9701, Condor 607, Delta 108, Springbok 202, Dominica 2445, Alitalia 557, Air France 6403. All USB. (Boender, Netherlands)

5667: American 26 w/position report to Honolulu in USB at 1219. (Sabo, S. Korea)

5696: USCG Cutter Mellon (NDIT, WHEC-717) wkg NOJ, CommSta Kodiak at 1507. Tlc concerning ongoing rescue ops hrd here over next several hours until around 1918. Other stns included a/c CG1704, CG6021, and Q2Y-3. All USB mode. (Sabo, S. Korea)

5732: YL/GG in USB at 2308 w/3+2F grps. (Sevart, England)

5746: YL/EE at 2120 w/5F grps. Lincolnshire Poacher station on Cyprus w/mgs to Middle East. Affected by warble jammers. (Mason, England)

5750: OM/SS dictates 5L msg in phonets to 2nd OM/SS in USB at 1128. Phonets use Carlos, Golfo, Julieta, Miguel, Noviembre, Romero, & Uniforme as substitutes for EE phonets. Rest of SS phonets same as in EE. (Margolis, IL); YL/GG in USB at 0300 w/rptd 3F grp and 1-0 count. 10 dashes at 0305 and "Gruppen" count. into 3/2F grps. Hrd Wed. (Hamlin, NY)

6224: Marine comms in SSB 0544-0558. Crew members needed, tow cable parted & using emergency tow gear. Primary cable broke about 2130 & back underway about 2330. Other end of comms QSY'ing to 6230 kHz. (Sooy Sr., NJ)

KA5WRL

REGISTERED MONITOR - KAR5BR



Jimmy J. Poole
HCR66 Box 100
Van Buren, AR 72956 USA
CRAWFORD COUNTY
10-X# 50358 GRID EM25



Confirming QSO with:

Pse QSL Tnx

STATION	MO	DAY	YR	UTC	FREQ	REPORT	MODE
							TWO WAY

K2QFL Print

QSL card used by Jimmy J. Poole, AR.

6425: U/i 146 in CW at 1703 w/5F grps. (Boender, Netherlands)

6507: LGN30, Rogaland, Norway in USB w/EE wx for all areas of Norwegian Sea. Hrd daily at 2315-2320. (Caldicott, MA)

6532: Honolulu advised Continent-8 of ATC clearance to maintain flight level 390 to 410. USB at 1347. (Sabo, S. Korea)

6637: Paris Radio, Air France wkg 2 a/c. comms by YL/FF at 0339 in USB. (Baker, OH)

6655: Honolulu radio w/Express 072 for position report. Honolulu gave clearance & advised 072 to call Anchorage Center on 119.1 MHz when 150 miles from Shemya. USB mode. (Brookman, AK)

6676: Sydney VOLMET from 1233-1234, weaker sig on //11387 kHz. Bangkok VOLMET fm 1240-1244. Both USB mode. (Sabo, S. Korea)

6686: Zero November at 2340 in USB w/mgs of "water flooding from ships countermeasures wash-down systems" rptd several times. (Gentry, IL)

6732: Anti drug or anti-smuggling comms in SSB 0343-0517. If Lat/Long given correctly Ops were approx 250 miles South of El Salvador. (Sooy Sr., NJ)

6738: USAF, Inciruk, Turkey w/Sky King msg foll by Lajes Field, Azores, and 3rd very weak (believed be Croughton, England). Hrd 0528. At 0530 u/i RAF station w/British equivalent of Sky King msg w/color coded locations. USB mode. (Baker, OH)

6758: YL/CZ w/rptd 3F grp. into 5F grps. USB at 0230 Friday, 0500 Sunday and 2200 Thursday and Friday. (Hamlin, NY)

6785: YL/SS rptng "Atencion 381 02" & into 5F grps in AM mode at 022 on Saturday. This is unusually strong signal. (Hamlin, NY)

6833: YL/GG at 0545 w/5F grps ending w/00000 Ende. (Mason, England)

6870: KCD73, FAA, Islip, NY wkg KLB70, u/i (maybe KLD70, FAA, Nashua, NJ??) in LSB at 1921 w/discussion of performance of new radios. At 1927, KLB70 announced "returning to SELSCAN." (Hamlin, NY)

6880: Lincolnshire Poacher tune. then YL/EE in USB w/5F grps at 2200 Tue, Fri and Sat. YL has British accent & delivers nbrs in slow lilting cadence. (Hamlin, NY)

6953: YL/SS in AM mode rptng "02, 100" at 0200 & into 5F grps at 0205. Hrd Sat. (Hamlin, NY)

7302: AFA4DR (NCS) in USB w/Air Force MARS net at 2015. Check-ins incl AFT4LX (Leesville, LA) and AFA4CR (Oklahoma City, OK). (Low, TX)

7335: CHU Time & Frequency station Ottawa, Canada at 0844. (Spurway, Australia)

7425: YL/SS in AM w/5F grps at 0209. Also hrd another day at 0203. (Davey, IN); YL rpts KPA2 in SUB at 2017. (Sabo, S. Korea); YL/EE Mossad stn rptng EZI2 at 2200. 7 days a week. (Soderlund, RI)

7532: YL rptng Mike Delta from 2000-2005. Then "Message fro 241/40 296/72. Attention" and into 5F EE text. Station sending 9 dots & 1 dash in background. (Mason, England)

7535: Foll ships hrd on Norfolk SESEF primary: At 1408 USS San Jacinto CG-56 for xmtr test; 1558 NIEG. USS Guadalcanal LPH07 for xmtr tests; 1928 NNGD. SS Mississippi CGN-40; 2357 NNUL, USS Constellation CV-64 clg Norfolk SESEF but no joy. All USB mode. (Baker, OH)

7588: At 1800 YL/EE w/1-0 count and '918' until 1810 when 10 tones were sent. Then into 3/2F grps after 'Count 92'. (Mason, England)

7887: YL/EE in SSB w/Lincolnshire Poacher tune. Hrd 0544-0547. (Sooy Sr., NJ)

8160: YL/EE w/5F grps in USB at 0500 Sat. & Sun. Same YL as in Lincolnshire Poacher xmsns but that tune not used here. Nbrs begin abruptly on the hour. (Hamlin, NY)

8205: Screechy noises mixed w/tones moving around in pitch. Cud be voice scrambler because some apparent speech pattern was hrd in all the din. USB at 2028. (Margolis, IL)

8464: YL/EE w/5F grps. each x2. in USB at 2045. Warbling type jammer trying unsuccessfully to block nbrs xmsn. (Sabo, S. Korea)

8532: LZW, Varna, Bulgaria w/ DE LZW mkr. Hrd at 2330. (Laughlan, NY)

8652: PZN, Paramaribo, Surinam in CW at 1220 clg CQ. Detected distorted modulated keying. (Caldicott, MA)

8719: NTWX, USS Hoist ARS-40 wkg COM-SUPRON 8 on "salvage channel" primary re located anchor and chain. eta on recovery. hrd at 1957 in USB. (Baker, OH)

8746: At 2326 WOM, Miami FL wkg Cruise ship Nieuw Amsterdam, PJCH, for R/T ttc. at 2342 WOM ckg Cruise Ship Star Princess w/same. Hrd in USB. (Baker, OH)

8800: OTC Sydney-Haleyon 3 w/Radphone call at 0028. At 0034 OTC Sydney announcing changes to CH's 412, 815 & 1229. (Spurway, Australia)

8809: M/S Star Princess, ELRI8, wkg WOM for R/T ttc at 0137 in USB. (Baker, OH)

8819: Rainbow Radio (Tors Cove, NF, Canada) wkg a/c at 2336. (Low, TX)

