POPULAR COMMUNICATIONS

APRIL 1999

Tinian VOA Relay On The Air! — Page 52

AT&T High-Seas SSB Stations Going Off The Air

New Uniden Scanner Tracks Multiple Trunked Systems! — Page 43

- North To Alaska: A Clear Message From KNLS
- Tacoma's KKMO — Still Talking After All These Years
- Spotlight: Sony's New Handheld Scanner With PC Interface

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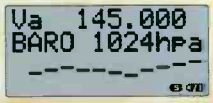

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POPULAR COMMUNICATIONS

APRIL 1999 VOLUME 17, NUMBER 8

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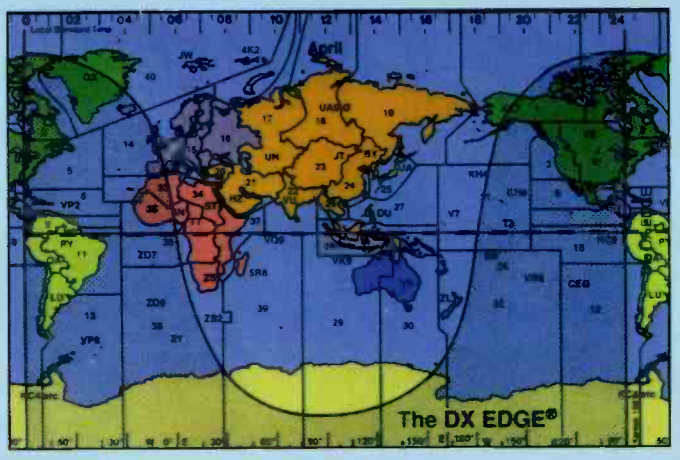

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COLUMNS

DEPARTMENTS

ON THE COVER: *AT&T high-seas SSB stations are going off the air on February 28. This resort boat captain can use a powerful competing shore station — WLO, Mobile, Alabama. For details, see page 16. (Photo by Larry Mulvehill)*

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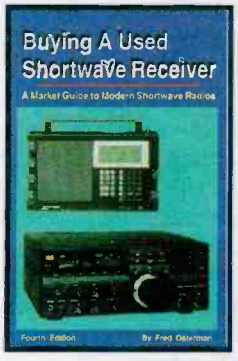

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Tuning In

AN EDITORIAL

BY HAROLD ORT, N2RLL, SSB-596

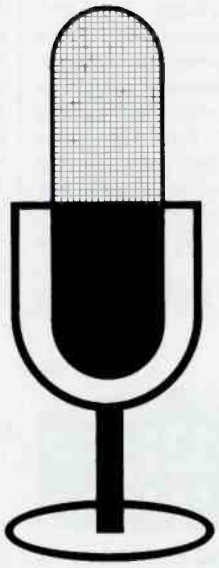
Low-Power FM Update — It's Coming!

We've just received some good news on the LPFM (microbroadcasting) front this month from the FCC. You'll recall that the FCC had been considering several proposals for establishing a microbroadcasting service in the U.S. It now seems that, according to the FCC's Mass Media Bureau, a comprehensive 58-page Notice of Proposed Rule Making will be reviewed on **January 28th,** a few days after this issue of *Pop'Comm* leaves for the printer.

I understand the FCC is working diligently on this, with the keen interest and general support of Chairman William Kennard. Our phone call to Kennard's office was answered by David Fiske who said, ". . . our mass media people are working hard on this issue." That's not to say it's a done deal, but in reading between the lines, it's becoming apparent that LPFM is finally getting the attention it deserves, giving communities what they desperately need — the return of broadcasting to its small-town roots. My feeling is that by the end of this year, we'll be seeing approval for LPFM stations up to about 1 kW, and of course, with a couple of much lower-powered categories to satisfy special events, churches, and communities with a need for either a one-time event station or a station powerful enough to cover a couple of blocks during the day.

Certainly, there's the usual drone of criticism from big broadcasters concerned about loss of revenue and competition, but don't you think the spirit of competition is the cornerstone of our great democracy? Radio stations come and go, and formats change as frequently as we change our socks. Exactly why big-gun broadcasters are afraid of LPFM stations is a mystery to me. It would be a lot like the New York Times fearing competition from a five-page weekly neighborhood flyer stapled in the upper left corner. Maybe the big boys aren't offering communities what's been needed for a long time: a voice in their community instead of the usual ho-hum of syndicated shows that are the same-old grind as *Three's Company* reruns.

It's our belief that the creation of an



LPFM Broadcast Service would give ordinary Americans the ability to own and operate their own small radio station as a lucrative business, furthering the creation of small business opportunities. Based on a strict non-interference policy set forth by the Commission, most stations would operate at between 500 and 1,000 watts; more than enough to cover 10–15 miles — sufficient power to be effective. These stations would, of course, all be FCC-licensed and require professional recommendations and engineering data to be considered for the service in the first place.

Stay tuned. It's not over yet, but we're keeping an eye on this hot potato — an issue hot enough for Uncle Charlie to devote sizeable space on their Website. For the latest on this issue, be sure to check out the FCC's Internet home at <http://www.fcc.gov/mmb/prd/lpfm/> or the brand new *Pop'Comm* Website at our new address, <http://www.popular-communications.com>.

Although the initial comment period for these proposals has passed, the Notice of Proposed Rule Making of January 28th will have another 30-day public comment period, followed by a 30-day comment period for "reply comments." Should you miss the comment dates, your letters can't

(Continued on page 77)

POPULAR COMMUNICATIONS

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CIRCLE 131 ON READER SERVICE CARD

Pop'Comm P.O.

LETTERS TO THE EDITOR

Each month, we select representative reader letters for our "Pop'Comm P.O." column. We reserve the right to condense lengthy letters for space reasons and to edit to conform to style. All letters submitted must be signed and show a return mailing address or valid E-mail address. Upon request, we will withhold a sender's name if the letter is used in "Pop'Comm P.O." Address letters to: Harold Ort, N2RLL, SSB-596, Editor, *Popular Communications*, 25 Newbridge Road, Hicksville, NY 11801-2909, or send E-mail via the Internet to <popularcom@aol.com>.

The Debate Continues

Dear Editor:

This is in response to John Arthur's commentary on the Morse code requirement for ham licenses being "obsolete." After more than 25 years in computers and nearly 19 years in the U.S. military, the loss of trained and experienced Morse operators is of great concern to me. There is an ever-increasing dependence on the Internet and communicating using computers. My worry is that we will reach a point where the fancy, high-tech equipment we're using will be rendered useless as a result of hackers, war, natural disaster, or electro-magnetic phenomena.

Though I am having trouble learning Morse, my goal is to upgrade my No-Code Technician license to at least full Technician. I believe that there is still a place for Morse code in the hobby.

Gary McCullah, KC5RNE

Dear Gary:

Yes, there is still a place for Morse code in the hobby, but in the grand scheme of things, if there's no one listening for the code — military, commercial, etc. — then it's time to go with technology, much like when the world graduated from props to jets and from toaster ovens to microwaves.

Making Sense Of It All

Dear Editor:

I had to read Mr. Ponzio's editorial with amusement, and some agreement too. I have worked in the broadcast business for over 23 years and have seen the "dumbing of America" firsthand! Several years ago, they threw the required licenses out the door. Now we have on-air people that don't even know what plate voltage is!

Pertaining to ham radio, the code isn't an issue to me, but what's with the rest of the structure? The six grades of license makes no sense at all. Is there ANY other country with this set-up? You figure it out. Five of the six have HF privileges! What! I have a 10-meter QSO every morning with several friends in England, and they constantly ask, "What's with your class structure?" They ask, "Why are so many of your hams obsessed with what a person's class is?" It makes no sense to me at all. A Novice can work the world on 10, but can't talk to their neighbor on 2 simplex! Also, when Advanced folks ask me how to build an antenna, something has happened. Oh yeah, by the way, please don't ask what my 10-20 is.

Geeeezzz!! What is with all of that I keep hearing?

Bill, KC4KMG

Dear Bill:

Probably Mr. Ponzio on 11 meters.

Above And Beyond

Dear Editor:

This letter is in response to the letter from Mr. Vincent Ponzio, KA3NRX regarding the continued whining of the anti-Morse code crowd. Mr. Ponzio's attitude is the very reason I feel so unwelcome in amateur radio. It seems as though some operators are too good to associate with those of us who do not know the code and hence we are labeled as "appliance operators." I got my start in amateur radio from a co-worker, Don Hemanover, N9DOO, while I was working as a telecommunications installer for the Indiana State Police. Don went out of his way to help me study and obtain my license. I elected to enter amateur radio by going the no-code route and then try to later learn code. Don was quite happy when I passed the exams and got my license. He even demonstrated to me what it was like to send code.

I tried and tried to learn the code after I obtained my license, but after a while I could not decipher what I was hearing. I did not give up and I continued to practice and had the same results each time. I finally gave up after two years. After becoming a deputy sheriff, I tried to master the code again and failed. I then started to realize that since I was a no-coder, other hams shunned me and I never really felt welcome in the amateur radio community. I always hear sayings like " all it takes to be a no-code ham is an HT and a belt clip." I tried to demonstrate technical expertise by building a lot of my own amateur gear from scratch, talking on 2 meters, 6 meters, and 70-cm sideband, working meteor scatter, and trying to apply what I learned to my hobby and sharing it with others. I was there to help others, regardless if they were hams and did or did not know code, and even if they weren't ham operators. Needless to say, I still felt I was not good enough for the other operators. All I have to do to prove that my feelings are correct is to read letters like Mr. Ponzio's and listen to other amateur's comments on the radio.

Some of us in the amateur radio community have really tried to learn and master the Morse code and are unable to do so. Some of us have also demonstrated a lot of technical expertise and try to make up for not knowing the code. I would like to see the code requirement dropped for some of the HF bands, but with attitudes like Mr. Ponzio's in the amateur radio community, I don't see it ever becoming a reality. I also foresee the hobby attracting fewer people because of these very types of attitudes.

I praise those who are in our amateur community that really try to help new hams and make them feel welcome, but I have a feeling those who try to help and make others feel welcome are far outnumbered by those who don't. In the meantime, I'll continue to help others to the best of my ability and make them feel welcome to the hobby, whether they know code or not. I will also think hard about everything I have heard or read. Maybe when it's time to renew my license, I won't. Then Mr. Ponzio can be happy that he and the others who feel as he does have rid the community of another whiner.

Jerry L. Brown, N9MGC
Brazil, Indiana

David Places His Order

Dear Editor:

I enjoyed reading your editorial in the January 1999 edition of *Popular Communications*. I'm glad that I'm not the only person who thinks along those lines. And if cellular phone jammers start being sold in the U.S., please place an ad or a notice in the magazine. I'd probably buy one.

David Olson

Dear David:

You and 10 million other folks!

A Word From Tom

Dear Editor:

Regarding the review of "FirstRate" in the September 1998 *Pop'Comm*, for reasons unknown, the authors of FirstRate have not acknowledged that we (TRS Consultants) discontinued its SWBC Schedules subscription service in March 1997. Subscribers continue to be served by Mark Fine of FineWare. In fact, the program datafiles have been greatly expanded to include many program listings. Full details are available at FineWare's Website at <http://www.crosslink.net/~mfine/>.

TRS Consultants continues to provide links and information for the shortwave listener and hams at <http://www.trsc.com/>. We also maintain a link on our homepage to FineWare for those persons who have not heard about the transition of services.

Tom Sundstrom, W2XQ
TRS Consultants

Warren Says: Let CW Be An Option

Dear Editor:

I just read a letter and your reply, and after laughing my beep-boop off and having read no further, I'm sending this, still laughing! Vincent Ponzio has put himself in the same league (I hope not League) as Rush Limburger, Howard Squirm, and a host of others who insist on making asses of themselves in front of a mic, key, typewriter, or whatever. I hope you don't have a bulge in the side of your mouth, as you obviously replied tongue-in-cheek!

This CW thing has gone far into the absurd and is bordering on bizarre! The "debate" promises to continue 'til the cows come home.

I agree with your opinions, especially "I Got Mine, Now You Get Yours." I can't recall how many battles I've had with bosses who refuse to accept innovation. "We've been doing it that way for years" is their battle cry and they still don't realize that attitude has made America so backward in the world market. Get rid of the code requirement (ITU permitting) and let it be an option for those, such as myself, who want to use it. Get rid of the sub-bands too. We can't go where the rest of the world is, and that's also where the DX is! A prime example is 160 meters where hams honor a gentleman's agreement and prove that we don't need legislation to get along together. We don't need the FCC or the ARRL forcing us into pigeon holes in order to be good operators. Maybe I'm a rebel, but I do have a cause. It's called improvement!

Warren
KB2VXA

KNLS — New Life From The North

It Traveled A Long And Winding Road

By Gerry L. Dexter

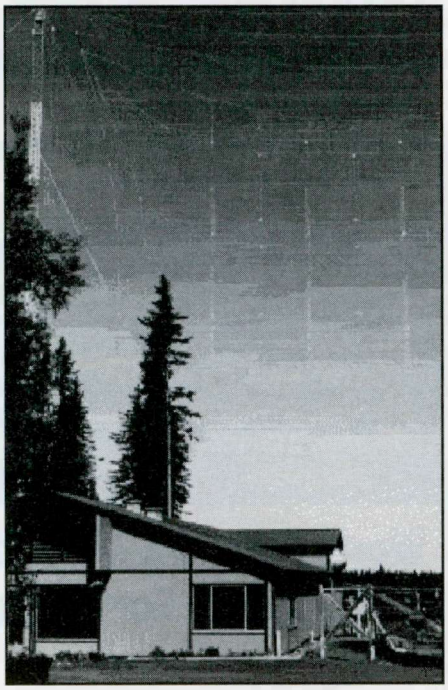
Radio Moscow, in one of its broadcasts back in the early '80s declared KNLS to be "... a wasted effort by this break-away Christian organization ... KNLS is another blatant example of how the Reagan administration and the Central Intelligence Agency are trying to cause internal dissension in the Soviet Union and the People's Republic of China."

Clearly, the efforts of Christian broadcaster KNLS, beaming much of its programming in Russian to the former Soviet Union, were not appreciated by the Kremlin. Indeed, there were even reports that the Soviets were jamming the KNLS signal during its Russian language broadcasts.

But what a difference a few years can make! In January 1991, KNLS became the first religious station to broadcast a weekly series of one hour Christian programming from within the former Soviet Union, carried, no less, on one of the still government-owned networks. These programs, along with KNLS' regular Russian language broadcasts, generated a flood of listener letters. With the fall of Communism in late 1991, Russians were finally free to request Bibles and other Christian literature, whereas Soviet listeners had to smuggle their letters out of the country through foreign travelers. To better fill that need, KNLS opened a satellite office in St. Petersburg, Russia, in late 1992, making it much easier for Russian listeners to write the station with questions or requests.

Different From Others

KNLS is a bit different from the average shortwave religious broadcaster. In fact, there are a number of things that are not what you might expect from this kind of station. For example, KNLS operates from the unlikely location of Anchor Point, Alaska. This site was specifically chosen by the corporation responsible for KNLS, the World Christian Broadcasting Corporation, a non-profit organization established in 1976.



A view of the outside of the KNLS transmitter building at Anchor Point, Alaska.

World Christian Broadcasting (WCB) was founded with the idea of creating a shortwave radio station which could broadcast basic Christian principles to areas of the world which have had limited exposure to the Bible or where its teachings have been politically opposed. Incorporated in Texas by a handful of Christian men, WCB has since made its home just outside Nashville, Tennessee at 605 Bradley Court in Franklin, Tennessee 37067-8200.

Initially, WCB faced many problems, even tragedy, in bringing KNLS to life. In 1977, two founding members of WCB's Board of Directors, Dr. Lowell Perry of Abilene, Texas, and California businessman Ken Ferguson, were scouting possible locations for the new station when their plane went down, killing both men. After the site in Alaska had been selected, local residents raised concerns about the effects the transmitter's electromagnetic radiation would have on themselves and their environment.

The next obstacle to overcome was time. Six years passed before WCB could obtain a building permit from the Federal Communications Commission. And the construction itself was not easy. A mile of road had to be cut through the rugged Alaskan landscape just to reach the building site! Wells were dug, rustic housing installed, the antenna was erected, and the transmitter facility almost completed. Then, disaster struck again. An unknown arsonist set fire to the transmitter building, destroying half the structure. WCB's technical staff counted themselves fortunate that no one had been hurt.

Finally, the project was complete and KNLS aired its first broadcast on July 23, 1983. Yet, even after it became fully operational, KNLS experienced many engineering difficulties, including the problem of radio frequency interference (RFI) leading into the station's equipment. The effect of Alaska's harsh weather conditions on the antenna was also a grave factor to be overcome. A special counterweight system had to be designed to protect it from high winds and icing. Much time and effort was expended in controlling and curing these technical concerns.

KNLS runs a 100 kW transmitter, beaming signals from a TCI-611 antenna, which can be aimed at the Western Pacific, Asia, and Europe. The main targets are the People's Republic of China and the former Soviet Union. KNLS has received mail from listeners in over 100 countries. The antenna's 270-degree beam has the back of the antenna aimed at Atlanta, Georgia, while the back of the 330-degree beam runs toward the American West Coast.

KNLS engineers chose the Alaskan site as the best location from which to send a clear signal to the station's intended audiences. Little more than a village, Anchor Point is the farthest-most point of the Kenai Peninsula, approximately 120 miles southwest of Anchorage.

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BROADCASTING SCHEDULE, KNLS - THE NEW LIFE STATION
ANCHOR POINT, ALASKA 99556 USA

Revised 2 October, 1998

Schedule in Universal Time

CURRENT SCHEDULE September 27, 1998 - March 26, 1999					TENTATIVE SCHEDULE March 27, 1999 - September 26, 1999				
FREQ. (kHz)	METER	TIME (UTC)	SERVICE AREA	LANGUAGE	FREQ. (kHz)	METER	TIME (UTC)	SERVICE AREA	LANGUAGE
6150	49	0800-0900	Eastern Russia & China	English	9615	31	0800-0900	Eastern Russia & China	English
6150	49	0900-1000	Eastern Russia	Russian	9615	31	0900-1000	Eastern Russia	Russian
7365	41	1000-1100	Eastern China	Mandarin	9615	31	1000-1100	Eastern China	Mandarin
6150	49	1100-1200	East Central Russia	Russian	9615	31	1100-1200	East Central Russia	Russian
7365	41	1200-1300	Eastern China	Mandarin	9615	31	1200-1300	Eastern China	Mandarin
7365	41	1300-1400	Asian Pacific Coast	English	9615	31	1300-1400	Asian Pacific Coast	English
7355	41	1400-1500	North Central China	Mandarin	9615	31	1400-1500	North Central China	Mandarin
7355	41	1500-1600	Eastern China	Mandarin	9615	31	1500-1600	Eastern China	Mandarin
7355	41	1600-1700	Eastern China	Mandarin	9615	31	1600-1700	Eastern China	Mandarin
7355	41	1700-1800	Central Russia	Russian	11780	25	1700-1800	Central Russia	Russian

CURRENT PROGRAM SCHEDULE

MANDARIN LANGUAGE PROGRAMS

Variety style — Everyday of Week — 1000,1200,1400,1500,1600

RUSSIAN LANGUAGE PROGRAMS

Variety Style — Everyday of Week — 0900,1100,1700

ENGLISH LANGUAGE PROGRAMS

Variety Style — Everyday of Week — 0800,1300

ENGLISH LANGUAGE PROGRAMS

Title of Program	Days of Week	Time (UTC)
Programs in English	Everyday	0800 1300

English language broadcasts include America's best music, timely feature stories, listener letters, and thought provoking messages.

NOTICE !!

Most of the programming for KNLS is broadcast according to the above schedule. At various times we also provide programming to other stations which use them at their discretion. Since we have no control of the times or frequencies being used we cannot provide QSL's for these transmissions. We would appreciate confirmation from DXers.

The staff of KNLS continues to offer Bible study by mail. Write to us if you are interested in a course in English, Russian or Chinese. We will also try to locate courses in other languages.

In March 1989, KNLS became the first shortwave station to make full-time use of the Optimod-HF audio processor, which, according to the staff, has greatly improved the readability of the signal. In 1990, KNLS added an automation system to its facility.

Another unusual feature of KNLS is its programming. Unlike many religious broadcasters, the programming is very low-key. There's no preaching, no shouting, no hellfire and damnation, and no sales pitches. There are never any on-air appeals for money.

Funding for the station is all done privately through donations made to WCB by churches and individuals. KNLS programs are conceived, written, and produced exclusively by the WCB staff at the operations center in Tennessee. There are currently four native Russian and four native Chinese speakers in WCB's programming department. They are responsible for writing and recording the bulk of the foreign language broadcasts for KNLS; three hours daily in Russian and five in Mandarin Chinese. The two hours of English broadcast each day come from a variety of contributors from all over the United States.

All of the programs are arranged in a variety/magazine format, which includes both classical and contemporary music, feature items on a wide range of topics, English language lessons and, of course, brief religious messages. An effort is made to avoid teaching any particular creed or denominational philosophy. Instead, the emphasis is placed on the Bible, on what it says and what the programmers believe that means in one's everyday life.

The Future Of KNLS

In the future, World Christian Broadcasting plans to add a second transmitter and antenna at the Anchor Point site. Such a move would substantially enhance KNLS' presence in its target regions and allow for an increase in the number of broadcast hours. The possibility of such technical additions had been foreseen and provided for by the station's original designers. In fact, the KNLS facility was designed to accommodate three-100 kilowatt transmitters.

KNLS is an excellent verifier. It sends a full color QSL picturing the studio-transmitter building at Anchor Point. One first class U.S. stamp or one International Reply Coupon is requested to cover return postage. Reports can be sent to KNLS, P.O. Box 473, Anchor Point, AK 99556.

Tacoma's Tenacious Talker: KKMO

It's Had 7 Frequencies, 8 Power Levels, 10 Locations, And 3 Callsigns! 72 Years Later, It's Still Going!

By Alice Brannigan

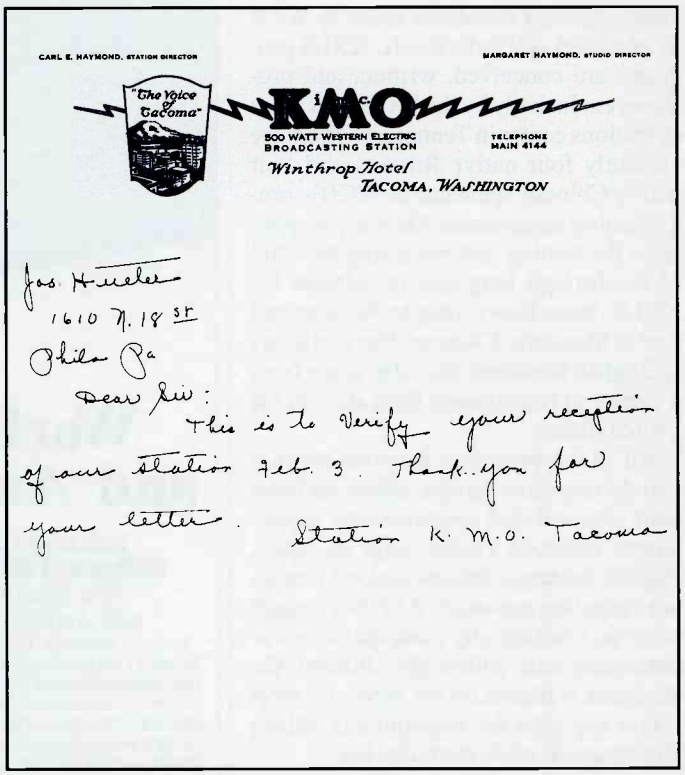
The first 25 broadcasting licenses were issued beginning late in 1921. But 1922 saw more than 600 new broadcasters licensed in the U.S. in the rush to participate in this wonderful new technology. Everyone who wanted to be part of the sensational radio fad sweeping America set-up their very own station. It was inexpensive and simple to put a flea-powered station on the air. Fact is, in the early 1920s, the U.S. Department of Commerce wanted broadcasting to grow, so it gladly issued a license to virtually every citizen and American-owned company applying for one.

The Love Electric Company was issued one such license on April 1, 1922. It was for KMO, a little 10-watt station to be operated on 833 kHz from their shop at 732 Pacific Street, Tacoma, Washington. A 113-foot mast was installed, which brought KMO reception reports from as far away as Alaska. The *Tacoma Times* newspaper agreed to underwrite many of KMO's programs, and provide the station's news reports. KMO's schedule included religious programming and local election returns.

In late 1924, KMO was told to shift frequency to 1200 kHz, where it had to share hours with Tacoma's two other stations, KFBG and KGB. KFBG was a 50-watt station operated by the First Presbyterian Church, while KGB was the 50-watt station of the *Tacoma Daily Ledger* newspaper. How could puny 10 watt KMO survive in the shadow of two far more powerful partners on 1200 kHz? The solution came early in 1925 when KMO increased its power to 100 watts upon relocating to 818 North L Street, a residential area. By September of 1925, KFBG had gone dark, followed three months later by KGB. These two events left KMO the full time local occupant of 1200 kHz. At this point, KMO was leased by Love Electric for 18 months to the Tacoma Supply Inc., and relocated to the leasee's facilities at 738 Pacific Avenue.

When the lease ended, Love Electric began searching for a buyer for KMO. In August of 1926, KMO was sold to radio engineer Carl E. Haymond, who promptly scrapped the existing KMO technical equipment and replaced everything. The transmitter was replaced with a used 500 watt Westinghouse unit from Portland's KGW, although KMO continued to operate at the 100-watt level until early 1927.

In February 1927, Haymond moved KMO to new rooftop studios at the Hotel Winthrop, at Ninth and Broadway. The 500-watt transmitter was installed atop the Tacoma Rhodes Store, 950 Eleventh Street, where it was operated at the 250-watt level. A single wire inverted L-type antenna was used. Soon after, the station was told to move to 1180 kHz, and in November of the same year, it had to shift frequency again, this time to 1340 kHz. The station became known as "The Voice of Tacoma."


CARL E. HAYMOND, STATION DIRECTOR

MARGARET HAYMOND, STUDIO DIRECTOR

"The Voice of Tacoma"

KMO

500 WATT WESTERN ELECTRIC BROADCASTING STATION

TELEPHONE MAIN 4144

Winthrop Hotel
TACOMA, WASHINGTON

Jos. Hueter
1610 N. 18 St
Phila Pa

Dear Sir:

This is to verify your reception of our station Feb. 3. Thank you for your letter. Station K. M. O. Tacoma

This undated KMO veri is from the 1931–32 period when the studios and offices were in the Winthrop Hotel, and the station was running 500 watts. An insightful thought from the station reads, "Radio gives wings and sound to words the eye might miss." Still true today. (Collection of the late Joe Hueter, now in the Pop'Comm *archives.)*

As of early 1930, KMO had moved to 860 kHz and was permitted to operate with 1 kW days (500 watts at night). This new dial position limited the station to specific hours of operation. A year later, the transmitter was relocated to the roof of the Garsten's Building, 1634 East J Street, and the daytime power was cut back to 500 watts. At this location, a four-wire T-type antenna was installed. A further cut in power was required in 1932 when KMO changed to 1330 kHz. Though allowed to use only 250-watts, it was permitted to operate on this channel full time.

In early 1936, new studios were opened on the second floor at 914 1/2 Broadway. The FCC granted a permit for KMO to

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58.5 (w) x 130 (h) x 31.3 (d) mm, 310 g

Computer not included.

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return to 1 kW, and install a 197-foot Blaw-Knox vertical radiator, when it moved to its new transmitting site. This site is 4501 Pacific Highway East, Tacoma. The presently unused tower still stands in a field behind the former transmitter building.

More Power

In late 1940, the FCC authorized KMO to increase its power to 5 kW. In March of 1941, the NARBA treaty required KMO to shift to 1360 kHz. As of August, 1941, the power level was upped to 5 kW.

Haymond and his family sold their interests in KMO as of October, 1954. The new owners, Tacoma Radio Corporation, paid $200,000 for the property. In 1957, the new owners renovated the existing transmitter building east of town and consolidated all of the station's operations at that location.

By April of 1963, the station had again been sold, this time for $254,500. The new owner was Edward A. Wheeler, who operated the station with a heavy emphasis on country music. The transmitter site was changed again in the spring of 1969, this time to Waterworks Road at the Pierce-King County line, Tacoma. The transmitter was operated remotely from the studios, which remained at the Pacific Highway East location. In 1972, KMO increased the height of its antenna to 455 1/2 feet.

Another Sale

Only three years after the old tower was made taller, the KMO transmitting site was relocated to 3700 53rd Avenue, N.E., atop a hill overlooking Tacoma. A new 455-foot guyed tower was erected on this site. In 1977, KMO was sold for $500,000 (plus a $100,000 consulting agreement to the seller) to the Jim Baine Company. Can you guess what that meant? *Yup!* In March of 1979, KMO was granted a permit to change its transmitting location to Ton-A-Won-Da Avenue, at the shoreline of Tacoma Bay.

In January of 1983, the FCC approved the sale of KMO for $2 million, a decent enough increase in the value of a station started as a 10-watt backroom novelty. But the deal was never consummated after the existing owner decided to hold on to it. In April of that year, the venerable call letters KMO were dropped in favor of KAMT and the country music format was dumped in favor of an adult contemporary music format.

Soon after, the studios were relocated to the ground level of Tacoma's restored Old City Hall, 621 Commerce Street, as the station became known as "AM Tacoma." After only four years, it was decided to discontinue the KAMT call letters. A new call sign, KKMO, reminiscent of the station's original historic call letters, was obtained from the FCC. Not long after the new call letters appeared, so did the station's new big band music format.

In 1988, KKMO was approved to construct an experimental synchronous 1 kW AM station at Mountainlake Terrace. This transmitter was approved for a non-directional antenna and for simultaneous operation with KKMO. In 1989, KKMO moved its studio and offices back to its former transmitter site at 4501 Pacific Highway East. In 1991, ethnic talk programs (Korean, Japanese, Spanish) were added to the schedule.

KKMO has served Tacoma for 26 years longer than any other local broadcaster, for 56 years more than the city's other AM station. In fact, KKMO is Washington State's fourth oldest continuously licensed AM broadcast station. It operates on 1360 kHz with 5 kW and its non-directional antenna system. Studios and offices remain on Pacific Highway East.

Toughing It Out In Tacoma

Here is an example of the travails of a station with the iron will to make a go of it. Still, it never won any major national awards, nor has it been singled out and spotlighted for honors in books on broadcasting history. Most of the hundreds of other early 1920s low-powered broadcasters started up and went dark in the twinkling of an eye, scarcely leaving a trace of their existence. Also gone are a number of early broadcasting stations that ended up pushing some power and managed to last 50 years or more. For example, WFAA (Dallas, Texas, 5 kW), WCAL (Northfield, Minnesota, 5 kW), WHBI (Newark, New Jersey, 2.5 kW), WNAD (Norman, Oklahoma, 1 kW), KUSD (Vermillion, South Dakota, 1 kW), WNBC (New York, New York, 50 kW) to cite just a few. Early Canadian broadcaster CKCO (Ottawa, Ontario, 1 kW) was able to survive more than 20 years, but eventually pulled the plug. Likewise did pioneer stations CJCJ (Calgary, Alta., 100 watts, CHGS (Summerside, P.E.I., 100 watts), CKCR (Kitchener, Ontario, 205 watts), and CKCV (Quebec City, Quebec, 250 watts), among others. (A few stations listed here originally began with other call letters.)

Just like the city in which it's located, this station is bold and persistent. When others declined or quit, feisty KMO/KKMO adapted, hung on, even thrived, through a vexing parade of frequency, location, and power changes.It survived competition from more powerful time-share stations, the Great Depression, war years, ownership, and format changes. Tacomans are tough, and they gave the station its grit.

The first wagon train from the east arrived in Tacoma in 1853, after enduring excruciating adversity and hardships crossing the Cascade Mountains. Later in the 19th century, loggers caused Tacoma to become a burly and brawling West Coast frontier boom town, dotted with rowdy saloons and gambling halls. Even as late as 1905, Tacoma still retained the general character of a raw frontier town. Yet today, Tacoma has blossomed into a gleaming modern city and important international seaport with fisheries, smelting, and electromechanical plants. It has vital military bases, and is a manufacturing center for gas, lumber, and timber products, as well as processed foods. Being so close to Mt. Rainier, Tacoma is a popular resort area.

Thanks to Broadcast Pro-File (B-PF) for granting us permission to quote from their in-depth report on KKMO, which we have supplemented with material from other sources. B-PF is a professional service that, for a nominal fee, can prepare a detailed historical report on any American AM or FM station, past or present. For their catalog, send $1.00 to Broadcast Pro-File, 28243 Royal Road, Castaic, CA 91384-3028. Please mention that you read about them here.

Please pass along to us your old-time radio and wireless QSLs (good copies are OK), photos, picture postcards, station directories, newspaper clippings, comments, and thoughts. Everything is welcomed and useful in the research and preparation of the material presented here. Our direct E-mail address is <Radioville@juno.com>. Our postal address is in care of *Popular Communications,* 25 Newbridge Road, Hicksville, NY 11801. Hope to see you here next month! ■

"During my 50 years in Amateur Radio, almost everything has changed—technology, world affairs, people, business and more.

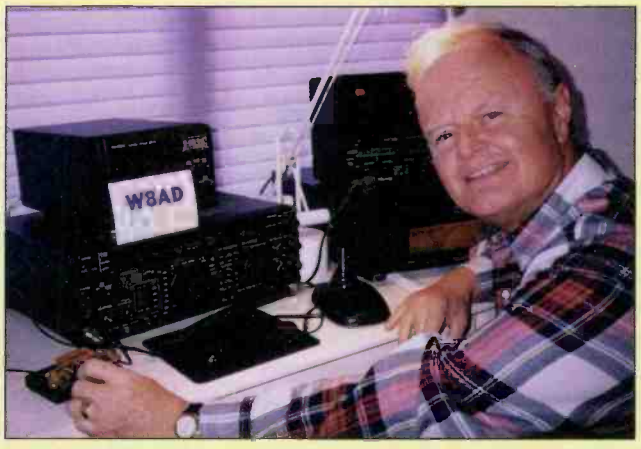
One of the most important things I've learned about business over all those years, both as a customer and a designer/manufacturer, is this: If you produce the best products you can, with the highest quality, fair pricing and excellent customer service, everything else will take care of itself. That's one philosophy that doesn't change at Alpha Delta!"

—Don, W8AD, ex-W9JTN

W9JTN's first SWL set-up in 1948
NC-33, RME preselector, long wire

Don, W9JTN, in 1951, with HQ129X,
HT-18 at 10 watts and 10 mtr dipole

W9JTN, 1952, with SX-71, HT-18
Pair of 814s— about the same
Power as a modern transceiver.
40 meter dipole



Don, W8AD, today, with desktop kW.
(I must like plaid shirts). Antenna is
Outbacker portable/Outpost Tripod
on patio

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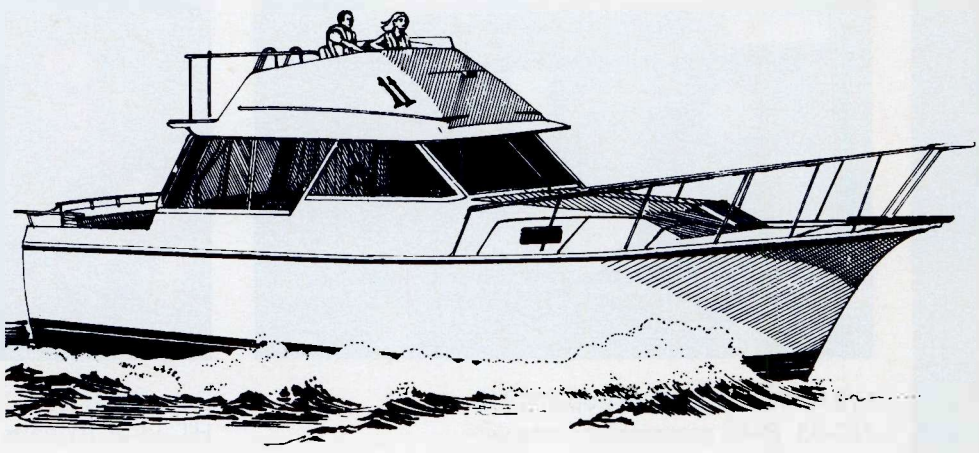
Demand Outpaces Need For Terrestrial Services

By Gordon West

AT&T's long-range, marine, single-sideband radiotelephone service is scheduled for a complete phase-out and shutdown on February 28, 1999. Thousands of mariners depend on high-frequency SSB stations, like KMI, WOO, and WOM to handle incoming and outgoing phone calls, plus emergency calls to any United States Coast Guard Rescue Coordination Center. When AT&T shuts down the service, they will sever the most powerful SSB voice connection from ship-to-shore.



"The demand for more sophisticated and cost-effective methods of communications has outpaced the need for terrestrial radio services," explains Janice Burenga of AT&T, defending their position in the immediate turn-off of their three public shore radiotelephone stations. "As a result, AT&T will close its three radio coast stations (KMI, WOM, and WOO) as of February 28 — thus resulting in the cancellation of the high-frequency manual and high-seas direct radiotelephone service," added Burenga.

When asked how many customers depend on AT&T high-seas SSB radio, Burenga indicated that this information was proprietary to AT&T, but conceded to say the numbers were certainly in the thousands. When I asked why only 60-days notice was given, she explained that this was a management decision and had no further discussion about the inopportune timing of the shutdown.

It's an issue that may be raised with the Federal Communications Commission, which keeps close tabs on what a premature shutdown of a public correspondence service could do to the general public. "The Federal Communications Commission will normally authorize the proposed discontinuance of service (or reduction or impairment) unless it is shown that customers would be unable to receive service, or a reasonable substitute, from another carrier. If you (all mariners) wish to object, you should file your comments within 15 days after receipt of this notification to the Federal Communications Commission, Washington, D.C. 20554," comments Vince Zuza, AT&T Mobile Satellite Service Manager.

AT&T is suggesting all SSB users switch over to the INMARSAT marine mini-M terminal registered to AT&T customers using a $5,000 piece of equipment available through Mackay communications, a worldwide leader in satellite communications equipment. They claim the $5,000 is a discounted price.

But what about the thousands of mariners who are out cruising right now, unaware of the February, shutdown? Will there be some sort of signal-operated relay that may kick in on any of the 50 SSB AT&T correspondence channels that will announce there is no longer any service available? "I am not aware of any specific gradual phase-out plans," comments an AT&T high-seas technical operator. "One day we will be here, and the next day we will be gone."

And what about the 800-SEA-CALL call-ups from mom, dad, work, and the kids wanting a connection to an SSB ship station at sea? Will they also reach a recording that simply states the service went off the air on February 28, 1999?

Get To Know WLO

Most marine single-sideband transceivers are **synthesized** with all International Telecommunications Union (ITU) channels permanently stored on a non-erasable chip. This could allow mariners an immediate switchover to a powerful competing public correspondence shore station WLO in Mobile, Alabama.

"Our long-range SSB public correspondence station in Mobile, Alabama, can transmit and receive powerful signals to the Atlantic, Gulf of Mexico, Baja California, and extended points to the east and west," comments WLO's Rene Stiegler. "Mariners at sea can register with us right over the air, which allows them to call up their loved ones or work, and let them know a new phone number for calling from shore to their ship at sea," adds Stiegler.