8825: West Indian 900 clg NY, was told he coming in distorted ever since take-off. Hrd at 0309 in USB. (Gentry, IL)

8826: Honolulu VOLMET in USB at 1800. (Spurway, Australia)

8828: Honolulu radio w/aviation wx in USB from 0458 to 0503. (Gentry, IL)

8867: Sydney wkg FL370 at 0021 in USB and at 0023 Ansett 510 getting wx from Sydney for Lord Howe. (Spurway, Australia)

8873: YL/SS in AM at 0914 w/5F grps. Down at 0917. (Lundquist, IA)

8942: Hong Kong Aeradio wkg United 805 in USB at 1440. (Sabo, S. Korea)

8967: Offutt w/msg for Sky King in USB at 0448. (Gentry, IL)

8972: Audio frequency sweep (siren sound) spanning +/- 5 kHz. hrd between 0120 & 0140. (Hamlin, NY)

8980: YL/SS in AM at 0512 w/5F grps. Note: Maximum sig strength w/minimum RF gain control setting. (Caldicott, MA)

8984: CommSta Portsmouth clg Charlie 7 Charlie w/request to QSY to 11201 if possible. Hrd at 2111 in USB. (Gentry, IL)

9017: Gift Shop in USB at 1349 w/sig checks to Iron Wood. (Margolis, IL)

9050: YL/EE in AM mode at 2100 Wed w/3+2F grps. Same YL as on 7655//9900 but dif msg. (Hamlin, NY)

9090: YL/EE in AM w/5F grps at 2112. (Davey, IN)

9330: YL/SS in AM at 0304 w/ "Atencion 256 03" rptd. 0305: "03 110" rptd. 0306 into 5F grps. (Margolis, IL)

10024: Guayaquil, Ecuador wkg Bogota, Colombia in USB at 0444. (Hamlin, NY)

10051: WSY70, New York VOLMET at 1545 in USB. (Low, TX)

10057: Brazzaville VOLMET w/weak sig giving wx. Hrd in USB at 2137. (Baker, OH)

10125: YL, weak & fading. rpts CIO2 in USB from 1349-1350. Mossad stn. (Sabo, S. Korea)

10374: At 1800 YL/GG w/1-0 count and '853'. At 1810 after ten tones, 'Gruppe 186' and into 3/2F grps. (Mason, England)

10493: WGY912, FEMA Special Facility, Berryville. VA w/daily roll call of stations. WGY902 FEMA Dist 2, NY, NY; WGY986, u/i; WGY904 Dist 4 Atlanta, GA; WGY905 Dist 5 Chicago, IL; WGY906 Dist 6 Denton, TX; WGY907 Dist 8 Kansas City, MO; WGY908 Dist 8 Denver, CO; WGY909 Dist 9 San

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Francisco, CA; WGY910 Dist 10 Bothwell, WA; WGY911 Washington DC Telecomm HQ; WGY916, 918, 950 all u/i and WGY901, Dist 2, Boston, MA called, QSY F-27. Hrd 1651. At 2341 WGY908 wkg Play Ball (a/c) w/pp to "7525." Play Ball does rdo check and breaks patch. All USB. (Baker, OH)

10493: FEMA stations WGY907, Kansas City, MO; WGY908, Denver, CO; WGY910, Bethell, WA & WGY912, Mt. Weather, VA all wkg in net in USB at 1654. (Margolis, IL)

10529: YL/EE in AM mode at 1348 w/3+2F grps. Non-parallel bcst noted on 11626 kHz. (Sabo, S. Korea)

10648: YL/EE in AM at 1346 w/5L grps foll by "end of msg. rpt. rpt. msg. msg. Group 96. Group 96 & into rpt of the 5L grps msg. (Margolis, IL)

10970: YL/ rpts VLB2 from 1348-1350 in USB. Weak sig. (Sabo, S. Korea)

11053: Andrews AFB wkg S/AM 60815 in USB at 2220. Though nearby freqs have been in common use by Andrews, this freq seems to be a new one. (Hamlin, NY)

11176: Offut w/Sky King msgs in USB at 1843. (Gentry, IL)

11201: CG Rescue Helicopter 6009 in USB at 1947 tells NMF, Boston that he's on the scene of a boat in distress. (Margolis, IL)

11226: Shopworn wkg Reinstate & Sawblade in USB at 2057. (Hamlin, NY)

11234: Haven, RAF Ascension Islands wkg Ascot 3221 at 0145 re wx at Ascension. At 2125 Haven wkg Ascot 4969. SELCAL AJCE, for position, status, and SELCAL check. USB mode. (Baker, OH)

11267: Yankee Four Papa w/coded msg of over 20 characters in USB at 2103. (Gentry, IL)

11300: Nairobi Aeradio wkg Olympic 106 in USB at 2025. (Sabo, S. Korea)

11396: New York radio in USB wkg American 1182 at 2208. (Gentry, IL)

12216: WGY908, FEMA, Denver, CO in USB cooms at 0052 w/WGY906, FEMA, Denton, TX. (Margolis, IL)

12257: USAF jet pilot USB comms at 1257 on pp via Andrews AFB. He was hrd along w/OM in u/i East European lang. Both voices hrd loud & clr at my shack, but apparently neither man hrd the other. The foreigner was most likely on ship/shore comms because comms because this freq is ship ch. 1210. (Margolis, IL)

12340: HJNF, Simon Bolivar (Colombian cargo ship) in USB at 2138 w/pp to Bogota, Colombia. (Margolis, IL)

12359: ELBM9, Tropical (Liberian re passenger ship) in USB 2155. OM/SSclg C6KP. Festivale (Bahamian reg passenger ship). (Margolis, IL)

12695.5: KFS, Palo Alto, CA at 2334 w/QSX 4/6/8/12/16/22 MHz mkr. (Laughlan, NY)

12699: HPP, Panama Intelmar Radio at 2345 w/query if anyone had any ATC, AMVER, or OBS t/c. (Laughlan, NY)

12856: XSG, Shanghai, China at 1216 in CW w/mkr. (Caldicott, MA)

12975: IQX, Trieste, Italy in CW at 1527 w/mkr. (Boender, Netherlands)

12984: VNG, NSW, Australia Time Signal station. Logged in GA. (Sooy Sr., NJ)

13000.5: Three OM/EE in USB comms. Two u/i & 1 called 'Grab Man' who gave his location as near Azores-Gibraltar Ridge Range. He was flying at 350 ground speed. Someone said "You guys must be burning up your engines." Comms immediately terminated. Note: This is strictly a maritime CW Coast Station freq. (Caldicott, MA)

13092: GVUK, HMS Southampton D-90 wkg Portishead radio on GKT56 for R/T t/c, made QSY from 17245/16363 kHz. Hrd 1935 in USB. (Baker, OH)

13201: Navy Romeo Papa One One calling McClellan in USB at 1717. Called 3 times but no response. (Gentry, IL)

13270: New York VOLMET at 2336 w/wx conditions for major U.S. cities. (Low, TX)

13273: Tokyo Aeradio wkg United 803 in USB at 0443. (Sabo, S. Korea)

13313.4: Msg in CW at 1755 using full nbrs 34567 and cut nbrs ADNTU. (Margolis, IL)

13330: New York radio w/company msg of wx for Miami. Ft. Lauderdale, and Papa Bravo India wx in USB at 1629. (Gentry, IL)

13333: Concorde 189 wkg Speedbird London in USB at 2026. (Hamlin, NY)

13342: Lufthansa 566, enroute Frankfurt-Lagos. Due very poor conditions they had to QSY 7 times: 13342, 11345, 11691, 11345, 16207. 16256 and back to 11345 kHz. USB mode. (Boender, Netherlands)

13365: OM/EE in AM at 0734 rpts 286-286-286-1 then 652-67 652-67 and into 67 grps of 5F t/c. Passed text only once, then ended 000-000. Sounded like computer-generated voice, but with heavy accent. (Sabo, S. Korea)

13555: YL in AM at 1209 rpts 934-934-934 and 1-0 count until 1210. Then 10 beeps, count 225, count 225 and into 3/2F grps. (Sabo, S. Korea)

13630: At 1230 unknown German CW station sending VVV DE DE447. (Mason, England)

13652: U/i CW station at 1316 sending cipher text in continuous strings of characters. Some Cyrillic characters noted. (Ed.)