And when it comes to how powerful a signal WLO can send out and receive, K.C. Robinson, their licensed radio technical voice of WLO, sums it up in an

announcer-like tone, "OOOHHHOOO, you will hear us loud and clear, and we will pick you up with incredible signal strength." Robinson is also an active amateur radio operator, callsign KQ4ZL.

WLO operates on the following ITU channels: 405, 414, 419, 607, 824, 829, 830, 836, 1212, 1225, 1226, 1607, 1641, and 1647. Their radiotelephone rate structure is similar to what AT&T had —no monthly service charge, $4.99 a minute with a three-minute minimum with no additional landline charges for domestic calls, and $2.99 a minute if your call can be received on any of their 4 MHz channels. They monitor all channels for a call-up, other than ITU Channel 836. Call-ups should be directed to WLO, and should last for at least 45 seconds with ship station name and FCC callsign, ship station approximate location, the ITU channel they are transmitting on, and a continuous call for 45 seconds. This allows K.C. and his crew to select the best antenna system to home in on SSB ship station signals.

K.C. also points out that all mariners should first check to ensure the channel is not already in use, and should push their SSB radio's "TXRX" button briefly to double-check that their transmit frequency is clear. "Sometimes we get interference from boats using modified radio equipment talking simplex on our customer's ship station transmit channels," adds K.C. Robinson. "Operators wishing to talk simplex ship-to-ship should stick with the FCC-authorized marine channels, and never use channels that are not specifically assigned for ship-to-ship communications," adds K.C.

To receive a WLO sign-up package that also includes the exact kilohertz frequencies for all of their duplex public correspondence channels, call WLO Mobile Radio at 334-666-5110 or FAX 334-666-8339. You can also E-mail <wloemail-@-aol.com> or contact WLO's Rene Stiegler at <rene@shipcom.com>.

Don't let the shutdown of AT&T high-seas SSB radio service diminish your enthusiasm for all your marine SSB can do. You will still have access to long-range Coast Guard AMVER ITU channels, long-range WLO ITU telephone channels and a continuation of long-range ship-to-ship communications. ■

SSB Frequencies Of WLO Radio

ITU Ch.	*Ship Trans (kHz)*	*Ship Rec (kHz)*
XXX	2430.0	2572.0
405	4077.0	4369.0
414	4104.0	4396.0
419	4119.0	4411.0
428	4060.0	4351.0
607	6218.0	6519.0
824	8264.0	8788.0
829	8279.0	8803.0
830	8282.0	8806.0
836	8113.0	8713.0
1212	12263.0	13110.0
1225	12302.0	13149.0
1226	12305.0	13152.0
1233	12326.0	13173.0
1235	12332.0	13179.0
1607	16378.0	17260.0
1641	16480.0	17362.0
1643	16486.0	17368.0
1647	16498.0	17380.0
1807	18798.0	19773.0
2237	22108.0	22804.0
2242	22123.0	22819.0
2246	22135.0	22831.0
2503	25076.0	26151.0

BY GORDON WEST, WB6NOA

Radio Resources

INTERESTING THOUGHTS AND IDEAS FOR ENJOYING THE HOBBY

The Better Battery

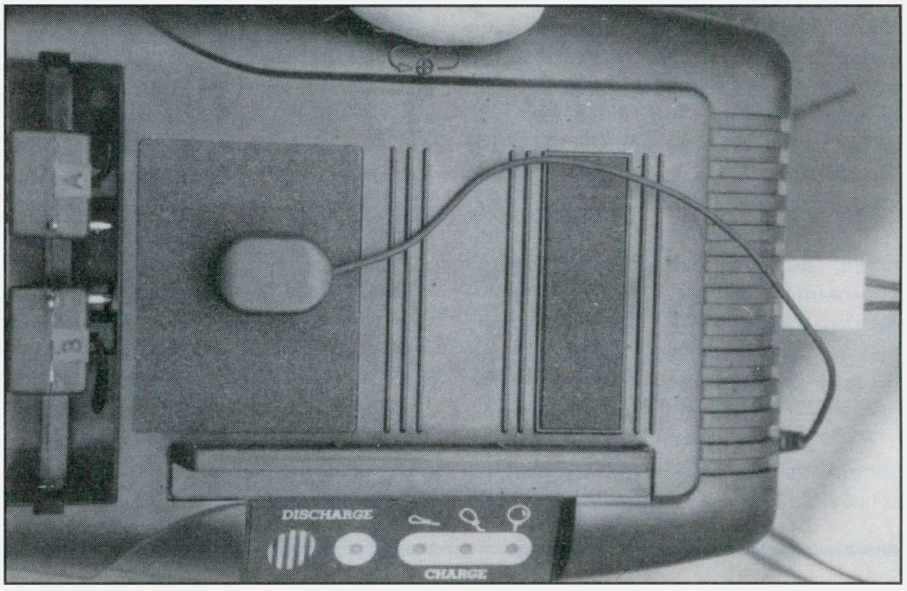
The portable battery revolution has just hit, and we, the users, have a lot to gain. Manufacturers of handheld radios and scanners are so busy concentrating on the marketing of their equipment, they left the door wide open to aftermarket battery manufacturers to sell standard and new technology cells and packs in the marketplace.

Your portable two-way or pocket scanner may take individual "AA" battery cells, or a "sealed" battery pack where the "AA" cells are tab-soldered in series.

Q. Which radio manufacturer and model number requores a battery cell other than an "AA" pack?

A. ICOM ICR10 100-memory scanner
B. Yaesu VX1 and new VX5R
C. Cherokee FRS handie-talkie
D. Alinco DJ-X10

A. The correct answer is B. All but the little Yaesus take "AA"-sized alkaline or nickel cadmium (NiCd) cells. Yaesu is first with lithium ion in a tubular cell that can run their VX1 and brand new VX5 for literally days between recharging.



Tiny gold pins on the Maha charger make contact with the battery charge plates.

Nickel Cadmium

NiCd batteries continue to boast increased power density for their "AA" cell size. Portable handheld equipment that can take individual "AA" cells may play the longest on over-the-counter alkaline cells. The better quality alkaline battery you select, the longer your scanner or HT is going to play. This means don't choose those swapmeet specials where you see imported alkaline cells in a big box marked down for 10 cents each. Pick up that cell and see how light it feels. Power density and weight are proportional — heavier alkaline batteries almost always last longer than the imported lightweights. If you don't recognize the name as one you regularly see on TV with the copper top or the bunny, chances are these throwaway "AA" cells would not be a good investment for long playing time on your pocket scanner or portable HT.

Manufacturers of alkaline batteries do not list the milliamp hours that the battery will play. If they did, you could easily do your math and calculate what battery is going to last the longest.

"One reason we don't put milliamp hour ratings on disposable cells is the many different ways a piece of portable electronics drains the battery," commented a manufacturer's representative for a name-brand battery company at the 1999 Consumer Electronics Show. "For instance, two competing brands of "AA" battery types with the exact same milliamp hour rating may hold up longer in different applications. One brand may last longer with low-current consumption, and one may play longer with higher current consumption. It all depends on the chemistry," adds the manufacturer's rep. And when it comes to chemistry inside the alkaline cells, the most they will tell you is "long life" and make no specific claims for the number of milliamp hours inside each cell.

"I don't like the idea of having a recharged battery pack on my handheld radio without knowing exactly how much playing time I might have left."

Q. Is it possible to recharge alkaline cells successfully?

A. No
B. Yes
C. Only with special chargers
D. Almost always

A. Despite the claims of miracle alkaline rechargers, trying to stuff electrons back into an almost dead alkaline cell may only replenish the battery by 10 percent. And if the cell is absolutely dead, most "miracle chargers" won't get the voltage to budge at all. There *are* "AA" battery styles called "rechargeables" that have special alkaline inside. I have several scanner friends who have successfully run their equipment with up to seven recharges on the reusable style of alkaline. But, unfortunately, you can't be certain exactly how much playing time you're going to get on the second, third, and fourth charge. You'll never get as much as when the reusable battery was

They're the same size, but the battery on the left has almost twice the capacity as the nickel cadmium (NiCd) on the right.

brand new, but, nonetheless, by using the special charger that is required that comes with reusables, you do get additional life after near death.

I don't like the idea of having a recharged battery pack on my handheld radio without knowing exactly how much playing time I might have left.

NiCd batteries continue to be one of the best sellers thanks to their rechargeability, dependability, power density, and availability as a standard accessory from the manufacturer or dealer of the equipment you own.

Q. What is the typical voltage for a NiCd "AA" cell?

A. Same as alkaline, 1.5 volts
B. 1 volt
C. 1.25 volts
D. 2.0 volts

A. A recently charged NiCd battery runs about 1.25 volts per "AA" cell. During charging, it could momentarily be as high as 1.5 volts per cell, but NiCd batteries begin to heat up at this point. A single NiCd cell that registers below 1 volt is in need of a recharge. In fact, if you have a "sealed" scanner or handheld battery pack, and the pack refuses to hold a charge, carefully pry it open wearing protective plastic lenses (in case of sparks), and notice that rechargeable "AA" cells are most likely found within the "sealed" pack. If you have tried to charge the pack, and it just doesn't seem to take or hold a charge, chances are you have one or more dead cells within the series-soldered pack.

Using an analog or digital voltmeter, select a voltage range around 2 volts. Make sure you are on the "volts" scale before probing with the voltmeter's red and black leads.

Check each cell individually, remembering you will need to regularly reverse the leads as you go from positive to negative connections, depending on how the pack was assembled. Sometimes, they put all of the cells in single file, yet other times they double them over to get them into one nice, neat battery pack.

When you hit the cell that is dead, you should see about .3 volt on your meter. In rare cases, you will see zero volts. And every so often, you will even see a mysterious negative voltage with the leads properly hooked up, indicating a cell in reverse.

Sometimes, you can zap a cell back to life by applying a higher, correct type and polarity voltage, to it. This is hazardous, and it could lead to cell rupture. Don't do it unless you are stranded in the middle of the desert and this is your only way to make a radio call!

Take a pair of diagonals and cut out the dead cell, noting its polarity. Now go to your favorite local radio store, buy a handful of new "AA" NiCd batteries, and carefully solder the new battery in place. Now check the terminal voltage of the entire pack, and you should be back in business. Keep in mind that most ham radios and many scanners don't operate off of a 12-volt pack, but rather voltages between 7.5 volts and to 12 volts. Just count the number of cells and calculate your terminal voltage.

"The magic number of successful recharges depends on how you treat your rechargeable NiCd battery pack."

When you're looking at "AA" NiCd rechargeable cells, take a look around the positive contact point or soldered joint for the evidence of white powder. If you spot this powder, chances are the cell has had it. Somehow, you have literally boiled the electrolyte out of the rechargeable cell, and it is now history. But if the ends of the cell look absolutely clean, chances are everything is still moist on the inside, and you still have many recharges to go before the entire pack or cell gives up the ghost.

If I find more than two cells in an eight-cell or 10-cell pack dead, I usually wire in a complete new set of new NiCd batteries and enjoy my equipment without worrying if it's going dead in the middle of hot radio traffic.

Q. How many times can NiCd battery packs be recharged successfully?

A. 100 times
B. 1,000 times
C. 50 times
D. 500 times

A. The magic number of successful recharges depends on how you treat your rechargeable NiCd battery pack. If you regularly run your equipment down to almost total battery depletion, and then recharge it slowly overnight, and repeat this process over and over again, you could go for approximately 500 recharges. Good exercises of your equipment and slow charging back up can sometimes double the life expectancy, so maybe two answers, B and D, are correct — 500 to 1,000 times.

But if you leave your scanner or handheld on a constant trickle charge for months on end, you probably won't get more than 250 recharges. This is because you raise the internal temperature of the rechargeable battery, which ultimately cooks its innards. There *is* a solution on the inside, and something's got to give if the cell constantly feels warm to the touch. The same thing goes for your home power tools — leaving them constantly plugged in will shorten battery life.

This combination radio/GPS receiver can run on NiMH cells, giving you extended running time.

Old-style rapid chargers are another NiCd battery killer if you don't use them properly. Years ago, I had a well-known fast-charger from a prominent radio manufacturer that stuffed hundreds of milliamps in the battery pack for a short period of time, and then would automatically switch into a trickle-charge mode. The way I ruined my pack was by regularly charging up my equipment, running it in the charger, and taking it in and out of the charger, unknowingly resetting my fast-charger time cycle. After five or six times out of the charger, I gave it five or six continuous high charges, and the battery pack was red hot. Anytime you have a hot battery pack, you are boiling the insides.

Today we have new NiCd "smart chargers" offered by radio, and battery and battery accessory manufacturers, including E.H. Yost Company, Middleton, Wisconsin, phone 608-831-3443; W & W Associates, New York, phone 800-221-0732; Advanced Battery Systems, Holbrook, Massachusetts, phone 800-634-8132; and Maha in Brea, California, phone 800-376-9992.

These $50 "smart chargers" all probably come from the same overseas place, but they are indeed useful in charging a variety of portable battery chemistries. The smart charger can detect both temperature, as well as voltage fluctuations as the battery comes up to a full head of steam. NiCd batteries have a predictable voltage top-out, and nickel metal hydride (NiMH) and lithium-ion batteries have a different voltage "dance" when they have reached capacity. Proprietary integrated circuits monitor these subtle changes in terminal voltage at a full charge, plus feedback from the voltage sensor that magnetically sits on the top of the battery pack will usually kick the charger out of fast charge, and put it into trickle charge or no charge. This same "smart charger" may also condition a battery pack by cycling it down significantly in charge, and then automatically recycling it back up. While these $50 "smart chargers" don't have a micron of the technology that land mobile $1,000-battery bank charger conditioners have, they nonetheless serve us hobbyists well for the buck in just trying to keep our little handie-talkie or pocket scanner rechargeable batteries running in tip-top shape.

And the hard-working NiCd battery really deserves applause for all it has given us over the past years. When handheld radios first came out running on "AA" batteries, power density was a mere 400 milliamp hours in a single "AA" cell.

"If you leave your scanner or handheld on a constant trickle charge for months on end, you probably won't get more than 250 recharges."

Just the other day, I was holding a 1500-milliamp hour, 1.25-volt cell. This heavyweight tied in series with its 1500-mA buddies could certainly play a handheld for many days between recharges.

Q.What is the typical self-discharge rate for NiCd batteries?

A. 10 percent per week
B. Negligible discharge
C. Half-life after one week

A. NiCds self-discharge approximately 10 percent per week. Even though you charged up your handheld a month ago, and stuck it in the glove box, you're down almost 50 percent in battery capacity. If you had alkalines, there is almost no self-discharge. There's a good lesson here. Run alkalines in any portable equipment that is going to hang around out of sight and out of charge for months before it may need to be put into use.

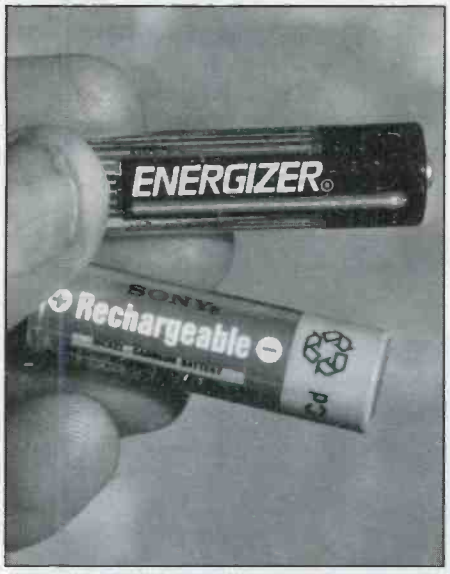
Nickel Metal Hydride

This is the new technology that most cellular phones now use. The beauty of the NiMH battery pack is a 50- to 100-percent increase in capacity over a similar-sized NiCd battery pack, and extended long life if properly recharged. Maha claims its proprietary NiMH battery packs may sometimes go for 1,000 charge/discharge cycles, and they don't add significant weight over a conventional NiCd battery pack.

NiMH battery packs also have less susceptibility to bad conditioning. No one likes a battery in a bad mood, and a battery, such as a NiCd, that is regularly charged and seldom exercised may not play as long as a pack that is regularly charged and regularly exercised. Sometimes it's hard to break an old NiCd battery pack of bad habits.

With NiMH battery packs, you have almost no "memory effect." And once you give them a good discharge, they will hold a full charge and play as if you have never used them before.

But the NiMH battery pack requires a very special fast charger if you're going to



A recently changed "AA" NiCd battery runs about 1.25 V per cell; an "AA" alkaline, 1.5 V.

humpback voltage at a rate greater than 10 percent of the battery capacity. NiMHs may be continuously trickle-charged, but they can't stand a fast charge with a traditional NiCd fast charger. An NiMH battery in the wrong fast charger will heat up too quickly on the inside long before the fast charger detects voltage top-off. By the time the fast charger figures out the battery is full, you have just about smoked your NiMH battery pack. This is why you never want to run NiMH without the right kind of charger. Those $50 "smart chargers" work dandy on both NiCd, as well as NiMH.

What you need for NiMH batteries is a temperature cut-off termination, peak voltage cut-off termination, and negative Delta-V termination with 10–15 mV per cell. "If you think you cooked one of our batteries into heaven, just wait for it to cool down," comments an official at Maha Battery Company. Maha battery packs are equipped with a built-in temperature cut-off termination that can really give you a scare when you discover your red-hot battery in an overcharge situation. The first thing to do is take it out of the charger, slip it onto the handheld, and discover there is absolutely no voltage present on the terminals. You confirm this with your voltmeter. They're dead. But they're not necessarily dead for good. Once the insides finally cool down, the temperature sensor will close contact, and your battery pack is now back on the air. Whew!

Will NiMH individual "AA" cells and NiMH battery packs ever replace what manufacturers supply inNiCd batteries? I think so. In fact, many ham radio and scanner manufacturers are still supplying just the NiCd battery packs, while battery accessory manufacturers like E.H. Yost, W & W, Advanced Battery Systems, and Maha are selling the heck out of replacement NiMH sealed packs, as well as individual cells, plus the smart charger to properly bring them back up to a full and safe charge.

Yaesu Goes Lithium-Ion

Lithium-ion is the latest technology in pumping up power density into a battery pack that can be rapidly recharged, over and over again, up to 1,000 times. Two years ago, Yaesu introduced a dual-band handheld ham rig with VHF and UHF scan monitoring. The equipment could run off of a single "AA" alkaline cell for a proprietary 3.6 volts, 700 milliamp-hour lithium-ion battery cartridge. A big smart (and special) wall charger would safely recharge the lithium battery in short order, somehow sensing when it was full and triggering off the fast-charge circuit. And if you are out in the open and the battery becomes depleted, pull out the rechargeable, and put an "AA" alkaline in their proprietary "other battery" holder, and you still have some operating time at diminished power output.

Now Yaesu has introduced their new VX5, a shortwave/VHF/UHF receiver that gives you AM on the shortwave bands, plus FM from 47 MHz on up. The battery complement is a lithium-ion 7.2 volt cartridge that allows the equipment to run relatively high power at 5 watts output. Most surprising is the 1100-milliamp-hour rating of this 7.2-volt pack. And if you deplete the pack, you also have a holder for a traditional alkaline "AA" cell.

And The Winner Is . . .

All of us who use portable electronics are the winners in the battery war of power density, inexpensive non-brand-name replacement packs, and long playing time. Don't be afraid to buy new battery technology from a company other than the radio manufacturer. These aftermarket companies are doing an exceptional job of giving us more power per pound at extremely low prices; certainly a lot less than a comparable manufacturer-sold battery replacement pack. ■

The Radio Connection

BY PETER J. BERTINI
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A LOOK BEHIND THE DIALS

Peter's New Home, And Finishing The Philco 89

At last! "The Radio Connection" is officially situated in its new World Headquarters. Moving a lifetime collection of radio-related stuff was an experience I never want to experience again. Some things still remain lost in transit — victims of being "moved" 75-feet from the old location. Down in the cellar, my woodworking shop remains a total disaster, testimony of two weeks Christmas vacation time building the radio display shelves and my workbench. But now I am taking it all in and finally enjoying the fruits of my labors. I have enough shelving to properly display at least 80 percent of the radios in my collection; this represents the ones I intend to keep. Some of these sets need serious cabinet work, and having them in a controlled environment sure beats having them undergo further deterioration by being stored in a damp garage or cellar.

Torn and tattered grille cloths from my 89 cathedrals. Note the difference in patterns. Replacement cloth is in foreground.

"There is really no excuse for losing knobs or mounting hardware."

I've learned one very important lesson! As my collection grew, I developed a bad habit. Often, I would remove a radio chassis from the cabinet, and begin a half-hearted restoration. The chassis would get done, but the cabinet, needing veneer or refinishing work, was left empty. This eventually lead to a condition called "Peter's Syndrome." It's a rather insidious condition, as it creeps up on you and you don't realize what's going on until it's too late.

I found myself with about 10 boxes storing radio guts, and an equal number of empty radio cabinets. Figuring out which radio went into which cabinet was challenging enough. For example, there are two large Philco model 16s in my collection; one is an early tombstone, the other a cathedral. Both sets use the same version chassis. Chasing down which grille cloth went with each radio was worse! Knobs, dial bezels, and mounting hardware were stored throughout the old workshop and cellar without rhyme or reason. I am slowly working my way through the pile, sorting which knobs and other radio-related remnants belong to what set. Some radios were missing knobs when I got them, some radios had good grille cloths, and some didn't. I'll probably end up spending good money on replacement knobs and other parts that were lost through my carelessness. Sad thing is, I will never know if the knobs are really lost, or if the set came to me

Soaking the new grille cloth in strong coffee or tea will properly "age" the material.

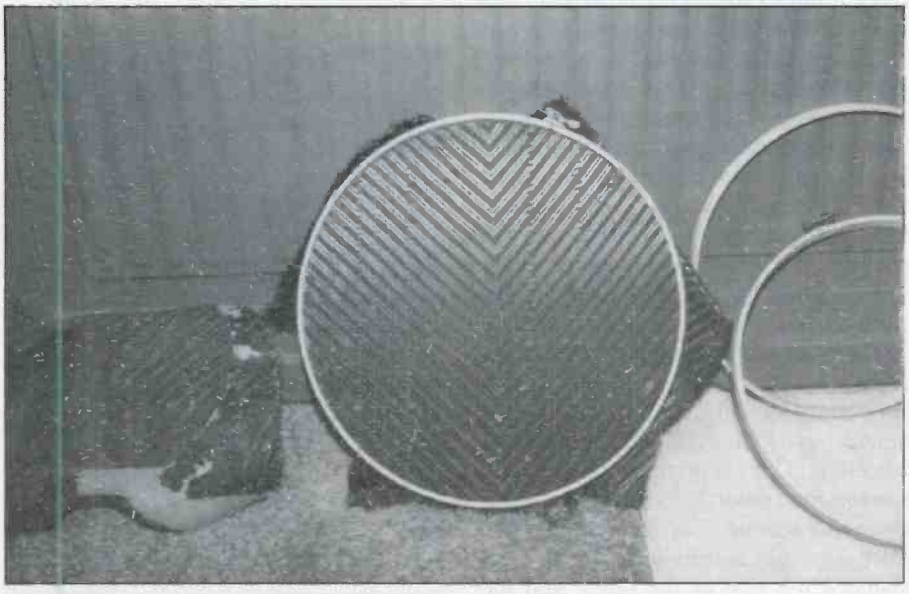
Here are the tools of the trade. A spray can of 3M Super 77 spray adhesive, a sharp pointed awl, embroidery hoops, Spritz Fray Check, and the new grille material are what we need to get started.

that way! There is really no excuse for losing knobs or mounting hardware. Those special screws with the decorative heads used to mount speakers are also extremely difficult to find.

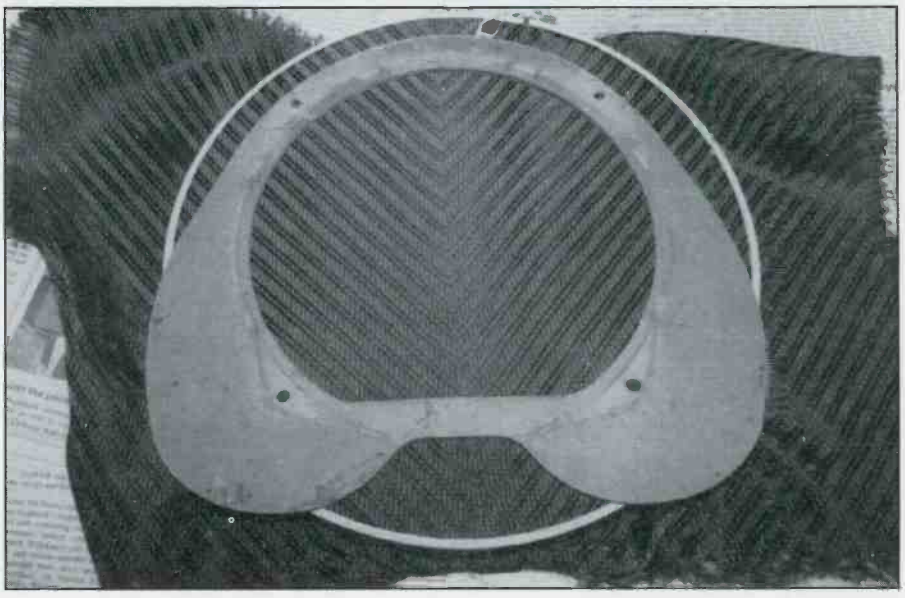
The average collector seldom acquires a radio that is ready to be displayed and used — although I am beginning to see the wisdom in collecting sets in premium condition! It's nice, if you can afford to do so. Here's what to do to avoid the mess I found myself in. Immediately take stock of any new set you acquire. Write down all the information you can about the radio including the condition of the grille cloth, cabinet, and what knobs are missing, and any other information that you may need at a later date. Vendor and ordering information for grille cloth was discussed in the December 1998 "The Radio Connection" column. Back issues of *Popular Communications* are available from the publisher for $4.

If you must remove chassis, immediately bag the knobs and any associated hardware in a Ziplock plastic bag, with a note enclosed stating exactly with which radio the materials belong.

A wood radio may appear to be too grungy to be displayed. With the chassis removed, use a small vacuum cleaner to clean out the cabinet interior. If you must store the radio and chassis, use a large Rubber Maid plastic storage box. Store the radio in an area that's relatively dry, and avoid temperature extremes. Most wooden sets can be cleaned up with a vigorous rubbing using GoJo hand cleaner. Another very effective cleaner is naphtha, but remember to use this solvent outdoors. It is extremely flammable. Avoid breathing the vapors. Follow up with a good cleaning using Murphy's Oil Soap. This cleaning will remove years of dirt and grime, as well as surface layers of oxidized lacquer finish. Follow the cleaning with an application of antique wax, butchers wax, or even Pledge. Old English Scratch Guard and Liquid Gold can really make a radio shine like new, but unfortunately the effect is rather short-lived. One of my friends uses brown wax shoe polish on his wood radios. I tried it, and it works quite well.



The new grille cloth is stretched until snug in the embroidery hoop. Had a natural fiber material been used, moistening the cloth and letting it dry would also help stretch the material. Note that the rear side of the pattern — the side that will be glued to the mounting board — is shown.



Carefully center the pattern over the mounting board before pressing the material to the spray adhesive!

At this point, the radio should be presentable enough to merit display — hide it in a corner on a lower display shelf and no one will be the wiser! Sets with severe veneer damage can displayed so that only the better areas of the cabinet are seen. I'm slowly getting every chassis back where it belongs. When I have time, I will attend to the cabinets that need refinishing.

The Philco 89 Saga Continues

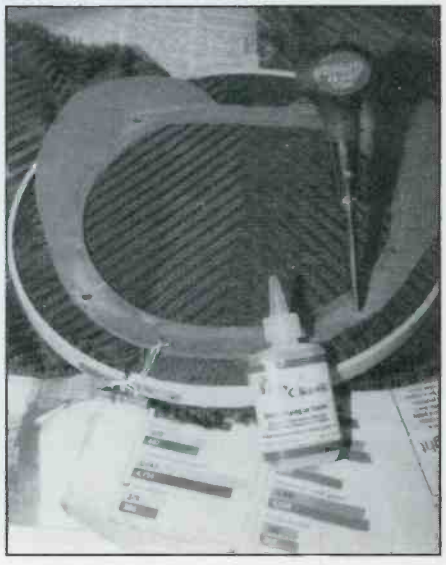
Last December's column dealt with grille replacements. Several sources for vintage grille cloth reproductions were given, as well as directions for installing a grille cloth in your radio.

I promised to show you how to put those directions to work in a step-by-step fashion, using the Philco 89 as an example. Everything is finally on hand to do so. I have two different versions of the 89 cathedral, and both need new grille cloths. Fortunately, I had wisely kept the tattered remains from both sets, as each set used different style grille cloth. The Philco we've been restoring in past columns used a Chevron, or "V" pattern that I hadn't seen used on other model 89s. The other 89 cathedral needs a weave that closely matched a sample that was used on several Philcos besides the model 89. Had I relied on sample sheets alone, I would have selected the wrong style grille cloth for each of the 89s.

The replacement Chevron pattern grille cloth didn't look correct. It looked much too new, and the fabric had a considerable amount of "sheen" to it. One of the suggestions offered by grille cloth vendor John Okolowicz is to soak the cloth in coffee for several hours. This will lightly stain the material, reducing the gloss, thus giving a more aged and natural appearance to the material. My wife, Nancy, just happened to have a pot of coffee brewing. I decided to try this technique. The replacement grille cloth material appears to a polyester or rayon material; it will not absorb dyes as readily as a natural fiber would. I allowed the cloth to soak for two hours, and then rinsed it out in warm water to remove the coffee smell. When the cloth was removed from the coffee, it looked ruined, but the material being wet caused this effect. Once it dried, it returned to a more normal color. I ironed out the wrinkles using a steam iron. The next step was selecting an embroidery hoop that matched the size of the fabric and the mounting board for the radio. The following steps outline the remaining grille cloth installation procedures that I used.

Determine which side of the material faces the outside of the radio. If you are not sure, refer back to the sample cards where the materials are shown properly. Remember that the backside of the grille cloth must be on the outside of the embroidery hoop — this is the side that will be glued to the mounting board. The cloth should be snug in the hoop, with no wrinkles or loose material. If the material is a natural fiber, dampening the cloth and allowing it to dry will shrink the fabric and pull it tighter.

You will need the following items for



A sharp awl is used to work apart the threads for the mounting screws to pass through. Spread the threads, don't attempt to force the awl or you will pull threads.

"Be very careful not to over tighten the mounting hardware."

Whew! It's been a long road, but the Philco 89 is now completely electrically restored, and sports a repaired and refinished cabinet. It sounds as sweet as it looks!

the next steps: Embroidery hoop holding the new grille cloth, spray adhesive (I used 3M Super 77, available at most hardware stores), the mounting board, and a bottle of Dritz "Fray Check" (found at fabric stores). First, remove any remnants of the old grille fabric from the mounting board. Once clean, spray the mounting board with an application of spray adhesive. Allow the adhesive to dry until tacky before applying the grille cloth, otherwise you risk having the glue wick into the fabric, staining it. Carefully center the hoop over the mounting board. If the fabric has a symmetrical pattern, you want to make sure it is lined-up properly before pressing to the adhesive.

Once the fabric has adhered to the mounting board, remove the hoop and press the areas of the fabric that remain unattached to the mounting board. You may now trim excess material using a pair of shears. Note the position of the speaker mounting holes, which pass through the mounting board and fabric. Using a small awl, carefully work the fabric threads to form a screw hole opening through the fabric. Be careful not to snag or pull a thread — this will damage the grille cloth! Once the awl has worked open a screw hole, use a very small drop of the Fritz Fray Check to keep the fabric from closing. Be careful not to apply the Fray Check where the grille cloth is visible because this glue will stain the material. Excess Fray Check will wick through the material over a distance. Use it sparingly. Now is a very good time to give the cabinet a very good cleaning, especially the grille work around the speaker opening.

Align the mounting board with the speaker opening, and install the speaker using the decorative head screws. Be very careful not to over tighten the mounting hardware. Excessive force can pull the screw heads into the veneer, damaging the radio cabinet.

At this point, I was able to slide the restored chassis back into the cabinet. A quick look in Ramirez's Philco book confirms the set used rosette style knobs, which were retrieved from the knob drawer and returned to the set.

It's been a long road. I remember buying this set at a radio auction several years ago. There were few bidders. The cabinet was in very poor shape. The veneers that remained were loose and peeling away. The chassis was rusted and had broken and missing tubes. It was a sad looking radio. I think I paid about $40 for the set. I was a new collector, and couldn't afford the prices commanded by sets in better condition. A good friend of mine restored the cabinet, while I was working on the chassis. Now, many years later, here it sits looking and sounding like new. When the set was made, the country was still reeling from the effects of the 1929 stock market crash — The Great Depression was still with us. The model 89 wasn't a top-of-the-line set, but for Philco in 1933, models such as the 91 and 15 probably held that honor. With six tubes, including a tuned RF stage, the 89 was no slouch as far as performance. Remember that in 1932 Philco was the number one radio manufacturer in the U.S., having produced a scant 60,000 sets!

It's late on a Friday night. An early January winter storm rages outside, but it's warm and cozy in the radio shack; and hey, no work tomorrow! The family is in bed and my lab Midnite is snuggled under my desk keeping my toes warm. The Philco 89 is playing away as I finish another column deadline. I wonder how many lives the radio touched. Did families gather around the set as news of an escalating war raged in Europe? Did families laugh at the antics of Amos and Andy, and what secret messages were passed to owners of Little Orphan Annie decoder rings? I wonder . . . Until next time! ■

CB Scene

27-MHz COMMUNICATIONS ACTIVITIES

BY JOCK ELLIOTT SSB-734

It's Up To Us

Ed Barnat, my co-columnist here at "CB Scene," is a dangerous man. Every once in a while, he'll say "a wise thing." He doesn't announce ahead of time that he is going to do it, but occasionally he will open his mouth and out will come a phrase or sentence that contains real wisdom. Just this week, Ed said something that got me to thinking. The more I thought about it, the more I realized that what he said was absolutely true and deserved to be written up in a column. But first, let me lay out some background.

A couple of months ago, I heard from Bob Leef. Bob is one of the founders of CREST REACT in California, the largest REACT team in the world. Bob is heavily involved in volunteer work around the globe, and even though CREST does very little monitoring of CB Ch. 9, I know that Bob has a real heart for helping people. Bob had taken a driving trip from California to Washington, DC, and when he returned, he reported that he had heard very little activity on Ch. 9 during his entire trip. His conclusion was that if Ch. 9 isn't actually dead as a useful emergency channel, it certainly is in the last stages of life support.

So I called Ed Barnat on the phone to tell him about Bob Leef's findings. Then I went on to grouse (to Ed) about how REACT International (of which I am a member), despite the efforts of many courageous individuals, seems to have lost any real zeal for its original purpose — monitoring CB Ch. 9. Following that, I launched a tirade on the Federal Communications Commission's failure to do any meaningful enforcement within the 40 legal CB channels and particularly on Ch. 9.

Ed listened patiently while I blew off steam and then said, "You know, it doesn't matter what REACT does, and it doesn't matter what the FCC does. It's up to us."

"What do you mean?" I asked.

"Well," he said, "if we want CB Ch. 9 to be monitored, it's up to us CBers to do it."

The more I thought about it, the more I realized Ed was right: it's up to us. We have the power to make it happen . . . or not. It's entirely our choice. Each one of us as individuals can choose to monitor Ch. 9 or ignore it. We have each been given the power to potentially save someone's life simply by using our radios, or we can turn our backs on it. Choice . . . it's a scary thing.

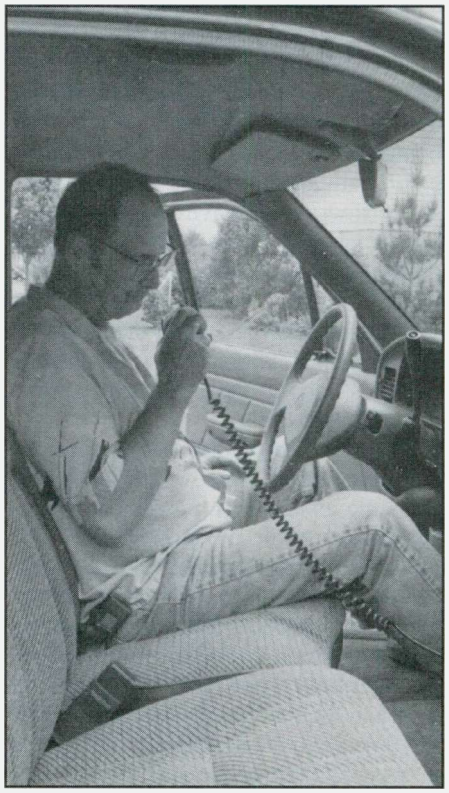
The Facts About CB Ch. 9

Every year in the United States, some 1 to 2 million CBs are sold, and the overwhelming majority of those radios have a switch or button that is labeled something like "Emergency Ch. 9." CB Ch. 9 (27.065 MHz), let me remind you, is only one of a handful of frequencies in the entire radio spectrum that is available to the general public for summoning help in an emergency.

Who buys those millions of CBs that are sold every year? Truckers. It's rare to see a long-haul rig without at least one CB antenna sprouting from a "West Coast" mirror. Then there are the folks who I call "classic" CBers. They usually have a base station at home and a rig in each vehicle. They use CBs to stay in touch with family and friends around town. Hard-core DXers buy CBs (and sometimes ham rigs) and use them to work long distance contacts on 11 meters. Finally, there are the occasional CB users, the people who buy a small rig or a "help" radio and stick it under the seat or in the trunk, "just in case."

As different as those four groups of CBers may be, they all have one thing in common: when they get into trouble on the road, they're going to flip that Channel 9 switch and give a call to see if anyone can help them. Now here is what I think is an Evil Thing: that somebody should need help on the road, punch up that Channel 9 button, and get nothing but deafening silence, South American skip, or some loudmouth proclaiming that nobody is going to talk on "his" channel. Would you want that to happen to a member of your family?

But it doesn't have to be that way. We — you and I, individually — can make a difference. We can choose to be there when someone needs help. And while you are thinking about your choice, let me toss another thought out on the table: a wise man once said, "All that is required for evil to succeed is for good men to do nothing."



There are those times when your only way to summon help is on CB Channel 9. Remember, it's up to you to use this emergency frequency so everyone benefits.

A Do-It-Yourself Hero Kit

Want to set yourself up to be a potential hero for someone in trouble on the road? It doesn't take much.

- A CB base station (or a mobile unit hooked to a power supply) and a working outside antenna.
- A piece of paper and a pen or pencil.
- A telephone and a list of emergency numbers for police and other emergency responders in your area.
- A willingness to help people.