14391.5: NNN0CYD, USS Sumter LST1181, NNN0CWD, USS William H. Standley & NNN0CSA, USCGC Seneca WMEC906 ck ing on freq to take rotation in pp t/c w/NNN0TWT. Hrd this USN MARS in USB at 1937. (Baker, OH)

14703: YL/EE in AM at 1624 w/3-2F grps. Hrd on many days & at various times between 1400 & 1700. (Margolis, IL)

14727.6: (in here) YL/GG w/3+2F grps sent twice. USB at 1741. (Ed.)

14770: CW station (sounds like Havana xmtr) sending cut nbrs at 1322. (Ed.)

14950.3: U/i auto CW at 1829 w/5F grps. Down at 1831 w/TTT TTT. (Ed.)

15015: MacDill w/wx in USB at 1934 & coded msgs at 1938 in USB. (Gentry, IL)

15035: Trenton Military w/wx in USB at 1638. (Gentry, IL)

16341: CLP8, Cuban Embassy, Conakry, Guinea in CW at 1258 clg CLP75 & requesting QSV. No reply hrd. (Margolis, IL)

16413.9: YL in USB at 1435 announcing Kilo Whiskey. I missed the heading & picked it up again in 3/2F grps. (Ed.)

17350: EHY, Madrid, Spain w/t/c list in USB at 2202. Also on 8728 kHz. (Baker, OH)

17437.1: U/i station at 1751 w/hand sent CW sending cipher text (some cut nbrs, some full nbrs) which sent in continuous string of characters. Msg heading was Msg Nbr, Group Count & BT. Ended w/BT AR. The cut nbr system was AU34567DNT=1-0. (Ed.)

18525: KKN50 (Dept of State) at 1419 in CW w/QRA-QSX mkr. (Low, TX)

19333: CLP1, MFA, Havana, Cuba to u/i Cuban Embassy w/PT SS msg at 1835 in CW. (Ed.)

19954: At 0153 in SSB hrd trilling, beeps, clicks from MIR space station. (Sooy Sr., NJ)

20818.9: CLP12, unlocated Cuban Embassy told to QSV by CLP1, MFA, Havana, Cuba in CW at 1558. (Ed.)

20929.4: U/i CW station at 1834 using speed key for cut nbr t/c. Nbrs are AU34567DNT=1-0. (Ed.)

20936: USN MARS: NNNOCYZ, USS Whidbey Island LSD41 wkg NNN0BBF w/pp t/c at 1813. USB mode. (Baker, OH)

20994: AEM6TTT, USAF MARS Somalia w/AAM6DPP, USA MARS Croatia. USB at 1625; AEM1USA, USA MARS Heidelberg w/AAR2USI, USA MARS Fort Monmouth in USB at 1641. (Boender, Netherlands)

21865: YL/SS in AM w/5F grps at 0000 Sunday. (Hamlin, NY)

22497: UDK2, Murmansk, Russia in CW at 1310 w/t/c list. (Boender, Netherlands)

22589: SVA7, Athens, Greece in CW at 1405 w/t/c list. (Boender, Netherlands)

22596: UNQ, Novorossiysk, Russia in CW at 1410 w/DE UNQ ANS. (Boender, Netherlands)

22705: St. Lys, France, call FFL wkg u/i vessel for R/T calls. Comms in FF. Hrd in USB at 1712. (Baker, OH)

22738: WOM, Ft. Lauderdale, FL w/t/c list in USB at 1701. (Gentry, IL)

22774: 7TK51, Skikda, Algeria in USB at 1445 w/pp. (Boender, Netherlands)

23642: US Embassy, Athens, Greece in CW at 1505 w/QRA DE KSW78 QXS 7/10/14/18/23 K. (Caldicott, MA)



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WASHINGTON PULSE

FCC ACTIONS AFFECTING COMMUNICATIONS

\$8,000 Forfeiture For Operating Unlicensed Radio Station

The Commission upheld its earlier order that Robert Pizano of Tampa, FL, forfeit \$8,000 for violating the Communications Act by operating an unlicensed radio station.

Pizano had admitted responsibility for conducting unauthorized transmissions on the 40 meter amateur band as part of political propaganda efforts against the Castro regime in Cuba by a group of Cuban former prisoners called the "Federacion Mundial de Ex-pressos Politcos Cubanos" (the Federacion).

Pizano sought consideration of the amount of the forfeiture in light of the Commission's downward adjustment criteria. He argued that the public interest in supporting a Cuban "freedom-fighter" dedicated to liberating his country should outweigh the Commission's regulatory interests. He also argued that levying a forfeiture against the group was therefore unjust.

In determining the amount of a forfeiture, the FCC must consider the nature, circumstances, extent and gravity of the violations and, with respect to a violator, the degree of culpability, any history of prior offenses, ability to pay, and such other matters as justice may require.

Pizano acknowledged culpability, but argued that his actions were justified because of the goals of the organization on whose behalf he claimed to be acting. Although Pizano had prior history of violating the Act, his assertions indicated a continued predisposition to violate the Act. The Commission noted that he offered no evidence to support his assertion that he was totally unable to pay any fine. The only figure he provided addresses the Federation's financial standing and not his personally. Since it is Pizano who is liable for the forfeiture, and the Federation, the Commission found his arguments unpersuasive.

Spectrum For Wind Profiler Radar Systems

The Commission proposed to allocate the 449 MHz band for wind profiler radar systems (wind profilers) and requested comment on whether wind profilers also should be accommodated in the 915 MHz band, as proposed by Radian Corporation, or in some other frequency band. Allocation of spectrum for wind profilers will facilitate the automated collection of weather information, including data on severe storms that threaten both lives and property.

Wind profilers are sensitive Doppler radars that measure wind speed and direction at a variety of altitude. This informa-

tion has many applications, including detection of severe wind conditions and planning flights in aviation; improving weather forecasting in meteorology; and analyzing movement of air masses carrying pollutants for environment studies.

Experimental wind profilers have been operating at 404 MHz, but have interfered with certain satellite uplinks in an adjacent band. As a result of this interference, the National Telecommunications and Information Administration (NTIA) recommended that wind profilers be accommodated at 449 MHz. The 449 MHz band that the Commission is proposing for wind profiler radars currently is allocated on a primary basis for Government radiolocation operations by the military. In addition, the 449 MHz band is allocated on a secondary basis to the Amateur Radio Service and to Government and non-Government radiolocation systems for coastal radars.

New Experimental Licenses

The Commission, granted the following experimental applications.

KF2XCK, Mackay Communications, Inc., to operate on frequencies in the 1626.5-1646.5 MHz and 1530-1545 MHz ranges for use of EB NERA SATURN C UNIT for demonstration to perspective customers. MO: Continental U.S. & along Gulf of Mexico.

KG2XLB, General Motors Research Corp., to operate on frequencies 1545-1559 MHz and 2310-2360 MHz for development and testing of satellite receivers for digital audio broadcast. MO: Continental U.S.

KO2XAR, Motorola, Inc., to operate on frequencies 806-822 MHz and 851-867 MHz for testing Enhanced Specialized Mobile Radio. FX&MO: Lake Zurich, IL.