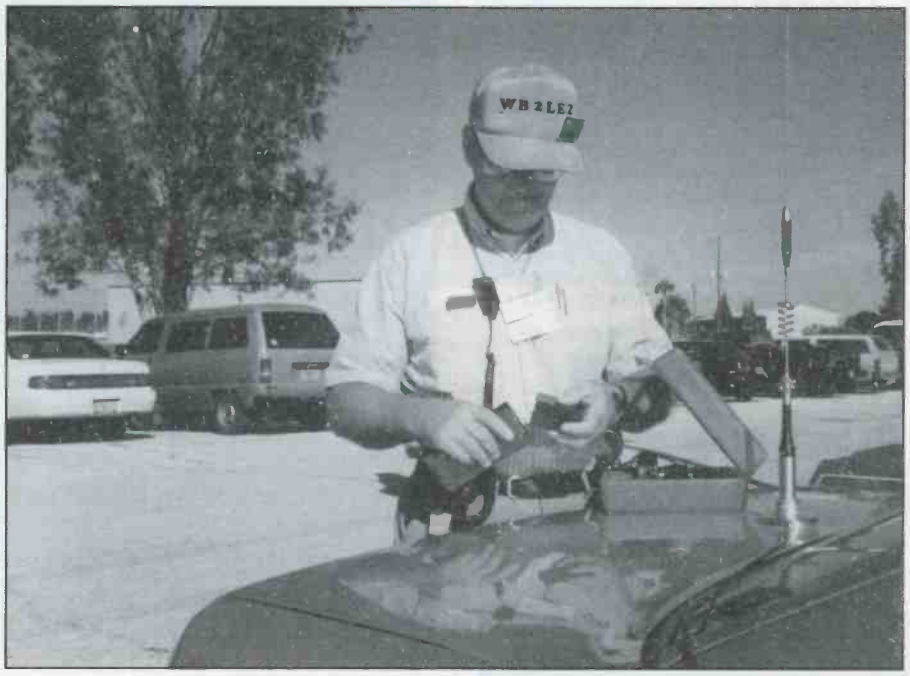
That's all you need. You don't need to be a member of any organized group or have any sort of special license; you get to be your own boss and set your own hours. And you don't have to do much either: when you're not using your CB for having fun in other ways, just put the channel selector on Ch. 9, squelch out the noise, and go about your business. When a call for assistance breaks the squelch, take down the information as accurately as you can and then relay the information to the proper authorities. That's the mission.

What You Will Face

Nobody said it would be easy. Even though the FCC rules state clearly "Channel 9 may be used only for emergency communications or for traveler assistance," you may find people who think that Ch. 9 is their personal property. I once had a chat group from Ohio tell me that "since 911 came in, Ch. 9 has been canceled." You can point out to them (as I did) that the FCC rules are still in force and that you have a perfect right to monitor as an assistance station and that all you are trying to do is provide a public service. Through politeness and persistence, you can often wear them down.

You may also battle skip (long distance propagation) and local noisemakers. In both cases, squelch out the noise. You'll still be able to respond to some calls for help, if they are close enough. Experience has shown that you can usually communicate about one to three miles between a base station and mobile units, and three to five miles between base stations, even under the lousiest skip conditions. You can use what I call "the trucker's secret" — if you are close enough together, you can still communicate, even in the face of heavy interference. In fact, one time when the Elliott clan was taking a trip and convoying with one of my wife's sisters in another car, we came upon a situation near New York City where a guy was running heavy, HEAVY power. But we could still get through and talk to each other because we only a half-mile apart. It drove the base station crazy because he couldn't keep us from talking on "his" channel.

Finally, you may also face opposition from what I term "the correctness police" — CB operators who believe they know the "correct" way to monitor Ch. 9, and, of course, you are doing it wrong. Once I heard a member of REACT screaming at a breaker on Ch. 9 because "it is reserved for emergencies." Well, that's just plain wrong. Ch. 9 is also reserved for traveler's assistance. If you haven't read the official FCC rules for CB operation, get yourself a copy and look them over. I think you'll be amazed at the amount of misinformation many people believe about what is or isn't allowed on the air.



This ham keeps a CB "help" transceiver in his vehicle for emergencies.

Triage for CB Channel 9

If you've ever watched the TV show MASH, you'll notice that when a truckload of wounded comes in, the doctors run around checking each patient and making notes. What they are doing is performing triage; that is, deciding which patients need to be treated first and which can safely wait for a while.

If you monitor Ch. 9, and a major event occurs, you're going to have to perform triage on incidents as they are reported to your station. Here is the order in which I prioritize roadway incidents.

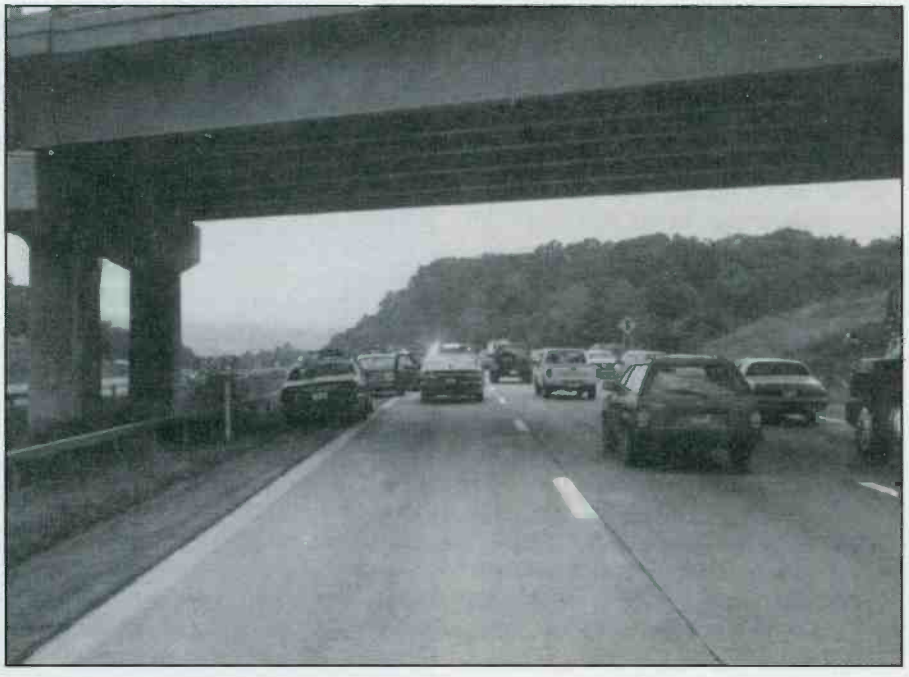
1. Personal injury accidents
2. Immediate threats, including vehicles stopped in the driving lane for any reason, chemical spills, and large debris.
3. Disabled vehicles out of traffic, but occupied — key indicators: flashers or hood up; for semi-trucks, reflective triangles placed on shoulder or roadway.
4. Abandoned vehicles out of traffic I record, but do not report to authorities.

When making or taking a report, there are three key elements.

- Location — The street or highway, the direction, the nearest cross street or exit. A report without location is essentially useless.
- The nature of the incident — personal injury accident, disabled vehicle, etc.
- What is needed — (sometimes, this information is unavailable, and you may simply get a report of a disabled vehicle, reasons unknown). If there is any accident, however, authorities will want to know how many vehicles and if anyone appears to be injured.

When you call the authorities, identify yourself by name and state clearly what your report is. (This is Jock Elliott, CB Channel 9 monitor. I have a report of a car in the guardrails, I-90 westbound, vicinity of Exit 5, unknown if there are injuries). If the police ask for your phone number, give it to them. Happy monitoring!

Years ago, in an article, I stated that I "check in" on Ch. 9. That is, I announce that I am monitoring the frequency. I got an angry E-mail from a team member in Texas chastising me for improper procedure. I did a little checking and found out that his team doesn't monitor CB Ch. 9 at all any more. The point is that if you occasionally announce your presence or pass information to other monitors in



Knowing how to report an emergency to public safety officials is just as important as monitoring the emergency channel.

your area, you are alerting people that the channel is in use for its intended purpose. There have been a number of times that I have taken an assistance call immediately after checking in. That leads me to believe that perhaps the person was listening to see if there was anyone available to help. The bottom line is that CB Channel 9, in all of its history, has NEVER been threatened by overuse. But right now, it is indeed, in danger of dying because it is underutilized.

So make the right choice: choose to monitor Ch. 9 when you can. Because, when you get right down to it, it *is* up to us. If you monitor Ch. 9, write to me and let me know. Send a self-addressed stamped envelope, and I'll send you a special "Order of the Lightkeeper" certificate. Send a large envelope if you want it sent without folding.

CB Books You'll Like

Ken Touhey has published a series of books on electronics topics. The *Yellow Book: Beginning CB Repair* is written for CB hobbyists who have little formal electronics training but are handy with small hand tools and know how to solder. The book is designed to answer most of the questions new CBers have and help them get the best performance from their units. Topics include antenna testing, boosting transmit power, troubleshooting, microphone wiring, technical slang, and much, much more. This book is jammed with facts, and I learn something new every time I open it up.

You can order the *Yellow Book: Beginning CB Repair* from *Pop'Comm* advertiser CRB Research or direct from Ken Touhey for $25, plus $3 for priority mail by calling 616-345-4609 for credit card orders.

The *Guide to Emergency Survival Communications* by Dave Ingram deserves a place on everyone's bookshelf. It covers sources of survival news, shortwave radio, amateur radio, scanning, citizens band, personal communications systems, alternate power sources, and lots more. The preface alone (which describes a 1996 power outage) is worth the price of just $19.95, and if you're concerned about Y2K, there's stuff you need to know. I got my copy from Universal Radio at 800-431-3939.

Until next time, keep those cards, letters, and shack photos coming! Write to me at *Pop'Comm* or E-mail me at <lightkeeper@sprintmail.com>. ■

ScanTech

TRUNKING, TIPS, TECHNIQUES, AND MODS

BY KEN REISS
<armadillo1@aol.com>

Preamps, Attenuators, Filters, And Other Things That Can Cure — And Cause Problems . . .

One quick way to start a lively radio discussion is to bring up the subject of preamps, filters, and attenuators. Some folks will swear by one or the other, while others swear at them. The truth is, most folks have never tried any of them, but still seem to harbor strong opinions on their use and functionality.

What's all the fuss? Well, a lot of it has to do with misunderstanding how the radio itself works, and some of it has to do with misunderstanding how these accessory devices work and what they are intended to do. And the rest of it has to do with the user's physical location. The bottom line is that if they work for you, great! If they don't, then take them out of your system.

Having said all that, let's take a few minutes and look at some of the more common add-on devices. Along the way, we'll take a look at the problems they can cause, and the right places to use them.

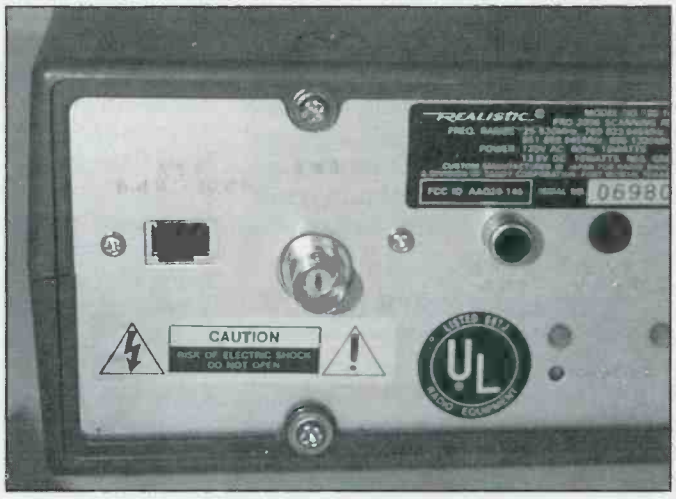
Amplifier — Equals More Signal, Right?

Let's start with preamps, as they cause the most problems. A preamp amplifies the signal before the radio (pre-amplifier). Preamps can be placed in-line at the receiver end of the coax, or better still, up at the antenna where the incoming signal is strongest. While this sounds like a good idea, and should in theory make more signals available to your receiver, it rarely works out that way.

"By putting an amplifier in the circuit, you increase the chances of overload if there are strong signals already present on the antenna."

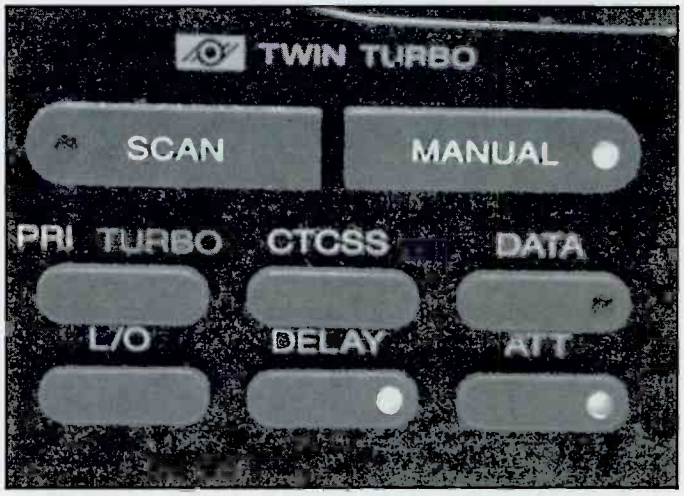
Unfortunately, the preamp can't tell what's important and what's not, so it tends to amplify everything equally. Unless you are in an area where there are weak signals from everywhere, a preamp will probably be more trouble than good. The leading causes of that trouble are desensitization; the radio just doesn't hear anything, so it's worse than before adding the preamp, and overload; you hear pagers and other signals in places on the band where they don't belong. If you're in an urban area, a preamp is usually a problem.

In order to understand why this is a problem, it's useful to remember just what our radio is attempting to accomplish. All sorts of signals are arriving at the antenna at the same time. It's the job of the receiver to convert the signals into something we can hear, but only one signal, the one on the frequency to which we are tuned, is of interest at any time. Overload is simply strong signals getting through the radio's internal filtering process and showing up in places where they shouldn't. By putting an amplifier in the circuit, you increase the chances of overload if there are strong signals already present on the antenna.

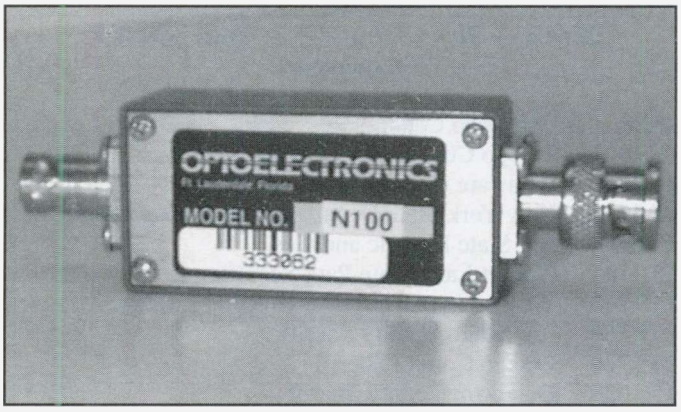


Some radios, like the PRO-2006 from RadioShack pictured here, feature a switchable attenuator that is always on or off. It's a very useful feature in an area with lots of strong signals.

Desentization happens when a strong signal near the frequency that the receiver is tuned to causes the receiver's radio frequency amplifiers to shut down. The amount of amplification necessary to process an incoming signal varies quite widely, and there are circuits in the receiver to deal with this. If a weak signal hits the antenna, the amplifiers step up to make the signal stronger for processing by the rest of the receiver. If a



Radios like the recent BC-9000 from Uniden feature a per-channel attenuator. The light on the right side of the ATT button indicates the attenuator is on for this particular channel. We'll probably see more of this feature as more and more radio transmitters are used for all sorts of purposes.



Filters come in all shapes and sizes. Here's one that's intended to be mounted on top of a handheld if necessary, but works just fine on a base unit too. It's from Optoelectronics and this particular filter rejects the FM broadcast band. It can be a very convenient filter if you have trouble with a nearby broadcaster.

strong signal arrives, the amplifiers drop down to provide the following stages with a more appropriate signal level, helping prevent overload.

The problem happens if the signal you're trying to hear is a relatively weak one, but a strong signal is nearby, say 15 or 30 kHz away. Because the strong signal is so strong, and so close in frequency, the receiver may not be able to tell that it's not the right one, and the amplifiers will drop down in response. But the signal you *want* is now gone because the amplifiers have dropped to a level too low for it to be heard. Bummer. That's desensitization, or *desense* as it's often called, and it can be a major problem with preamplifiers, although it's their job to amplify. And the preamp will amplify the strong signals even stronger, along with everything else. Not a good situation. To make matters worse, most consumer-grade scanners don't have enough filtering, or high enough quality components to adequately deal with strong signals. Overload and adjacent channel interference are the frequent outcomes of these shortcomings. But it's not like you spent $3,000 or $4,000 on your receiver, either.

Preamplifiers *are* useful in certain circumstances. If you're trying to hear a weak signal and there aren't strong signals around, it may help. If you're away from the city in a situation where all of the signals are weak, then you're a good candidate for a preamp. The problem is that these days, with the proliferation of pagers and cellular systems all across the country, those RF quiet spots are getting harder and harder to find. Inserting a preamp into your system is a good way to find out about nearby paging transmitters that you didn't know existed.

It may also be appropriate to use preamps in combination with filters for specific reception problems. We'll talk more about this option in a minute. But for most of us, we want the radio to hear everything, on any frequency that the receiver can tune. So filters are not what we're after either, but let's discuss how they work.

Filters

Filters come in essentially five varieties, but they all do the same job — allow some signals to pass on to the receiver while blocking others. Essentially, a filter provides some sort of a gate; wide open to allow certain signals, or closed to other signals. The gate can be very wide, covering many MHz of spectrum, or as narrow as a few kHz either side of a particular frequency.

Table 1 — Rick's Military Aero Frequencies

247.200	Military Use Cedar Rapids Airport
252.100	928th TAC
255.400	Military Enroute
257.800	
257.900	Air Combat Training
260.400	Iowa Air Guard
269.300	
272.1625	
272.200	Common Freq "Traffic to Scott AFB and O'Hare"
280.800	National Guard Davenport
286.500	Air National Guard
282.100	Mil Global Frequency Net
299.500	Air-to-Air Combat Training
304.200	Air Combat training
311.000	
327.500	Howard Military Operations
349.400	Military Air Transport Command (MAC Primary)
360.700	Air National Guard
364.200	
364.600	Dubuque area high altitude
384.900	
385.650	Military "Uniform" freq

The first type of filter we'll look at provides a wide gate that's closed for several MHz of frequencies. This can be extremely useful if there's a group of signals that you can identify as a problem and want to eliminate. A common example of a **band reject** filter is an FM broadcast band filter, or sometimes called "FM Trap" (I think I'm showing my age again . . . but that's OK, I'm not as old as Harold!). This filter is designed to block signals in the 88 to 108 MHz frequency range, and can do a great job of eliminating that type of interference if you're troubled by broadcasters. There are also band reject filters for the AM aircraft band if you have trouble with airplane comms getting into your scanner in places where they shouldn't.

A variation of the band reject filter is the **band pass** filter, which does exactly the opposite. Instead of *blocking* a particular range of frequencies, a band pass filter allows only those frequencies to pass through and blocks everything else. This makes a great front-end to a receiver that only has one band of frequencies to worry about, but they tend not to be built into scanners because the frequency range of coverage is too broad. The ideal situation would be to have a band pass filter that could be switched in and out for each range of frequencies that we hear. However, you can add band pass filters to the antenna line if, for some reason, you are only interested in signals in a particular band. For practical reasons, band pass filters aren't too common among scanner enthusiasts.

Another type of filter is one that has only one "end" called a **high pass or low pass filter**. These filters have a cutoff point which dictates where the filter is used, and depending on the

"If you're away from the city in a situation where all of the signals are weak, then you're a candidate for a preamp."

type of filter, anything above or below the cutoff point is passed *or* rejected. A good example of this type of filter is one that hams have used for years and have correctly called a low pass filter. This filter usually has a cut-off point about 30 MHz or so, and anything above that frequency is blocked, thereby allowing only the low frequency signals to pass. These are used on transmitters to help prevent harmonic frequencies and other transmitter anomalies from escaping through the antenna and causing interference to nearby televisions and radios. There are however, pass filters with other cutoff points for different applications. Your scanner might benefit from a high pass filter that blocks signals below 30 MHz if you're having trouble with nearby ham or CB transmitters, but otherwise these filters are not used much with scanners.