KO2XAS, Motorola, Inc., to operate on frequencies 806-822 MHz and 851-867 MHz for testing Enhanced Specialized Mobile Radio. FX&MO: Arlington Heights, IL.

KO2XAT, Motorola, Inc., to operate on frequencies 806-822 MHz and 851-867 MHz for testing Enhanced Specialized Mobile Radio. FX&MO: Schaumburg, IL.

KO2XAU, State of California, to operate on frequency 401.7025 MHz for use of GOES/DCS Satellite (data collection system) for fire weather forecasting and prediction of water run-off. FX: Julian, CA.

KO2XAV, State of California, to operate on frequency 401.7025 MHz for use of GOES/DCS Satellite (data collection system) for fire weather forecasting and prediction of water run-off. FX: Marrieta, CA.

KO2XDF, Hughes Network Systems, Inc., to operate on frequencies in the 800

MHz range to test and operate on HNS' analog/digital cellular systems in an over the air, multiple cell system configuration. FX&MO: Germantown, MD.

KO2XDG, Hughes Network Systems, Inc., to operate on frequencies in the 800 MHz range to test and operate on HNS' analog/digital cellular systems in an over the air, multiple cell system configuration. FX&MO: Damascus, MD.

KO2XHD, Hughes Network Systems, Inc., to operate on frequencies in the 800 MHz range to test and operate on HNS' analog/digital cellular systems in an over the air, multiple cell system configuration. FX&MO: Derwood, MD.

KO2XDI, Andrew Corporation, to operate on various frequencies to conduct field strength surveys and market testing of newly developed repeater equipment.

KO2XDN, General Electric Radio Services, Corp., to operate on frequencies 1215-1400 MHz for conducting production equipment radiation tests (equipment for export). MO: Within 48 km of Syracuse, NY.

KO2XDX, TRW, to operate on frequencies 34-36 GHz and 93-95 GHz to test wave radar, for collision warning and other automotive applications. MO: Within Los Angeles, CA & Detroit, MI.

KO2XDY, North American Telectrac & Location Technologies, Inc., to operate on frequencies 908 MHz and 925.0150 MHz for development of an automatic vehicular monitoring system. FX&MO: Garden Grove, CA.

KO2XDZ, Starsys Global Positioning, Inc., to operate on mobile remote ground transmitters in conjunction with the ARGO satellite transponder for demonstration and experimental purposes. MO: Continental U.S.

KO2XEC, Signwaves, Inc., to operate on frequencies 88-108 MHz to test new product configurations for low power transmitters. FX: Continental U.S.

KO2XEE, Broadcast Microwave Services, Inc., to operate on frequencies 1990-2110 MHz, 2450-2500 MHz, and 10550-10680 MHz for development and demonstration of microwave radio equipment. MO: Continental U.S.

KO2XEF, Weber State University, to operate on frequencies 159.005-159.995 MHz for scientific radio research (study of pronhom). MO: Within 16 km of Antelope Island, UT.

KO2XEN, The University of Texas-Austin, to operate on frequencies 428.55 MHz and 429.55 MHz for fulfillment of U.S. government contract. FX&MO: Austin, TX.

KO2XEQ, Aydin Corporation, to operate on frequency 1030 MHz for development of IFF for export. FX: San Jose, CA.

KO2XES, Satellite CD Radio, Inc., to

operate on frequencies 2310-2360 MHz for development, testing, and demonstration of a nationwide CD quality satellite digital radio service for passengers in automobiles. FX&MO: Continental U.S.

KE2XMU, AOS, Inc., to operate on frequencies 1636.5-1645.0 MHz for emergency communications in remote locations via Compac-T & INMARSAT. MO: Continental U.S.

KE2XMX, Satellite Communications Equipment, Inc., to operate on frequencies 1636.5-1645.0 MHz for communication in remote areas and in disaster recovery situations. MO: St. Louis, MO.

KE2XCA, IWL Communications, Inc., to operate on frequencies 1636.5-1645.0 MHz for use of INMARSAT for demonstration purposes. MO: Continental U.S.

KM2XRE, Radiation Systems, Inc., to operate on various frequencies for fulfillment of government contract (FAA). MO: Continental U.S., Alaska & Hawaii.

KO2XFG, PCS Partner 1, G.P., to operate on frequencies 864-869 MHz, 902-928 MHz, and 1850-1990 MHz to construct and operate a personal communications system and to perform limited market studies. FX&MO: Within Orange County, FL.

KO2XFJ, Hauser Communications, Inc., to operate on frequencies 1850-1990 MHz for the development of personal communications systems and services. FX & MO: FL, MN, MD & DC.

KO2XFK, Alligator Communications, Inc., to operate on frequencies 928.00625-928.993375 MHz to demonstrate equipment for sale and conduct field strength surveys. MO: Continental U.S.

KO2XFV, Molalla Telephone Co., to operate on frequencies 902-928 MHz, 930-931 MHz, 1850-1990 MHz, 2400-2483 MHz, and 5725-5850 MHz for development of personal communications systems and conduct limited market study.

KO2XFX, Kentrox Industries, Inc., to operate on frequencies 824-849 MHz and 869-896 MHz for development of voice and data transmissions radios for higher speed, narrow bandwidth, voice and data transmission in 25 kHz channel spacing. FX: Continental U.S., Alaska & Hawaii.

KO2XFY, Opseis, Inc., to operate on frequencies 26-220 MHz for export of communications equipment. MO: Continental U.S.

KO2XFZ, Opseis, Inc., to operate on frequencies 216-220 MHz for development and testing of communications equipment.

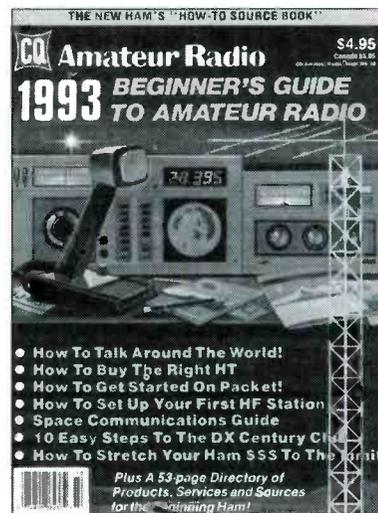
KO2XGA, Hughes Aircraft Co., to operate on frequencies 26.92-27.26 MHz and 26.98-27.26 MHz for testing and demonstrating an electronic luggage tag system. MO: CA, TX & IL.

KO2XGH, State of California, to operate on frequency 401.7025 MHz for fire weather forecasting and for prediction of water run-off. FX: Dos Rios, CA.

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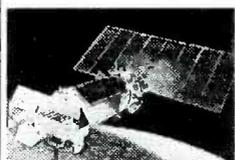
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KO2XGU, Nippon Television Network, Corp., to operate on frequencies 1636.5-1645.0 MHz for use of an INMARSAT terminal in case of disaster of public communication system. MO: Continental U.S.

KO2XGX, The World Bank, to operate on frequencies 1636.5-1645.0 MHz for use of SATURN-C satellite system for communication in areas where conventional communication means are unavailable. MO: Washington, DC.

KO2XGY, The World Bank, to operate on frequencies 1636.5-1645.0 MHz for the use of an INMARSAT satellite system for training purposes. MO: Continental U.S.

KO2XHA, Hunt Oil Company, to operate on frequencies 1636.5-1654.0 MHz and 1535-1543.5 MHz for use of INMARSAT System and to be used where conventional communication means are unavailable. MO: Continental U.S.

KO2XHB, Accidental Petroleum Services, Inc., to operate on frequencies 1636.5 MHz and 1535-1543.5 MHz to operate INMARSAT terminal to provide communications during emergency or disasters. MO: Within California.

KO2XHD, Raytheon Services Company to operate on frequencies 1626.5-1645.5 for use of an INMARSAT terminal for training purposes. FX: Seattle, WA.

KO2XHF, Comsat Land Mobile Services, to operate on frequency 1639.250 MHz for use of satellite system. MO: DC, TX, FL.

KO2XHG, Coast Land Mobile Services, to operate on frequency 1639.250 MHz for use of land mobile terminals to be used in remote locations for emergency communication. MO: Continental U.S.

KO2XHH, Comsat Mobile Communications, to operate on frequencies 1626.5-1646.5 MHz and 1530-1545 MHz for use of TM 1700A to test and demonstrate the feasibility of sending and receiving messages to and from the public access E-mail networks via INMARSAT and COMSAT. MO: Continental U.S.

KO2XHL, Alliance Telecom, Inc., to operate on frequencies 1850-1990 MHz for testing and demonstrating personal communications services. FX&MO: Rochester, NY.

KO2XHQ, Wireless Services, Corp., to operate on frequencies 1850-1990 MHz for development of personal communications services. FX&MO: Indianapolis, IN.

KO2XHR, Wireless Services, Corp., to operate on frequencies 1850-1990 MHz for development of personal communications services. FX&MO: New Haven, CT.

KO2HXS, Wireless Services, Corp., to operate on frequencies 1850-1990 MHz for development of personal communications services. FX&MO: Hartford, CT.

KO2XHT, Wireless Services, Corp., to

operate on frequencies 1850-1990 MHz for development of personal communications services. FX&MO: Cleveland, OH.

KO2XHU, Wireless Services, Corp., to operate on frequencies 1850-1990 MHz for development of personal communications services. FX&MO: Columbus, OH.

KO2XUV, Wireless Services, Corp., to operate on frequencies 1850-1990 MHz for development of personal communications services. FX&MO: Cincinnati, OH.

KO2XHY, MRC Communications Corp., to operate on frequencies 1850-1990 MHz for development of personal communications services. FX&MO: Memphis, TX.

KO2XIA, MRC Communications Corp., to operate on frequencies 1850-1990 MHz for development of personal communications services. FX&MO: Charlottesville, VA.

KO2XIB, MRC Communications Corp., to operate on frequencies 1850-1990 MHz for development of personal communications services. FX&MO: Richmond, VA.

KO2XIG, Time Warner Cable, to operate on frequencies 864-868 MHz, 902-928 MHz, 1850-1990 MHz, 2400-2483 MHz and 5725-5850 MHz for conduct personal communications services experiments. FX&MO: Orlando, FL.

KO2XIQ, Hughes Missile Systems, Co, to operate on frequencies 4.418 GHz and 4.986 GHz for demonstration of unmanned aerial vehicle technology. FX&MO: Avra Valley, AZ.

KO2XIT, Hughes Missile Systems, Co, to operate on frequencies 4.418 GHz and 4.986 GHz for demonstration of unmanned aerial vehicle technology. FX&MO: Hondo, TX.

KO2XIW, Cincinnati Microwave, Inc., to operate on frequencies 902-928 MHz for the development, production, demonstration and testing of cordless telephones. MO: Continental U.S.

KQ2XAB, GTE Government Systems, Corp., operates on frequencies 902-928 MHz for evaluation and demonstration of spread spectrum technologies for application to military needs. FX&MO: Taunton, MA.

KQ2XAD, Antarctic Support Associates, to operate on frequencies 149.195 MHz and 149.245 MHz for fulfillment of U.S. government contract (NSF). FX: Englewood, CO.

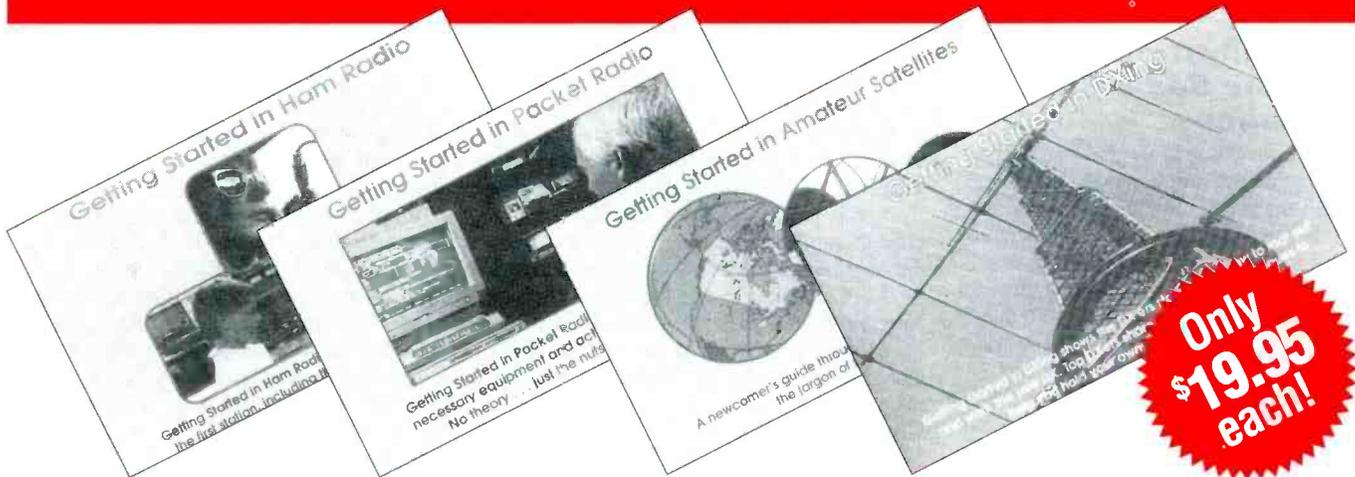
KQ2XAE, Radian Corp., to operate on frequency 1290 MHz for operation of communication equipment to collect wind and temperature profile. FX: Boulder, CO.

KQ2XAF, GTE Government Systems, Corp., to operate on frequencies 11450-12200 MHz and 14000-14500 MHz for fulfillment of U.S. government contract (Navy). MO: Aboard ship-Puerto Rico & Virginia Capes.

KQ2XAAQ, Times Mirror Cable Television, Corp., to operate on various frequencies for development and limited market



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KQ2XAS, Adelphia Cable Communications, to operate on frequencies 864-868 MHz, 902-928 MHz, 928-952 MHz, and 1850-1990 MHz for development and testing of personal communications services. FX&MO: Coudersport, PA.

KS2XEO, Technical Communications, Corp., to operate on various frequencies for experimentation, development, testing and demonstration of various voice and data modulation techniques for application to speech and data privacy equipment, digital selective, calling and signaling.

Permit Electronic Filing of Private Radio License Applications

The Commission amended its rules governing signature requirements for license applications in the private radio services to facilitate the implementation of electronic filing of private radio license applications. This amendment will allow more efficient processing of these applications with the ultimate goal of eliminating, to the maximum extent, the filing of paper applications.

Currently, all license applications filed with the Commission must include a handwritten signature. In October 1992, Congress amended the Communications Act of 1934 to allow electronic filing of license and construction permit applications. Specifically, the Act was amended to allow applications to be signed "in any manner or form, including by electronic means, as the Commission may prescribe by regulation."

Pursuant to the authority expressly delegated by Congress, the Commission has modified the handwritten signature requirement as it applies to applications in the private services. The amended rules allow applicants to "sign" applications electronically, and gives the Private Radio Bureau authority to establish procedures for electronic filing of such applications.

The Commission emphasized that until the Private Radio Bureau establishes specific procedures for electronic filing handwritten signatures will continue to be required on all private radio applications under the amended rules. Specific electronic filing procedures will be implemented by future Public Notice in the Federal Register, modified application forms, and other published procedures.