Another example that shows the problem more correctly might be in order. A high pass filter with a cutoff of about 152 MHz or so might be useful in eliminating VHF pager signals from showing up in the higher VHF portions of the band. However, a band reject filter for the pager ranges might accomplish the same thing, and still leave the VHF Low band available for you to receive. The high pass filter we just described would eliminate everything below 152 MHz.

Finally, we come to the filter that's probably the most desirable for scanner listeners, the **notch filter**. A notch filter is designed to eliminate a very narrow range of frequencies (usually only a few kHz wide, as opposed to a band reject filter which can cover many MHz). If you have interference getting into your receiver, it's likely that it's from one source, and probably nearby. A notch filter allows you to deeply restrict the signal from that source from passing through to the receiver. Without the signal hitting the receiver, there likely won't be any interference. Case closed.

Notch filters come in all shapes and sizes. Some are tunable across a wide range of frequencies to help you eliminate any type of interference that you might come across, while others are specially built to notch only a very narrow range of frequencies. These special frequency notch filters tend to be most effective and have very deep notches, which means that they will eliminate very strong signals on their assigned frequency, but allow signals to pass through almost unharmed just a few kHz away. They are tunable, but only for a very narrow range on either side of their designed center frequency.

Finally, a **band pass filter** *combined* with a preamp can do wonders. If you have an amplifier after the filter, so that only signals from the particular frequency range of interest are being amplified, performance can be enhanced significantly, but at the expense of everything else.

As a case in point, I am about 12 miles from the center of the city where the trunking system is located that I like to monitor. Much closer to me, however, are at least three cell towers within a mile, one of those only about a quarter-mile away. And also close by is the "Voice of St. Louis County," a 350-watt transmitter on the VHF Hi band for police use. Outside of that, there's not much RF in my neighborhood.

I was terribly disappointed in the performance I was getting from the BC-895 trunktracker. It would follow the signals OK, but the signals were noisy and weak, and frequently the radio would have trouble finding the control channel. I even went so far as to add a dedicated 800 MHz beam antenna aimed at the city to help the situation. Then I was reminded of the idea of a filtered preamp. To say the least, the signals came up out of the mud, and the radio has much less trouble locating the control channel. The filter was just enough to cut the interference that was probably desensitizing the receiver, and the preamp brought the signal up where it was supposed to be, without other problems. That same radio now has terrible performance in the VHF band, because the VHF signals are blocked by the filter.

Table 2 — Rich's Central New York Scanner Frequencies

46.38	Chenango County Fire Control
46.44	Otsego County Fire Control
46.06	Delaware County Fire Control
47.32	New York State Department of Transportation
48.02	NY State Electric and Gas
151.145	Gilbert Lake State Park Security
155.340	Tri-County Ambulance-Hospital Lifelink
155.250	Chenango County Sheriff
155.730	Otsego County Sheriff
156.030	Delaware County Sheriff
155.655	NY State Police (car-car)
155.665	NY State Police (car-base)
159.225	New York State Department of Conservation

Attenuators

An attenuator is the opposite of a preamp. They reduce the signal on some radios, and in very strong signal areas, you might find your reception "clearer" by using an attenuator. Or you might find the interference goes away if you switch in an attenuator. It is unfortunate, but most scanner listeners in metropolitan areas are much more likely to benefit from an attenuator than the other devices we've discussed. The reason for this has to do with the design of the typical scanner receiver and the amount of strong RF present in a town of almost any size.

Some of the newer radios will let you switch an attenuator on and off by channel. That's a nice feature if you're in a metro area, or if you only experience problems on one band. Other radios just have an on/off switch so the attenuator affects all signals. There are also add-on attenuators available that go in-line with the coax just before the radio. They work on all signals too.

How do you know if you need an attenuator? Well, that's a tough call. A lot of radios built in the last several years have one, so the easiest thing to do is try it. See if any interference you're experiencing goes away. With most of the switchable attenuators, they're about 10db or so, so it shouldn't kill the signal you want to hear, but might help the interference. Another thing to check for (especially if you have a radio that just has an on/off switch for the attenuator) is to see if the background "hiss" gets any better or worse with the attenuator turned on. If it tends to clear up with the attenuator turned on, it probably means you're experiencing some form of desensitization, and you might very well find that your receiver runs better with the attenuator on all the time. But there's something psychological about intentionally putting something on your radio to *reduce* the signal that gets to the receiver.

Think Before You Act

The bottom line with all of these devices is that they can help your scanner listening, or can just about destroy it. Keep in mind that the radios that we use for scanners are not built to com-

"... a bandpass filter combined with a preamp can do wonders."

mercial or military specs, and aren't going to handle lots of strong signals without breaking down. This isn't a physical breakdown, but rather an electronic failure that results in you listening to interference and other annoying features that will detract from what you're trying to accomplish. You can do an awful lot with just antennas, which is where you should probably start before doing much with any of these devices. Filters, particularly notch and band reject filters, can help eliminate interference from an otherwise great performing antenna system. If you're not sure what you need, see if you can find someone to take a look at your system and give you advice. Of course, free advice is often worth exactly what you pay for it, but sometimes two heads are better than one. You can always remove any of these devices from your system if they don't improve the situation.

Check out the Optoelectronics FM filter Model N-100 at 800-327-5912 and the RadioShack FM filter, part no. 15-577. And remember, if you'd like to share your experiences — good and bad — with filters, drop me a line today!

Scanning The Mail

Rick Luchtenburg from Anamost, Iowa, writes in to say "I have been a scanner listener since I was 16 years old (I'm now 41). Over the years, I have purchased many tabletop Bearcat scanners, and then a few years ago, I purchased a Realistic PRO-43 handheld scanner. I really enjoy listening to the military aero band (220-400 MHz). There is some great listening in the band, even here in Iowa City."

"Recently I purchased *Popular Communications* magazine and Wow! I had no idea of all the information available... these magazines have been a great help to me."

"I hope to someday purchase a wideband shortwave receiver, such as the ICOM or AOR. Can you tell me if there is a shortwave radio dealer here in Eastern Iowa? Thanks for a great magazine."

Well, Rick, unfortunately I am not aware of any radio dealers in your area beyond RadioShack. They, of course, carry some great introductory models of shortwave and scanner equipment, but it sounds like you're looking for things at the high end. The only suggestion I have for you is to browse through this and several issues of *Popular Communications* and contact the dealers that offer shortwave equipment, asking them for a catalog and advice. If anyone knows of a dealer closer to Rick, please let us know!

Of course, there are many excellent dealers that offer nationwide service through toll-free numbers. These include Universal Radio in Ohio (800-431-3939 or 614-866-4267), Amateur ElectronicSsupply, with locations all over the place (800-558-0411), Grove Enterprises in North Carolina (800-438-8155), Lentini Communications in Connecticut (800-666-0908), Ham Radio Outlet in Virginia (800-444-4799), and C. Crane Company in California (800-522-8863), just to name a few.

Rick also enclosed an interesting list of military frequencies (see **Table 1**) from the central U.S. Lots of these frequencies may be reused throughout the country, so check them out.

"... the radios that we use for scanners are not built to commercial or military specs..."

Central New York

Rich Klingman writes "Here's a list of central New York loggings I hope you can use. I've been scanning for several years, but only got into it after buying a used Bearcat 147XLT 16-channel model at a garage sale for $10.

"The three sheriff channels can get pretty interesting at times ... most calls around here are pretty mundane, as this is a fairly rural section of the state."

Great Rich! You can check out Rich's scanner frequency list in **Table 2**. Thanks for writing in!

What Do You Think?

"ScanTech" is *your* column, and we'd like your input. If you have frequency or trunking information, or questions on techniques or equipment, don't hesitate to send them in. Of course, we're always looking for photos of your shack too. You can write to *Popular Communications*, 25 Newbridge Road, Hicksville, NY 11801 or send it to me directly at Ken Reiss, 9051 Watson Rd. #309, St. Louis, MO 63126 or via E-mail at <armadillo1@aol. com>. Complaints should still go to Harold! Until next time, good listening. ■

The Computer Corner

BY ED GRIFFIN
<griffened@sprynet.com>

RECEIVER CONTROL, SOFTWARE AND MORE

Instant Copy — And It's Free

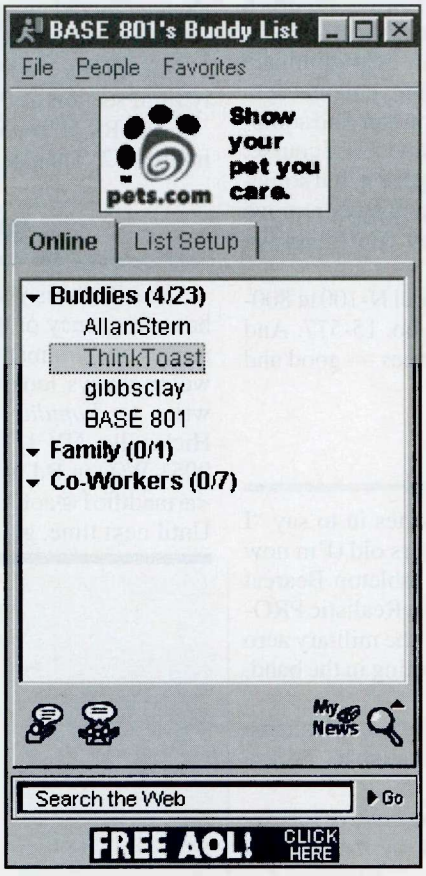
If you've been reading this column for awhile, you know about how radio monitors are using Internet Relay Chat (IRC), mailing lists, and Usenet newsgroups for sharing information. There's a new type of application that has become popular — the instant message and client. The software starts when you log onto the Internet, and you have a name or number that identifies you, which you also distribute to the folks with whom you wish to communicate. You also collect the names or numbers of those folks into a list that is entered into the software running on your system. This is called your "Buddy List."

The neat thing is that now when you log onto the Internet, you will see a listing of your Buddies who are also online at the time. They will get a notification that you are now online. Sending a quick message to them is only a click away, and unlike E-mail, there's no waiting for your message to get to them. Unlike IRC, you don't have to know which network and channel they are using. The best thing is that the software and access to the service are free!

The two most popular versions of this application are America Online's Instant Messenger (AIM) <http://www.aol.com/aim> and ICQ from Mirabelis <http://www.icq.com>. It's true that AOL bought Mirabelis over the summer, but they continue to operate independently, so you will have to figure out which one to use based upon what the other folks are using, or configure them both.

Folks on mailing lists have started meeting every night or during the day and comparing notes on what they can hear in real time. I must warn you that for many folks, it is addictive. It may lack some of the technical challenges that amateur radio operators face when using radio waves to chat, but it's still plenty of fun.

The applications don't have to be run automatically when you are online. You can control who sees when you are available, and if there's someone whom you don't wish to contact you, a mechanism for blocking them is provided.



Names and numbers of people you want to stay in touch with are collected on your "Buddy List."

Everything, All Of The Time

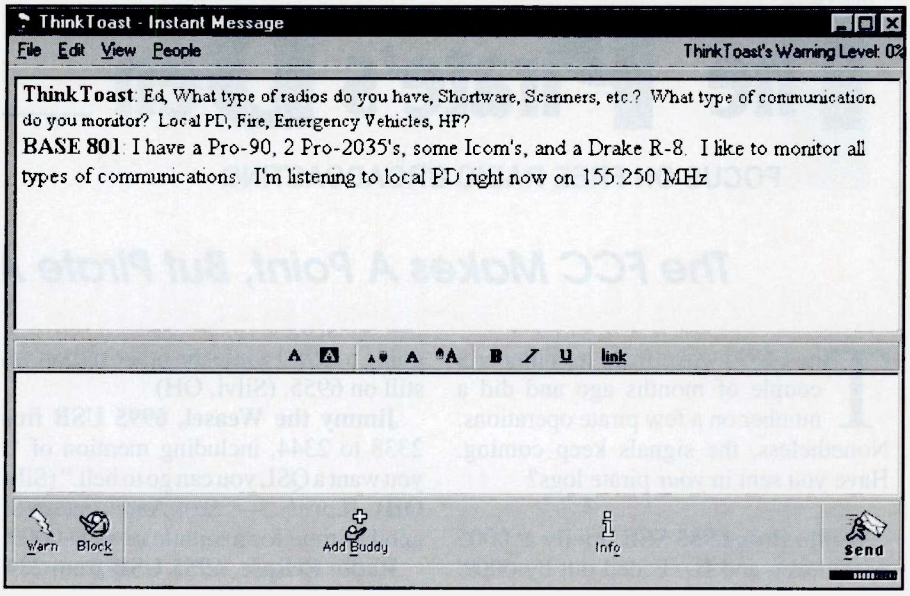
If you have been using the Internet, chances are it's been via a dial-up connection, most commonly using a regular telephone line at speeds up to 56k, or using ISDN at speeds between 56k and 128k. Some folks may have access via work, an educational facility, or another location that has a dedicated access connection. If you have had a chance to use a system that's always "on" the Internet, it can be hard to get used to having to find a telephone line and dial in when you are not able to connect directly to the network. You can become accustomed to always having your incoming mail delivered within seconds, and getting an instant response when using your browser on the Web. The hassle of having to share a telephone line, or pay per-minute charges fades away, and lots of cool stuff that only works well given a constant connection becomes possible.

The ability for home users to have this type of connectivity is now possible. Early adopters of the newest broadband technology may have recently gotten access to the Internet via their cable system using a cable modem, via their satellite dish, or via a new communications service called Digital Subscriber Line (DSL) offered by their local telephone company and others, using telephone-like wiring. A cable modem service provider is the Home Network <http://www.home.net>. Offering speeds of up to 100 times faster than a dial-up connection and 15 times faster than ISDN, things like watching video or sending voice over the Internet become possible, yielding much better quality than what you may have seen at dial-up speeds. They use your cable connection; the special cable modem is required, along with the cost of a monthly, flat rate subscription. The biggest drawback may be that your local cable system doesn't offer this service. This uses a shared bandwidth scheme, so you and the other folks using cable modems in your immediate area all share the connection. There's a lot to share, so most folks are overwhelmed by the speed of their downloads. Suggested pricing after installation is between $25 and 50 a month.

Getting A Small Satellite TV Dish?

If you've purchased or are considering the purchase of one of those small satellite television dishes, did you realize that you could also use it for data? One of the companies offering the service is DirecPC <http://www.Direcpc.com>. They offer connections at up to 400k, which is about three times faster than

ISDN, but since your dish is receive only, that speed increase is for downloads only. You still must use a dial-up modem and telephone line for the data you are sending to the Internet. This may not be the problem you think, since most Web surfing and E-mail reading sends much more data to your system than you are sending out. The bandwidth requirements are lopsided, or asymmetric. If you use ADSL, a flavor of DSL, it also uses a configuration where the amount of data you can receive at one time is much greater than what you can send. Unlike DirecPC, both sent and received data on ADSL travels to and from the Internet on the same connection. The rates on their Webpage include free minutes, and then there's a per minute charge, plus you must buy the system. If you live in an area without cable modem or DSL service, this may be the best high-speed alternative.



Chatting with your online friends is easy.

Digital Subscriber Line

Digital Subscriber Line or DSL is supposed to be everything that an older technology, ISDN (Integrated Services Digital Network) was not. Many folks whose companies require them to have home offices have had ISDN installed. This requires the purchase of an ISDN modem, the installation of a special telephone line, and then in most cases a per-minute charge in addition to the monthly line charge. It's easy to rack up an expensive monthly bill, and just like using a regular modem, you are only connected when you place a call, and the telephone company's meter is running.

Some folks were not able to get ISDN if they lived too far from the telephone company's central office, or if the existing equipment or wiring wouldn't support the higher speeds required for data transmission. DSL may not be available in your area yet, and requires the purchase of a special adapter used to connect to your network at home. Check your local telephone provider's Website for info on ADSL. If they have it, it may be your best choice for a flat-rate, dedicated, high-speed access solution. If you want to read up on some of the technical details, visit the ADSL forum at <http://www/adsl. com>.

One of the current drawbacks of any new technology is that, in the beginning, the hardware is costly, but as volume increases, cost decreases. A number of companies have recognized this, and are working to simplify what it will take to make this technology prevalent in home computers. The Universal ADSL Working Group's Website at <http://www.uawg.org> talks about how they want to completely eliminate modems.

Some of you may be wondering why getting faster access is important to radio monitoring. It's simple. If you can spend less time waiting on downloads and have what you want delivered to your computer while you are away, doesn't that leave more time for using your radio? I also see that as access to, and sharing of information improves, then our productivity while using our radios can improve as a result. On the other hand, if you don't have a computer that fights your radio for your time and attention, why are you reading the "Computer Corner" column?

Remember, we're always looking for E-mail from you. Connect to the *Popular Communications* Website at <http://www.popular-communications.com>, where you'll find a link to me and our other columnists. ■

BY EDWARD TEACH

The Pirate's Den

FOCUS ON FREE RADIO BROADCASTING

The FCC Makes A Point, But Pirate Activity Abounds!

The FCC awoke from its slumber a couple of months ago and did a number on a few pirate operations. Nonetheless, the signals keep coming. Have you sent in *your* pirate logs?

Radio Bob, 6955 SSB briefly at 0005 with music and ID. Faded out by 0009. (Dave Jeffery, New York)

Radio Metallica Worldwide, 7415 at 1448 with a talk about President Clinton, ID, and "Secret Agent" theme song. (Jeffery, NY) (*I'll venture a guess that this might have been a relay by legit station WBCQ — Ed*)

He-Man Radio, 6955 USB heard at 2232 with songs by Credence Clearwater Revival, Peter, Paul, and Mary, and also segments from Paul Harvey's "The Rest of the Story." Also offered station shirts for $12 and gave the usual address: P.O. Box 109, Blue Ridge Summit, PA 17214. (Dean Burgess, MA) 2243 to 2304 with "Puff, the Magic Dragon," mention of "Jake the Body," and He-Man IDs. (Lee Silvi, OH)

Trailer Park Ministries, 6955 USB at 0221–0240 with multiple IDs and some gospel music. (Silvi, OH)

Blind Faith Radio, 6955 USB at 1716 to 1724 with music and a mention that the broadcast was done "to keep the pirate radio interest going." Also heard from 1455 to 1512 playing a taped call from someone in a phone booth who was "attacked" by a deer. Said they were doing a "hit and run broadcast." Another time signing on at 1619 with the song "I Just Want to Celebrate . . ." And from 1646 to 1703 with Ted Nugent songs, mention of Box 293 drop. And also heard at 1538 to 1542 on another day. (Silvi, OH)

Radio Free Speech, 6955 at 2216 to 2230 with special tunes in a program dedicated to the FCC. (Silvi, OH)

Radio Chad, 6955 USB with a test from 0245 to 0247. (Silvi, OH)

RCBN, 6955 USB, heard from 2132 to 2204. Also heard at 0100 to 0119 on **6960** with broadcast number 21. Was probably on earlier as I heard him announce he was going to 6960 while the other station was still on 6955. (Silvi, OH)

Jimmy the Weasel, 6995 USB from 2338 to 2344, including mention of "If you want a QSL you can go to hell." (Silvi, OH) (*Lovely — Ed*) And tentatively another time for a minute or so at 0000.