Publication of Updated Communications Act

The Commission announced publication by the House Energy and Commerce Committee of an updated edition of the Communications Act of 1934 and related statutes.

The publication is entitled *Compilation of Selected Acts Within the Jurisdiction of the Committee on Energy and Commerce—Communications Law*. The 498-page

publication contains major communications-related legislation enacted into law in the 102nd Congress. These new laws include: the Cable Television Consumer Protection and Competition Act of 1992, the Public Telecommunications Act of 1992, the Telecommunications Authorization Act of 1992, the Telephone Consumer Protection Act of 1991, and the Telephone Disclosure and Dispute Resolution Act of 1992.

The Compilation also contains the Communications Satellite Act of 1962, the Electronic Communications Privacy Act of 1986, the Children's Television Act of 1990, selected provisions from the United States Code, various FCC appropriations and authorization legislation, and an index to the Communications Act of 1934.

The staff of the House of Energy and Commerce Committee has decided to eliminate all legislative history footnotes from this edition of the Compilation, except those that correct or clarify the text. To obtain legislative history material, users of the Compilation are therefore advised to retain their 1991 editions which contain all footnotes and/or refer to the 1993 Compilation's "Index to Public Laws Amending the Communications Act" and its Chronological Order" and "Public Laws by Sections Affected."

The Compilation can be ordered for \$16.00 from the Superintendent of Documents, Government Printing Office, Washington, D.C. 20402. To order by credit card (MasterCard or Visa), you can call (202) 783-3238. The publication stock number for ordering is 052-070-06857-4.

The Commission through the Office of Legislative Affairs will continue to provide technical assistance to the House of Energy and Commerce Committee which publishes an updated version of the Compilation at least once each Congress as it does with other regulatory statutes that are under its jurisdiction.

For this ongoing updating, users of the Compilation are encouraged to bring any recommended corrections, additions, or deletions to the attention of Stephen Klitzman, Associate Director, Office of Legislative Affairs, 1919 M Street, NW, Washington, D.C. 20554, (202) 632-6405.

FCC Adds San Francisco Port To Coast Guard Vessel Traffic Service Systems

In response to a request from the United States Coast Guard, the Commission changed Part 80 of its rules to add the San Francisco, CA port area to the Coast Guard designated radio protection areas for mandatory Vessel Traffic Services (VTS), and to establish marine VHF channel 14 (156.700 MHz) as the VTS frequency for the San Francisco port area.

A VTS system is used as an advisory ser-

vice to coordinate vessel movement and prevent collisions in large, busy port areas. Vessels report information related to position, course speed, which then tracks them movement of these vessels. VTS systems use VHF marine radiotelephone equipment to exchange voice communications on channels dedicated to VTS operations in Coast Guard designated VTS areas.

As a result of the Oil Pollution Act of 1990, the Coast Guard initiated a rule-making proceeding to require certain vessels to participate in a VTS system in the port of San Francisco. The San Francisco VTS system is designed to protect the marine environment by preventing vessel collisions and groundings. By designating San Francisco as a radio protection area for VTS communications, this Commission action will allow the Coast Guard to manage vessel traffic in that area more efficiently.

Additionally, the Commission designated marine VHF channel 14 exclusively for VTS operations within the specific geographic area. This channel is already allotted for VTS communications in other ports. The Commission will permit private coast stations currently authorized to operate on channel 14 within the VTS area to continue operation until the end of their current license terms.

Further, it was brought to the Commission's attention that currently its rules do not appear to authorize ship-to-ship Narrow Band Direct Printing (NB-DP) communications. The Commission stated that this omission in Part 80 of the rules was inadvertent and amended Part 80.361 of the rules to clarify that ship-to-ship NB-DP is authorized.

Finally, with respect to Part 80, the Coast Guard asked the Commission to clarify the Channel 16 (156.800 MHz) watch requirement contained in Part 80. The Coast Guard noted that certain vessels required by Coast Guard regulation to carry radio equipment, such as fishing vessels, should be required to monitor channel 16 while the vessel is underway. Commission rules requires all compulsory VHF ship stations to maintain a watch on channel 16 during its hours of service. The Coast Guard believes that this requirement would be clearer if it were amended to read that compulsory vessels must maintain a watch "while underway." The Commission agreed and clarified the watch requirements contained in Section 80.148.

Amateur License Suspended

The amateur license of James L. Brantley (K6KPS) was suspended for a year starting 3/21/93. The suspension was in settlement of a forfeiture (civil fine) proceeding against Brantley for alleged malicious interference and broadcasting violations of the Commission's Rules. ■

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FOCUS ON FREE RADIO BROADCASTING

Off we go for another tour of the pirate radio scene!

New reporter Jim Laughlan of New York heard a new station, new to this column at least. Jim found Radio Scottish Montreal on 7413 between 2300 and 2350. He says the content was French-Canadian and Scottish music with commentaries on neo-traditionalism and nationalism among Scots in Quebec. Also an interview with Alistair McCloud. The show's host used the name Rob Roy and indicated the program was being relayed by CSIC radio.

Skip Harwood out in California found Union City Radio airing at least eight 45 minute broadcasts over a three day period on 15050. The programs featured country and rock music and commercial spoofs (Bull Frog Beer). Skip says the station included ID announcements in Morse code, which he says was very helpful. I guess so, assuming one knows the code to begin with, Skip! Scott Gentry of Illinois heard this at 2006 with Pink Floyd, Billy Idol and Frank Zappa, The Guess Who, Stones and test announcements. Also a "Rock and Roll Doctor" skit.

Jill Dybka in Tennessee had an unidentified pirate on 7415 at 0126. "Something" Radio, with mentions of Wyoming and songs by the Grateful Dead and Linda Ronstadt. Also a talk about Ninja Turtles. They gave the Wellsville address and signed off abruptly at 0140. Anyone have any idea as to the identity of this station?

The Voice of Oz was logged by Matthew A. Kiner in Pennsylvania on 7415 between 2356 and 0039. The announcer called the station "Radio Free Oz" and "The Voice of the Emerald City." Music consisted of Irish Rock, Jefferson Airplane, Gordon Lightfoot and Moby Grape. Also included were fake commercials and news. Matthew says reception was hampered by QRM and he couldn't pick out the address, though one was announced. Matt also says he thinks he heard them announce that the broadcast was a relay. Last I heard, Matt, this was using P.O. Box 452, Wellsville, NY 14895 for reports.

Scott Gentry logged CSIC on 7413 at 0204 to 0255 with Pirate Rambo, "Science Corner" feature and "Fruit of the Loom Newsbriefs." (Hope you will, indeed, become a regular reporter, Scott!)

Matthew Kiner had Radio Esoterica on 7416.5 at 2253 to 2257 being relayed by the North American Pirate Relay Service (NAPRS) and indicating it was their second broadcast. Matt says the station plays mostly oddball European rock. Their address is Box 146, Stoneham, MA 02180. (Thanks for your logs Matthew! Hope you will check into the column often!)

Skip Harwood logged Radio Anarchy. On six different occasions, in fact. Each one averages about two hours in length. They used 7418 between 0030 and 0510, the last log being at 0130 to 0330. Programming was "punk" music from Belgium and Brazil.

They announced that future broadcasts would take place on 1610, 4760, 4816 and 6000 (they shouldn't run into TOO much QRM on those frequencies!) Skip notes the signal from this one is "much improved" and suggests it may be the result of a higher antenna and modifications to the transmitter.

Jim Laughlan heard WLIS on 7413 at 2300 to 2325, announcing that it was their third anniversary broadcast. As usual, they played a lot of interval signals and, apparently, some sound effects, too, such as a jack hammer and table saw!

Regular Reader Fernando Casanova of Spain was kind enough to send some of his QSL's: one of Radio Stella International, which is based in Scotland and operates on such frequencies as 6296, 7446, 9980 and 11416, and has been heard by a number of us in North America—mostly those in the East. The other is Radio Merlin International, which uses 6240. My thanks to Fernando for both of these—we don't get the opportunity to feature QSL's from pirates outside of North America very often.

SPECIAL NOTE TO PIRATE STATION OPERATORS: This column would very much like to receive information about your station, even photographs—something of great interest to all pirate fans.

That'll do it for this time. Remember to keep those pirate loggings, copies of QSL's and other news coming my way. Hope you'll join us again next month!

Happy pirate monitoring! ■



Radio Stella International sends this full color shot of their installation. Not exactly the BBC's main studio but it seems to get the job done. (Thanks to Fernando Casanova, Spain)



Here's the QSL from Radio Merlin International, which uses 6240. (Thanks: Fernando Casanova, Spain)

Beaming In... (from page 6)

fancy, but it served the purpose. Everything had been done at minimum expense.

There were giant horseflies, too. The kind that buzz. Only one size larger and they would have required navigation lights and tail numbers.

That we spent vacation time and major effort getting to this remote spot suddenly struck my XYL as being hilarious. She was pointing out bullet riddled beer cans on the ground. We got back in the car and slowly made the downhill drive back to the gate. Nobody spoke. What did she think was going to be up there, the antenna farm on Mt. Wilson? The Sears Tower?

The town's car wash charged double for high-pressure hose cleaning all the caked mud from the car. The guy asked me where all the mud came from. I told him a lie. Surely he knew that mountain trail. The tale of the dufus tourist who drove its length

in a city slicker car was the raw material from which local legends are made. I didn't want my ride recounted for the next 20 years at Rotary Club luncheons and Fourth of July picnics.

The error of my ways caught up with me the following morning when the car began rattling. Being Sunday, there were no Pontiac dealers open. You can't get a mechanic on a Sunday morning. Mechanic? I had trouble finding a service station with someone on duty who could locate and open the car's gas filler cap without being given 5 minutes of explicit directions.

Inquiring on 2 meters for where I could get a mechanic brought several replies, but no solid information. A shout on the CB was tried on several channels to see if I could scratch up some advice. Near the Virginia/North Carolina border, in the boonies on US Route 15, I hooked up on CB with an operator whose handle was Chief. He gave me directions to drive to his place.

Hail To The Chief

Chief was waiting for me. He was a big, burly man, and was waving me around to the back. That's where he had his workshop, and a welding business. The large Moonraker antenna on the roof meant it was also his radio shack. Without delay, he had the car up on ramps. He was crawling around under it with a flashlight, cussing and calling out all sorts of automotive diagnostic information. A half an hour earlier I didn't know this fellow and here he was, on a Sunday morning, willing to answer a stranger's shout on a radio and then dig around under a car to locate a problem.

Soon enough, his XYL came out of the house and asked if we would like breakfast. We were welcomed to join them, which we gladly did.

The car rattle turned out to be something in the exhaust system that had cracked during the wild ride through the woods, and then fell apart after a little driving. Chief decided he would give it a weld and make it better than new.

Chief and I had spent the afternoon examining his QSL collection and chatting about radio. He was a retired Chief Petty Officer, and had served on the nuclear cruiser *USS Bainbridge*. They wouldn't hear of us leaving until after Sunday dinner.

This was such an enjoyable visit, my XYL felt better about the radio vacation. I was practically forgiven for my ride up the forest road. As a concession, I forced the car to stop at some of the roadside tourist souvenir shops and attractions that she kept pointing out.

Sometime I'll invite you over to see the dozens of terrific color slides of radio people, stations, and towers encountered while on our great vacation this year. I found a classic Hallicrafters SX-42 receiver at a Georgia ham swap meet. It still lights up. One South Carolina station engineer gifted me with a burned out 4-1000A transmitting tube. I'll make it into a desk lamp. These are treasured keepsakes of a memorable radio vacation.

But somehow I also ended up with non-radio items, including a Three Mile Island souvenir coffee mug, a lizard head bolo tie, and a seashell knick-knack that's either a parrot or a flamingo. Then there's a color slide of my XYL with a stuffed five-legged dog on display at the Exit 1 Truck Stop, Interstate 24, Wildwood, Georgia. When you come over, you can pick through this stuff and take home anything that strikes your fancy.

Can't wait until I head down the open road again. Even though she isn't a radio person, I just know my XYL is counting the days, too.

It was Captain Jean-Luc Picard of the Starship *Enterprise* who observed, "Where ever you go—there you are!" No, wait. It may have been Thelma and Louise.

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CLANDESTINE COMMUNIQUE

WHAT'S NEW WITH THE CLANDESTINES

Radio SPLA, operated by the Sudan People's Liberation Army and its parent, the Sudan People's Liberation Movement, has been noted active again, broadcasting programs in English and Arabic in opposition to the government in Khartoum. The station was spotted on 9190 airing a half hour in English at 0500, followed by a half hour in Arabic. Note that this is a frequency that is also used on occasion by the Sudanese government broadcaster. Although Radio SPLA has been around for several years, clandestine enthusiasts have still not found an address to which reports may be sent.

A Voz de Renamo, the station of the Mozambique National Resistance, is now reported to be considered a legitimate broadcaster by the Mozambique government. We wouldn't place any heavy wagers that situation will be permanent! The station is scheduled at 0500 to 0515 on 10100 and 0515 to 0600 on 7380 although there are reports of them using 6155 at that hour. Also scheduled at 1600 to 1615 on 10100, and probably the rest of that hour on 5916.

Another frequency change for the Voice of Democratic Burma broadcast, which is aired via the facilities of Radio Norway. It's now on 15180 (from 15140) at 1430 to 1530 in Burmese.

A DX'er in Japan has logged and QSL'd the Radio Voice of Mojahed, which is operated by the People's Mojahedin of Iran and was heard using 6220, alternating with 6260. No time was given but the station is scheduled from 0130 to 0330, 0900 to 1000 and 1630 to 1830. The station claims to be located in Iraq, but near the Iranian border and uses a mailing address

of Miss NB, Box 9270, London WC1N 3XX, England.

The Voice of Independent Kashmir seems to be expanding its hours, slowly but surely. At present it's scheduled at 0230 to 0330 on 5000, 5860 and 6300; 0700 to 0800 on 5000, 7300 and 7375 and 1630 to 1730 on 4080 and 6300. The address is given as P.O. Box 102, Muzaffarabad, Azad Kashmir, Pakistan. 4115 may be in use now, instead of 4080. Power is said to be 10 kW.

Radio Azadi (formerly Radio Irana), an anti-Iranian clandestine station, is heard on 9400, signing on in Farsi at 0230.

Mikell Goetsch of Pittsburgh, PA reports loggings of three of the anti-Castro programs currently on the air. He heard La Voz de la Fundacion via WHRI, opening at 1000 on 9850 with man and woman in anti-Castro talks. La Voz de Alpha 66 via WHRI-7355 at 0800 with a sign on announcement in English, then into Spanish and featuring Cuban patriotic music interspersed with anti-Castro talks. Also heard was La Voz de Unidad Cubana, via WRNO-7355 at 0301, also in Spanish with anti-Castro talks. Mikell also had the Haitian Radio 16 Desanm program via WRNO-7355 at 0043 in Creole with talks and Haitian music, frequency and times announcement at 0054. Mikell has also received two QSL's recently —American Dissident Voices and La Voz del CID.