Radio Eclipse, 6955 USB from 2247 to 2302. (Silvi, OH)

Unidentified — bingo? 6955 USB at 1543 with someone calling out bingo numbers and a winner. Apparently the same station at another time on 6960 right after RBCN sign-off, but much weaker than RCBN had been. (Silvi, OH)

Radio Beaver, 6955 USB at 2333 to 0004 with talk about the FCC pirate busts and mention of the Box 293 mail drop. (Silvi, OH)

WKND, 6955 at 2101 to 2146 with music, plugs for the Association of Clandestine Enthusiasts (ACE), *Hobby Broadcasting* magazine, and others. Another occasion heard at 2207 to 2228 on 6950 with stuff by Kiss and a few IDs. (Silvi, OH)

Buddy (or Rubber) Duck Radio, 6955 USB heard at 2305 to 2307. Possible test, right after He-Man Radio signed off. (Silvi, OH)

Unidentified station on 6955 USB with the song "Get Ready — Here I Come" by Rare Earth and one other, but too much QRM from China Radio. (Silvi, OH)

WMPR, 6955 from 2148 to 2202 with music. (Silvi, OH)

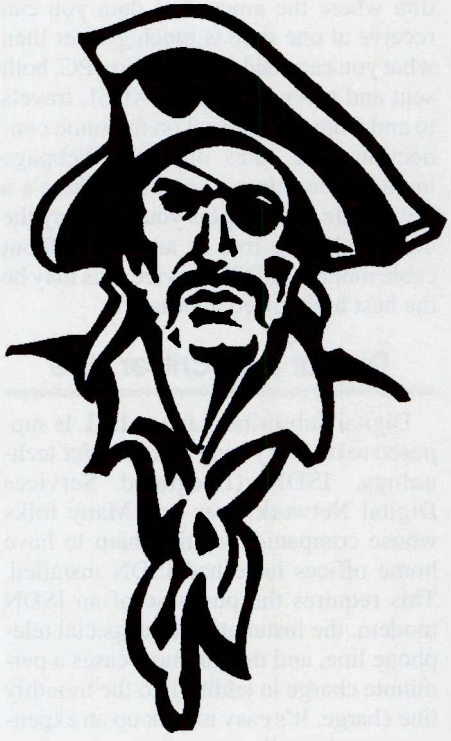
SWRS (Shortwave Relay Service), 7590 USB at 0634 to 0659 with a program of '60s and '70s rock (Jesse Rose, VA)

Radio Free London, 6305 at 0741 to 0757 with classic rock. (Rose, VA)

Britain's Better Music Station, 6199 monitored at 0805 to 0812 with classic rock. (Rose, VA)

Weekend Music Radio, 7446 at 0819 to 0827, also classic rock and what appeared to be a live phone-in call from a listener. (Rose, VA)

"Radio Pooh," 7000 LSB at 2300 with "Winnie the Pooh" theme played over and over and a little kid's voice naming



Pooh characters, followed by a scratchy and skipping record of "Winnie the Pooh and the Blustery Day." Off at 2325. (Klingman, NY)

Voice of Laryngitis, 6955 with usual mix of music. (Klingman, NY) (Time?)

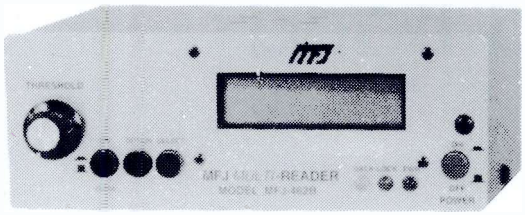
Radio Don Ho (*presume 6955 — Ed*) at 2010 to 2045 with Don Ho hits such as "Tiny Bubbles." Terrible audio. (Klingman, NY)

Radio XXX (*presumed on 6955 — Ed*) from 0130 to 0200, with soundtrack from a porno film and ID "You're tuned to Radio XXX," — then groans and screams — "hosted by Miss Jones."

We're a little off the usual pace this time, perhaps because of a slight drop in on-the-air activity. A couple of points: please double-check your reports to be sure you've included both time and frequency. Also be sure your name and at least your state are included in your report. I need copies of recent pirate QSLs to include in the column, too. Thanks, and I'll catch you again next month! ■

Tap into *secret* Shortwave Signals

Turn mysterious signals into exciting text messages with this new MFJ MultiReader™



MFJ-462B **$179.95**

Plug this self-contained MFJ MultiReader™ into your shortwave receiver's earphone jack.

Then *watch* mysterious chrips, whistles and buzzing sounds of RTTY, ASCII, CW and AMTOR(FEC) turn into exciting text messages as they scroll across your easy-to-read LCD display.

You'll *read* interesting commerical, military, diplomatic, weather, aeronautical, maritime and amateur traffic . . . traffic your friends can't read -- unless they have a decoder.

Eavesdrop on the World

Eavesdrop on the world's press agencies transmitting *unedited* late breaking news in English -- China News in Taiwan, Tanjug Press in Serbia, Iraqui News in Iraq -- all on RTTY.

Copy RTTY weather stations from Antarctica, Mali, Congo and many others. Listen to military RTTY passing traffic from Panama, Cyprus, Peru, Capetown, London and others. Listen to hams, diplomatic, research, commercial and maritime RTTY.

Listen to maritime users, diplomats and amateurs send and receive error free messages using various forms of TOR (Telex-Over-Radio).

Monitor Morse code from hams, military, commercial, aeronautical, diplomatic, maritime -- from all over the world -- Australia, Russia, Hong Kong, Japan, Egypt, Norway, Israel, Africa.

Printer Monitors 24 Hours a Day

MFJ's exclusive *TelePrinterPort*™ lets you monitor any station 24 hours a day by printing their transmissions on your Epson compatible printer.

Printer cable, **MFJ-5412**, $9.95.

MFJ *MessageSaver*™

You can save several pages of text in 8K of memory for re-reading or later review .

High Performance Modem

MFJ's high performance *phaselock loop* modem consistently gives you solid copy -- even with weak signals buried in noise. New threshold control minimizes noise interference -- greatly improves copy on CW and other modes.

Easy to use, tune and read

It's easy to use -- just push a button to select modes and features from a menu.

It's easy to tune -- a precision tuning indicator makes tuning your receiver easy for best copy.

It's easy to read -- the 2 line 16 character LCD display with contrast adjustment is mounted on a sloped front panel for easy reading.

Copies most standard shifts and speeds. Has *MFJ AutoTrak*™ Morse code speed tracking.

Use 12 VDC or use 110 VAC with MFJ-1312B AC adapter, $12.95. 5¼x2½x5¼ inches.

No Matter What Warranty

You get MFJ's famous one year *No Matter What*™ *unconditional* warranty. That means we will repair or replace your *MFJ MultiReader*™ (at our option) *no matter what* for a full year.

Try it for 30 Days

Order an *MFJ-462B MultiReader*™ *from* MFJ and try it in your own setup -- compare it to any other product on the market regardless of price.

Then if you're not completely satisfied, simply return it within 30 days for a prompt and courteous refund (less shipping).

Order today and try it -- you'll be glad you did.

Super Active Antenna

"World Radio TV Handbook" says MFJ-1024 is a "first rate easy-to-operate active antenna . . . quiet . . . excellent dynamic range . . . good gain . . . low noise . . . broad frequency coverage."

Mount it outdoors away from electrical noise for maximum signal, minimum noise. Covers 50 KHz to 30 MHz.

Receives strong, clear signals from all over the world. 20dB attenuator, gain control, ON LED. Switch two receivers and aux. or active antenna. 6x3x5 in. remote has 54 inch whip, 50 ft. coax. 3x2x4 in. 12 VDC or 110 VAC with MFJ-1312, $12.95.

MFJ-1024 **$129.95**

Indoor Active Antenna

MFJ-1020B **$79.95**

Rival outside long wires with this *tuned* indoor active antenna. *"World Radio TV Handbook"* says MFJ-1020 is a "fine value . . . fair price . . . best offering to date . . . performs very well indeed."

Tuned circuitry minimizes intermod, improves selectivity, reduces noise outside tuned band. Use as preselector with external antenna. Covers 0.3-30 MHz. Has Tune, Band, Gain, On/Off/Bypass Controls. Detachable telescoping whip, 5x2x6 in. Use 9 volt battery, 9-18 VDC or 110 VAC with MFJ-1312, $12.95.

Compact Active Antenna

MFJ-1022 **$39.95**

Plug this new *compact* MFJ all band active antenna into your general coverage receiver and you'll hear strong clear signals from all over the world from 300 KHz to 200 MHz -- including low, medium, shortwave and VHF bands.

Also improves scanner radio reception on VHF high and low bands.

Detachable 20 in. telescoping antenna. 9 volt battery or 110 VAC with MFJ-1312B, $12.95. 3⅛x1¼x4 in.

Eliminate power line noise!

MFJ-1026 **$169.95**

New! *Completely* eliminate power line noise, lightning crashes and interference *before they get into your receiver!* Works on all modes -- SSB, AM, CW, FM, data -- and on all shortwave bands. Plugs between main external antenna and receiver. Built-in active antenna picks up power line noise and cancels undesirable noise from main antenna. Also makes excellent active antenna.

MFJ Antenna Matcher

MFJ-959B **$99.95**

Matches your antenna to your receiver so you get maximum signal and minimum loss.

Preamp with gain control boosts weak stations 10 times. 20 dB attenuator prevents overload. Pushbuttons let you select 2 antennas and 2 receivers. Cover 1.6-30 MHz. 9x2x6 inches. Use 9-18 VDC or 110 VAC with MFJ-1312, $12.95.

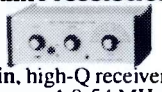
Dual Tunable Audio Filter

MFJ-752C **$99.95**

Two separately tunable filters let you peak desired signals and notch out interference at the same time. You can peak, notch, low or high pass signals to eliminate heterodynes and interference. Plugs between radio and speaker or phones. 10x2x6 in.

High-Gain Preselector

MFJ-1045C **$69.95**



High-gain, high-Q receiver preselector covers 1.8-54 MHz. Boost weak signals 10 times with low noise dual gate MOSFET. Reject out-of-band signals and images with high-Q tuned circuits. Pushbuttons let you select 2 antennas and 2 receivers. Dual coax and phono connectors. Use 9-18VDC or 110 VAC with MFJ-1312, $12.95.

Receive *CW, RTTY, ASCII, Weather Maps, News Photos*

MFJ-1214PC **$149.95**

Use your computer and radio to receive and display *brilliant full color* FAX news photos and incredible WeFAX weather maps. Also RTTY, ASCII and Morse code.

Animate weather maps. Display 10 global pictures simultaneously. Zoom any part of picture or map. Frequency manager lists over 900 FAX stations. Automatic picture saver.

Includes interface, easy-to-use menu driven software, cables, power supply, comprehensive manual and *Jump-Start*™ guide. Requires 286 or better computer with VGA monitor.

High-Q Passive Preselector

MFJ-956 **$39.95**

The MFJ-956 is a *high-Q* passive LC preselector that lets you boost your favorite stations while rejecting images, intermod and other phantom signals. Covers 1.5-30 MHz. Has preselector bypass and receiver grounded pos. 2x3x4 inches.

Super Passive Preselector

MFJ-1046 **$99.95**

New! **Improves** any receiver! Suppresses strong out-of-band signals that cause intermod, blocking, cross modulation and phantom signals. Unique Hi-Q *series tuned* circuit adds super sharp front-end selectivity with excellent stopband attenuation and very low passband loss. Air variable capacitor with vernier. 1.6-33 MHz.

Easy-Up Antennas Book

How to build and put up inexpensive, fully tested wire antennas using readily available parts that'll bring signals in like you've never heard before. Antennas from 100 KHz to 1000 MHz.

MFJ-38 **$16.95**

MFJ 12/24 Hour LCD Clocks

MFJ-107B **$9.95**

MFJ-108B **$19.95**

MFJ-105C **$19.95**

MFJ-108B, dual clock displays 24 UTC and 12 hour local time *simultaneously*. **MFJ-107B**, single clock shows you 24 hour UTC time. *3 star rated* by *Passport to World Band Radio*!

MFJ-105C, accurate 24 hour UTC quartz *wall clock* with large 10 inch face.

MFJ Antenna Switches

MFJ-1704 **$59.95**

MFJ-1702C **$21.95**

MFJ-1704 heavy duty antenna switch lets you select 4 antennas or ground them for static and lightning protection. Unused antennas automatically grounded. Replaceable lightning surge protection device. Good to 500 MHz, 60 dB isolation at 30 MHz.

MFJ-1702C for 2 antennas.

World Band Radio Kit

MFJ-8100K **$59.95** *kit*

MFJ-8100W **$79.95** *wired*

Build this *regenerative* shortwave receiver *kit* and listen to shortwave signals from all over the world with just a 10 foot wire antenna.

Has RF stage, vernier reduction drive, smooth regeneration, five bands.

Free MFJ Catalog

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MFJ . . . the world leader in shortwave accessories

CIRCLE 120 ON READER SERVICE CARD

Pop'Comm's World Band Tuning Tips

April 1999

This listing is designed to help you hear more shortwave broadcasting stations. The list includes a variety of stations, including international broadcasters beaming programs to North America, others to other parts of the world, as well as local and regional shortwave stations. Many of the transmissions listed here are not in English. Your ability to receive these stations will depend on time of day, time of year, your geographic location, highly variable propagation conditions, and the receiving equipment used.

AA, FF, SS, GG, etc. are abbreviations for languages (Arabic, French, Spanish, German). Times given are in UTC, which is five hours ahead of EST, i.e. 0000 UTC equals 7 p.m. EST, 6 p.m. CST, 4 p.m. PST.

UTC	Freq.	Station/Country	Notes
0000	5019	Ecos del Atrato, Colombia	SS
0000	6055	Radio Exterior de Espana, Spain	
0000	17675	Radio New Zealand Int'l	
0000	9630	Voz Cristiana, Chile	SS
0000	11900	WWBS, Georgia, USA	
0030	6331	Radio Arcangel, Peru	SS
0030	9485	Radio Bulgaria	
0030	7345	Radio Prague, Czech Republic	SS/EE
0030	6618	Radio Super Sensacion, Peru	SS
0030	7160	Radio Tirana, Albania	
0030	6120	Radio Vilnius, Lithuania, via Germany	
0030	9935	Voice of Greece	GG
0030	9685	VOIRI, Iran	
0100	5011	Cristal Int'l, Dominican Republic	SS
0100	11915	Radio Gaucha, Brazil	PP
0100	11705	Radio Havana Cuba	
0100	5678	Radio Ilucan, Peru	SS
0100	9737	Radio Nacional, Paraguay	SS
0100	9440	Radio Slovakia, Slovak Republic	
0100	6020	Radio Ukraine Int'l	
0130	9870	Radio Austria Int'l	EE/Croat
0130	6220	Radio Tirana, Albania	variable freq.
0130	4815	Radiodifusora Londrina, Brazil	PP
0140	9650	Vatican Radio	
0200	11785	Deutsche Welle, Germany	GG
0200	4940	Radio Amazonas, Venezuela	SS
0200	11720	Radio Bulgaria	
0200	3210	Radio Exterior de Espana, Spain via C.Rica	SS
0200	11725	Radio Korea Int'l	
0200	6155	Radio Romania Int'l	
0200	7115	Radio Yugoslavia	
0200	11710	RAE, Argentina	
0200	7450	Voice of Greece	GG/EE
0200	11690	Voz Cristiana, Chile	SS
0230	13750	Adventist World Radio, Costa Rica	SS
0230	4955	Radio Nacional, Colombia	SS/EE
0230	9495	Radio Sweden	
0230	4835	Radio Tezulutlan, Guatemala	SS
0230	9765	RDP, Portugal	PP
0230	5990	REE, Spain	SS
0230	9605	Vatican Radio	FF
0250	7305	Vatican Radio	
0300	9755	Africa Number One, Gabon	AA
0300	9525	Channel Africa, South Africa	FF
0300	5840	Croatian Radio	Croatian
0300	4980	Ecos del Torbes, Venezuela	SS
0300	4819	La Voz Evangelica, Honduras	SS
0300	9475	Radio Cairo, Egypt	
0300	3300	Radio Cultural, Guatemala	SS
0300	7110	Radio Ethiopia	vern; variable
0300	9820	Radio Havana Cuba	
0300	11665	Radio Sweden	Swedish
0300	12040	Radio Ukraine	
0300	3240	Trans World Radio, Swaziland	
0300	11530	Voice of Hope, Lebanon	AA
0300	9865	Voice of Russia	
0325	7170	V of Broad Masses of Eritrea	vern
0330	17510	KWHR, Hawaii	
0330	3985	Merlin Network One, England	
0330	7115	Radio Sweden	
0330	5905	Voice of Vietnam, via Russia	
0330	6265	Zambia National Broadcasting Corp	
0345	9835	Radio Budapest, Hungary	
0400	9730	China Radio Int'l, via French Guiana	
0400	3330	Christian Voice, Zambia	
0400	4930	Radio Internacional, Honduras	SS
0400	6115	Radio Union, Peru	SS
0400	9580	Radio Yugoslavia	
0400	7214	RTT Tunisienne, Tunisia	AA
0400	9885	Swiss Radio Int'l	
0500	9580	Africa Number One, Gabon	FF
0500	7520	Radio Bulgaria	
0500	4850	Radio Cameroon	EE/FF
0500	9790	Radio France Int'l	FF
0500	11955	Radio Nacional, Angola	PP
0545	4915	Ghana Broadcasting Corp.	SS
0600	9600	Magadan Radio, Russia	RR