Marie Lamb in New York reports reception of the Voice of the Iraqi People which, as Marie notes, is a US-supported anti-Saddam Hussein station. Marie logged this on 17950 at 1924 in Arabic with Middle Eastern music and heard a clear ID at

1931. Colombian clandestine Radio Patria Libre continues to be noted for around 40-45 minutes in the evenings on such frequencies as 6270 and/or 5835 or 5840. Based upon its operating history you can expect this one to turn up just about anywhere, including the 15045 area in the period up to 1200, sometimes even later, though that time/frequency combo is more of a sometime thing. After all this time we still haven't a clue as to where one might send a reception report for this station! Suggestions are welcome!

The Rwandan clandestine Radio Muhabura has been noted again, but on a different frequency, 6340 now, as opposed to its former 6400v. Sign on time is uncertain, but may be 0300, 0330 or 0345, running to about 0445.

American Dissident Voices, the pro-white, anti-homosexual program aired over WRNO-7355 Sundays (Saturday night local) at 0200 is now issuing verifications. The address is P.O. Box 90, Hillsboro, WV 24946. The QSL describes the program as "the only uncensored patriotic radio program on the air today." Robert Ross in Canada received a QSL, too. An earlier report produced a book catalog and two issues of the "Patriot Review." Bob notes that the return address on the earlier package was 33838 SE Kelso Road North, Box 596, Boring, Oregon 97009. Mikell Goetsch also recently received a QSL. The QSL is paper —not a card—and is tucked inside the catalog, easy to miss if you're not looking for it!

We welcome your clandestine logs, QSL news, background information on stations, schedules and the like. ■



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Our August Winner

This month our winner is Larry Flegle, of Woodstock, Georgia. Larry told us:

"When I was 12 years old, my parents gave me a 6 transistor Toshiba portable AM/FM radio. Using the earphone, I listened for mediumwave DX almost every night. Because I kept falling asleep with the radio playing, I went through a lot of batteries.

"This early fascination with radio led to a career in radio, first as an announcer, then station owner. From a hobby standpoint, I have remained a broadcast band DX'er, SWL, CB'er, ham, ATV enthusiast, and MARS operator.

"During my career in broadcasting, I have worked for WAPG, WHAN, WIPC, WINT, WXKL/Stereo, WSIR, and WQYK, I was co-owner of WBTG-FM, Sheffield, Alabama.

"My ham call is N4TMW, my CB call is KEQ4754, and I am Registered Monitor KGA4DK. Currently, I am President of the Southeastern DX Club.

"Just think, this was inspired by giving a kid a portable radio 32 years ago, and not getting on his case too often when he stayed up late listening to DX!" ■



Larry Flegle, N4TMW, of Woodstock, Georgia.



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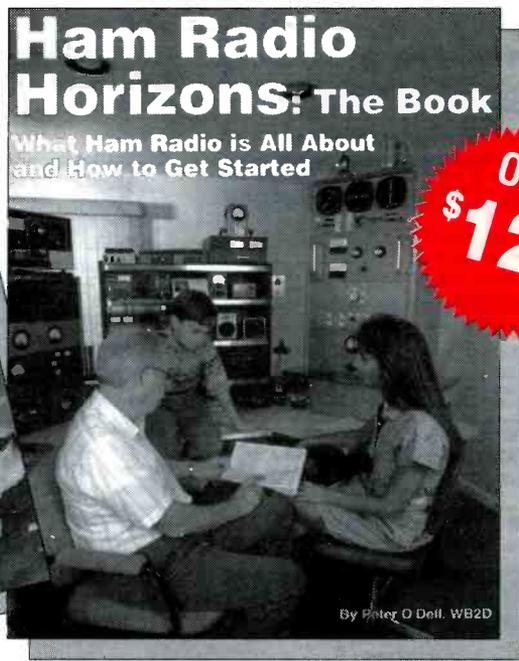
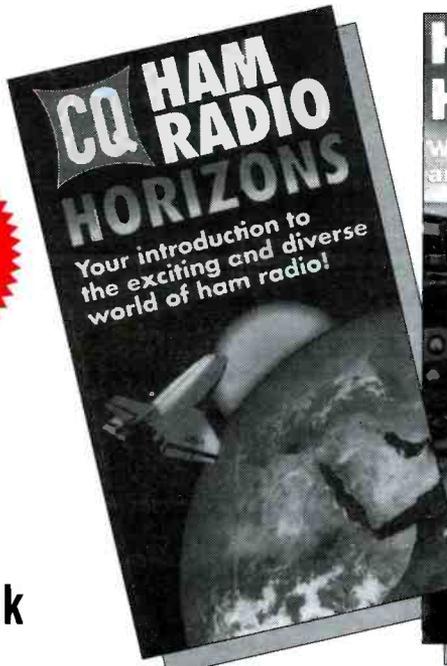
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Total Coverage Radios



AOR AR1000XLT

AM Broadcast to Microwave
1000 Channels
500KHz to 1300MHz coverage in a programmable hand held. Ten scan banks, ten search banks. Lockout on search and scan. AM plus narrow and broadcast FM. Priority, hold, delay and selectable search increment of 5 to 995 KHz. Permanent memory. 4 AA ni-cads and wall plus cig charger included along with belt clip, case, ant. & earphone.

Size: 6 7/8 x 1 3/4 x 2 1/2. Wt 12 oz.

Fax fact document # 205

\$449.⁰⁰

AR2500

2016 Channels
1 to 1300MHz

Patented Computer Control

62 Scan Banks, 16 Search Banks, 35 Channels per second. Patented Computer control for logging and spectrum display. AM, NFM, WFM, & BFO for CW/SSB. Priority bank, delay/hold and selectable search increments. Permanent memory. DC or AC with adapters. Mtng Brkt & Antenna included.

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Fax fact #305

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AR3000

400 Channels

100KHz to 2036MHz Patented computer control. Top rated receiver in its class, offers AM, NFM Wide FM, LSB, USB, CW modes, 400 scan memories. 4 priority channels. Delay & hold & Freescan. AC/DC pwr cord and whip ant.

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Fax fact document #105

\$1195.⁰⁰

AR2800

1000 Channels
.5 to 1300MHz

AM Broadcast to Microwave 1000 Channels 500KHz to 1300MHz coverage in a programmable mobile. Ten scan banks, ten search banks. Lockout on search and scan. AM plus narrow and broadcast FM. Priority, hold, delay and selectable search increment of 5 to 995 KHz. Permanent memory. DC or AC with adapters. Mtng Brkt & Antenna included.

Size: 2 1/4H x 5 5/8W x 6 1/2D. Wt. 1lb.

Fax fact #350

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AOR AR1500

Full Coverage with SSB and 1000 Channels.

500KHz to 1300MHz. Ten scan banks, ten search banks. Search lock and store. BFO. 2 Antennas. AM/NFM/WFM. Selectable increments. Tons of features, small size:

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Wt 14 oz.

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Scanners with Shortwave



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\$399.⁰⁰ each.



MVT7000

MVT8000

Top rated receivers from Japan now available in the USA. Tune down to 100KHz. Sensitivity guaranteed from 8MHz up. 200 scan channels. AM/NFM/WFM. No gaps, no cut-outs. Mobile is super slim line. AC/DC. Order MVT8000, includes antenna, mbl mnt. Order MVT7000 for the hand held. Complete with Ni-Cads, Charger, antenna & earphone.

Fax fact document #275



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

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- 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
- BC560XLTZ**\$99.95

Fax fact on above: #560

Scan/CB/Highway Patrol/WX. X,K,Ka,Wide & Laser

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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



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Other Pre-Programmed Scanning Receivers

- BC350AS**\$129.00
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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, & N cad.
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

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12 bands and 40 channels with 800MHz and nothing cut out. AC or DC.
Fax facts #690

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Other Table Top Scanners

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