UTC	Freq.	Station/Country	Notes
0600	6100	Radio Liberia Int'l	SS
0600	5470	Radio Veritas, Liberia	
0600	4783	RTV Malienne, Mali	FF
0600	4005	Vatican Radio	
0600	9668	Voice of Justice, Azerbaijan	Wed/Sat
0630	7260	Adventist World Radio, Italy	FF/AA
0630	6015	Radio Austria Int'l, via Canada	
0630	9835	Radio Japan/NHK	
0730	9915	Merlin Network One, England	
0730	9775	Voice of Greece	EE/Greek
0740	15200	Trans World Radio, Guam	
0800	13745	BBC, via Canada	RR
0800	3290	Guyana Broadcasting Corp.	
0800	5865	HCJB, Ecuador	
0800	7285	ORTM, Mali	FF
0800	5995	Radio Australia	
0800	13730	Radio Austria Int'l	
0830	13685	Swiss Radio Int'l	
0900	4890	NBC, Papua New Guinea	
0900	12080	Radio Australia	Pidgin
0900	4950	Radio Baha'I, Ecuador	SS
0900	6185	Radio Educacion, Mexico	SS/EE
0900	6010	Radio Mil, Mexico	SS
0900	5055	RFO, French Guiana	FF
0930	9640	HCJB, Ecuador	
0930	9710	Radio Australia	Pidgin
0930	9700	Radio New Zealand	
0930	4875	Radio Roraima, Brazil	PP
0930	4560	Radio Uno, Peru	SS
1000	5035	Radio Aparecida, Brazil	PP
1000	6020	Radio Australia	Tok Pisin
1000	4830	Radio Tachira, Venezuela	SS
1030	11715	Radio Korea Int'l	
1030	6100	Radio New Zealand Int'l	
1030	15240	Radio Sweden	Swedish
1030	4935	Radio Tropical, Peru	SS
1030	6070	Voz Cristiana, Chile	SS
1100	11660	KSDA/AWA, guam	Mandarin
1100	2410	Radio Enga, Papua New Guinea	vern.
1100	3905	Radio New Ireland, Papua New Guinea	vern
1100	21540	RTBF, Belgium, via Germany	FF
1100	5020	Solomon Islands Broadcasting	
1100	6105	XEQM, Mexico	SS
1100	6937	Yunan PBS, China	CC
1130	9845	Voice of Russia	Mongolian
1200	15485	China Radio Int'l	
1200	7285	Radio Korea Int'l	
1200	3925	Radio Tampa, Japan	JJ
1230	9810	Radio Thailand	
1300	7365	KNLS, Alaska	
1300	17800	Radio Cairo, Egypt	AA
1330	9500	Radio Australia	
1330	11660	Radio Australia	VV
1330	15355	Radio Jordan	AA
1330	9715	Radio Tashkent, Uzbekistan	
1330	21630	UAE Radio, Abu Dhabi	AA
1330	13675	UAE Radio, Dubai	
1400	9625	CBC Northern Service, Canada	
1400	15465	Radio Pakistan	
1400	13580	Radio Prague, Czech Republic	
1400	9780	Radio Yemen	AA
1400	15200	RDP Int'l, Portugal	PP
1400	11815	Voice of Africa, Libya	
1430	15275	BSKSA, Saudi Arabia	AA
1430	9505	Radio Japan/NHK	EE/others
1430	21810	Radio Sweden	
1430	7115	Radio Thailand	TT
1430	21605	RDP, Portugal	PP
1430	15265	Swiss Radio Int'l	
1500	15640	Kol Israel	
1500	15550	Vatican Radio	FF
1500	17680	Voz Cristiana, Chile	EE
1530	11530	Reshet Bet, Israel	HH
1600	11780	Broad. Svc. Kingdom of Saudi Arabia	AA
1600	13650	Radio Canada Int'l	RR
1600	11615	Radio France Int'l	
1600	15530	Radio France Int'l	
1630	15345	RTV Marocaine, Morocco	AA
1700	13705	Radio Rossi, Russia	RR
1715	17545	Reshet Bet, Israel	HH
1730	15475	Africa Number One, Gabon	FF
1730	11805	Radio Oman	AA
1730	11570	Radio Pakistan	
1730	15735	Radio Sweden	
1800	17870	Channel Africa, South Africa	
1800	11990	Radio Kuwait	
1830	12085	Radio Damascus, Syria	AA, others
1830	15705	Radio Denmark, via Norway	DD
1900	11620	All India Radio	
1900	11635	Radio Denmark, via Norway	DD
1900	9855	Radio Kuwait	AA
1900	9510	Trans World Radio, via S. Africa	vern
1900	15120	Voice of Nigeria	various langs.
1900	9560	Voice of Turkey	TT
1930	15115	HCJB, Ecuador	Farsi
2000	11605	Kol Israel	
2000	9985	Radio Taipei Int'l, via WYFR	FF
2000	11734	Radio Tanzania — Zanzibar	Swahili; varies
2000	15345	RAE, Argentina	FF
2000	9665	Voice of Armenia	EE
2015	13610	Radio Damascus, Syria	
2030	9745	AWR Africa, South Africa	
2030	7210	Qatar Broadcasting Service	AA
2030	15435	Voice of Africa, Libya	
2100	11915	Merlin Network One, England	
2100	21740	Radio Australia	
2100	9900	Radio Minurca, Central African Rep.	EE, others
2130	11755	Merlin Network One, England	
2130	17765	Voice of Greece	
2200	9505	Radio Record, Brazil	PP
2230	4870	ORTB, Benin	FF
2230	13670	Radio Vlaanderen Int'l, Belgium (via Bonaire)	
2230	12005	RTT Tunisienne	AA
2300	6040	Radio Clube Paranaense, Brazil	PP
2300	7280	Voice of Turkey	
2300	11885	Voice of Turkey	TT
2320	9275	Icelandic State Bc. Service	II/SSB
2330	4985	Radio Brazil Central, Brazil	PP
2330	6165	Radio Netherlands via Bonaire	

■

Product Parade

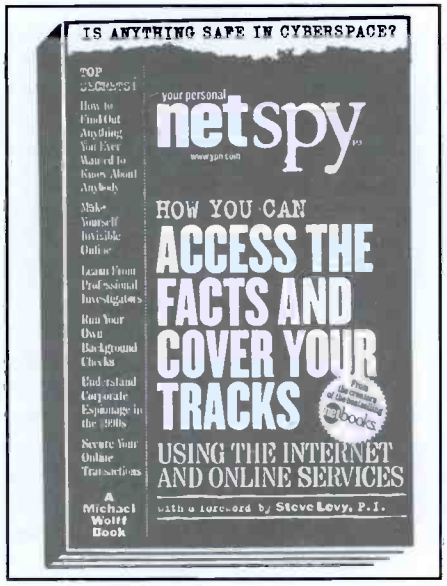
BY HAROLD ORT
AND R.L. SLATTERY

REVIEW OF NEW, INTERESTING AND USEFUL PRODUCTS

Online And Undercover!

You'll be surprised when you learn how much "hidden" information you can root out on the Internet. In fact, virtually *anything* you ever wanted to know about anybody is there! Not only that, but you can be quite surreptitious while going about this. Doing this with relative ease using an online home or office computer is explained very well in a great 185-page how-to book titled, *Access The Facts And Cover Your Tracks*.

Prepared by professional investigators and written so that the average person can understand it, the book shows how to run background checks, including credit information, criminal records, federal files, screen job applicants, people seeking loans, investment prospects, suppliers, bidders, and even prospective mates. Learn about corporate espionage, locate lost or strayed friends and relatives, people who owe you money, and old military buddies. Learn about Internet privacy and anonymity, message encryption, legal rights and obligations, how secure Websites protect online business dealings, locate professional investigators if you want someone else to do the work on your behalf, and more.



Access The Facts And Cover Your Tracks *shows you how to navigate the Web and find out virtually anything.*

Plenty of examples are provided, along with many helpful hints, graphic illustrations, and the actual Website addresses (URLs) needed to access data. It's all indexed and includes a big information-filled appendix.

Access The Facts And Cover Your Tracks is $12.95 (plus $5 s/h, $7 to Canada). New York residents please add $1.48 tax. VISA/MC welcomed. Order it from CRB Research Books, Inc., P.O. Box 56, Commack, New York 11725. Phone 516-543-9169 or check their fully secure Website at <http://www.crbbooks.com>.

CIRCLE 100 ON READER SERVICE CARD

New Uniden Scanner Downloads Closest 100 Channels And Tracks Multiple Trunked Systems

Uniden America Corporation has introduced a new scanner that simplifies locating channels and frequencies, and tracking trunked radio systems. The SmartScanner feature, available in the new handheld model, BC245XLT, enables users to easily download the closest 100 channels and frequencies available in a user's zip code. The user simply connects the scanner to a modem with a special cable provided with the scanner. The radio then dials into a pre-programmed toll-free phone number that identifies and automatically downloads the closest channels and frequencies.

"The SmartScanner feature eliminates the hassle of finding local channels and frequencies in a directory and loading them one by one," said John Harris, Uniden's senior vice president. "It's a terrific convenience for scanner users," he continued.

The TrunkTracker™ II feature makes the BC245XLT able to track both GE/Ericsson and Motorola trunked radio systems. Previously, Uniden introduced the TrunkTracker™ radio scanner — the first scanner capable of tracking a conversation as it jumped frequencies across Motorola trunked systems. Now TrunkTracker II enables scanner users to track conversations on trunked radio systems made by *both* major system manufacturers.

Uniden's New Trunktracker™ II scanner.

"When a conversation changes frequencies on a Motorola or GE/Ericsson trunked radio system, TrunkTracker™ II automatically follows the conversation so users don't have to find the rest of the transmission," Harris said. "Again, it's a revolutionary convenience for scanner users."

The BC245XLT scanner with both SmartScanner and TrunkTracker™ II technology will be available in June for a suggested retail price of $499.95. In addition, Uniden plans to introduce the SC200 handheld radio scanner, also featuring SmartScanner technology and an alphanumeric display in September.

Uniden America Corporation, the North American subsidiary of Uniden Corporation, Japan, manufactures and markets wireless consumer electronics products including cordless and cellular phones, Internet appliances, business telecommunications systems, and other personal communications devices. Based in Fort Worth, Texas, Uniden America sells its products through dealers and distributors throughout North, Central, and South America.

In the coming months, as a production model of the new BC245XLT is made available by Uniden, we'll have a "Product Spotlight" featuring this new scanner.

CIRCLE 101 ON READER SERVICE CARD

(Continued on page 76)

Broadcast DXing

BY BRUCE CONTI
<BAConti@aol.com>

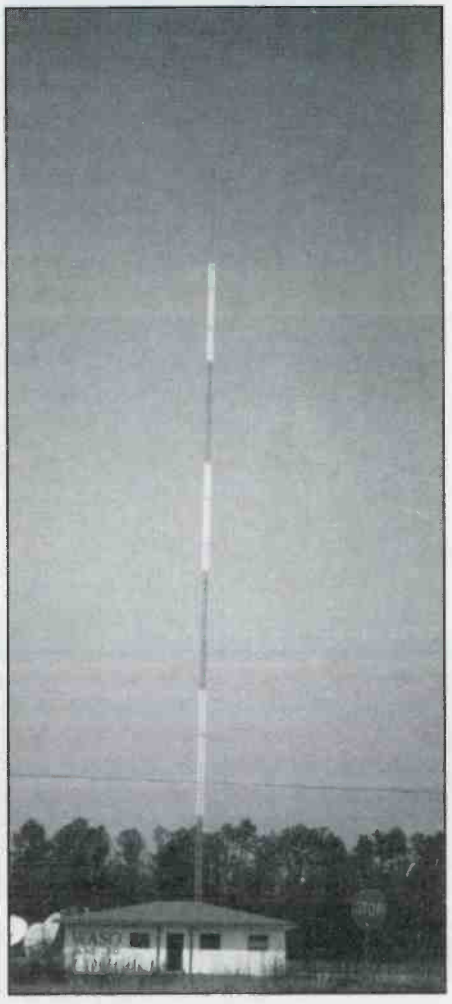
DX, NEWS AND VIEWS OF AM AND FM BROADCASTING

A Spectacular Sunrise

The spring equinox is an indicator of more than just warmer weather on the horizon. Sunrise and sunset mediumwave DXing peaks during this period, with the potential for some great subequatorial DX. Unusual sunrise/sunset skip can occur when either the transmitter or receiver location are at dawn or dusk. In many cases, there is *transmitter site dawn* or *dusk enhancement*, which is when there is a very brief increase in signal strength.

In other cases, interesting DX can be heard during your local sunrise and sunset, for reasons not always related to ionospheric conditions. Note that this is quite different from the *gray-line DX* experienced on shortwave. Gray-line DX more accurately refers to when a signal follows a curved path along the edge or border between day and night, when the transmitter site is going through sunrise at the same time you're experiencing sunset, or vise versa. Gray-line DX is often used for long-path reception. On mediumwave frequencies, the sunrise/sunset enhancement occurs when the short-path between transmitter and receiver is in darkness, but not necessarily following a path along the day/night edge. Long-path reception is extremely rare on mediumwave frequencies.

Transmitter site dawn enhancement occurs when a radio station's location is going through sunrise. For example, for transatlantic DXers in North America, signals from western Europe can be strongest during European sunrise. The **Radio Bleue** network stations in France are often easy targets during the time period within a half an hour of either side of sunrise in France. Sunrise in the Middle East often produces similar results earlier in the evening for eastern North American DXers. Sometimes, there is only a narrow window of opportunity for reception, perhaps as little as five or 10 minutes. Transatlantic DXers will plan ahead by creating a list of targets based on transmitter site dawn times. DXers in western North America will target rare catches from the New England states during transmitter site dawn.



WASO, Covington, Louisiana at 730 kHz might be a good sunrise/sunset DX target. (Photo courtesy Scott Hernandez)

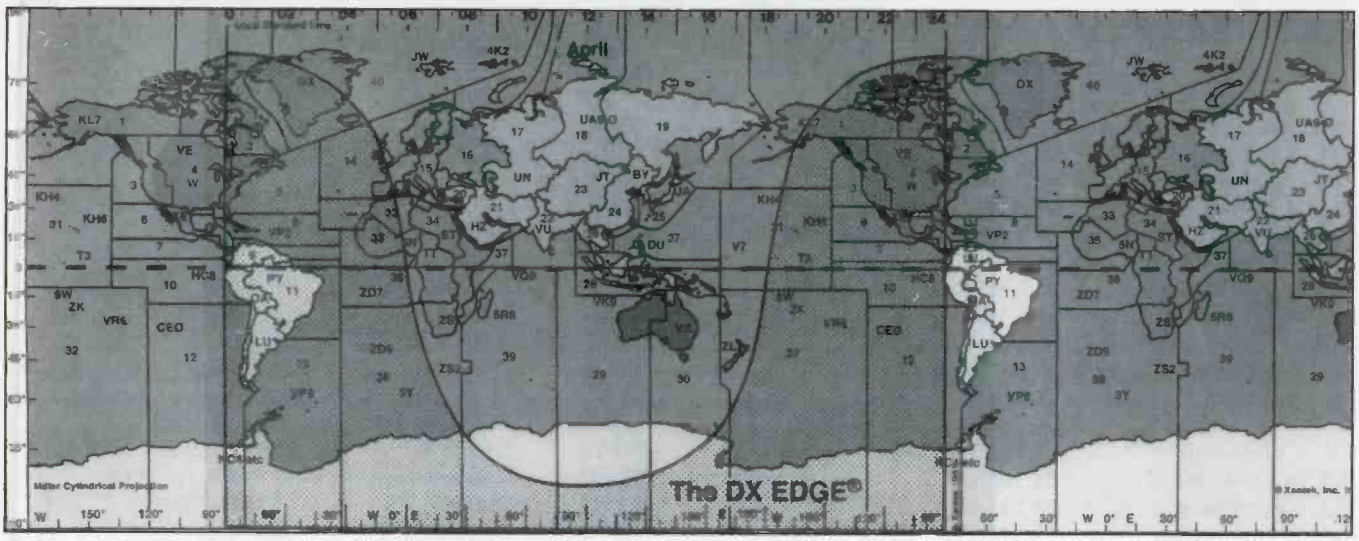
Another version of transmitter site dawn enhancement occurs when both the transmitter and receiver locations are going through sunrise. In North America, this can be prime time for Caribbean and South American reception. Stations from Trinidad and Tobago, Suriname, Venezuela, and Colombia, among others will peak during this volatile period. The peak can be hottest during the equinox. This is also the time when daytime-only stations are signing on, while others are changing patterns or increasing power for the day, adding another dimension to the sunrise DX experience. Similar results can occur when both the transmitter and receiver locations are going through sunset.

Calculating Sunrise And Sunset Times

There are a number of computer software programs available, such as *Geoclock*, that will calculate sunrise and sunset times, and display world maps illustrating areas in daylight and darkness. But one tool that continues to be indispensable for any sunrise/sunset DXing is the *DX Edge*. Designed like a slide rule, a daylight/darkness overlay slides over a map of the world to show the portions of the Earth in day and night at any time. Overlays are provided for each month. The *DX Edge* is great for those times when computer access is inconvenient or impractical, such as when traveling or DXpeditioning. The *DX Edge*, combined with a sunrise/sunset target list, will have you prepared for what will hopefully be many spectacular DX experiences. The *DX Edge* is available through most communications receiver retailers, or you can write to Xantek Inc., P.O. Box 834, Madison Square Station, New York, NY 10159 for additional information.

End Of An Era

Despite protests from listeners throughout the northeast, the station of the New York Times, **WQEW New York at 1560 kHz** is now **Radio Disney,** giving the Mickey Mouse network credibility with a 50,000-watt clear channel signal. A final demonstration by listeners outside the studios fell on deaf ears, as Disney went through with the six-year Local Marketing Agreement (LMA) to broadcast the children's network on 1560. WQEW has had a long history of providing quality music programming for the region. As **WQXR until 1992,** the station used to broadcast classical music with



Xantek's DX EDGE *showing sunrise/sunset for April.*

state-of-the-art studios recognized by organizations, such as the Audio Engineering Society. Then when American Standards music station WNEW at 1130 kHz became WBBR, the flagship of Bloomberg Business Radio, their nostalgia format moved to 1560 on what became WQEW. Although classical music listeners were disappointed, WQEW quickly regained its reputation for quality programming by providing live in-studio concerts and interviews with the stars of American standards music unavailable anywhere else across the dial. Now it seems that we've reached the end of an era on AM radio with the loss of WQEW.

Listeners in the New York area may want to try WLUX Islip, New York, at 540 kHz, or WVNJ Oakland, New Jersey, at 1160 kHz. Public radio station WNYC at 820 kHz may also pick up some of WQEW's programs. Although there are many lower power stations like these that broadcast nostalgia, most off of the Westwood One network, nothing compares to the coverage of the WQEW signal and the program quality of the former "Home of American Standards."

Digital Radio Update

Digital radio is moving forward in Canada. Unlike the in-band on-channel (IBOC) digital radio services still being hashed out in the United States, digital broadcasting in Canada does not depend on existing broadcast signals. Instead, frequencies in the L-band between 1452 and 1492 MHz have been allocated for digital radio using the Eureka-147 format. In Montreal, the CBC has been assigned 1458.048 MHz, which will carry CBF, CBFX, CBM, and CBME. The first commercial digital stations in Montreal have been assigned to 1452.816 MHz. Stations have been broadcasting digital signals from Toronto's CN Tower for some time now, including CHUM on 1456.304 MHz and CHIN on 1465.024 MHz.

In the U.S., Lucent Technologies and USA Digital are still locked in a battle for FCC approval of their IBOC formats, which would allow for digital broadcasting through present AM and FM facilities, similar to how different services are provided by FM subcarriers (FM SCA).

Meanwhile, many inquiries have been received here at *Popular Communications* about the availability of WorldSpace satellite broadcast receivers. WorldSpace was scheduled to launch three satellites this year to provide digital radio targeted for third world countries. As soon as I learn more, I'll be sure to relay the information to you. Stay tuned!

QSL Information

620 KGTL Homer, AK Sent beautiful card (view of Homer in full color) in 16 days, signed Dave Becker, Owner & GM. Address: P.O. Box 109, Homer, AK 99603. (Martin, OR)

760 KFMB San Diego, CA Received letter, business card, and two bumper stickers in 17 days, signed Michael J. Somerville, KFMB Radio Engineering, 760 KFMB and Star 100.7. Address: 7677 Engineer Rd., San Diego, CA 92111. (Kelly, AZ)

810 WGY Schenectady, NY Received full data letter with sticker in 21 days for taped report, signed Bob Blanchard-Dir. of Eng. Address: WGY, One Washington Square, Albany, NY 12205. (Martin, OR)

880 KRVN Lexington, NE Received a full-data brochure, business card, day/night contour maps, and QSL card in 48 days, signed Vern Killion, W5UYF, Director of Engineering, 880 Farm Radio and Lite 93. Address: P.O. Box 880, Lexington, NE 68850-0880. (Kelly, AZ)

1080 KGVY Green Valley, AZ Letter and contour map received in 27 days, signed Tim McKay, Program Director. Address: P.O. Box 767, Green Valley, AZ 85622. (Kelly, AZ)

1240 CFNI Port Hardy, BC Received a letter in 20 days for taped report, signed Carole Ford, Sales Rep. Address: P.O. Box 1240, Port Hardy, BC V0N 2P0. I now have all the stations QSLd from Vancouver Island, except a couple LPRTs. (Martin, OR)

1520 KOMA Oklahoma City, OK Large QSL card, full-color coverage maps for FM and AM day/night patterns, and music playlist in 14 days, signed Ray Klotz, Engineer. Address: KRXO-FM/KOMA-AM, P.O. Box 6000, Oklahoma City, OK 73153. (Kelly, AZ)

1550 KCCF Ferndale, WA Received letter in 53 days, signed Chuck Lee, PD. Address: P.O. Box 847, Ferndale WA 98248. (Martin, OR)

1640 KDIA Vallejo, CA Received 2nd verie in one month, this time a letter with same signer; Clifford Brown III, Program

Applied For Permits To Construct New FM Stations

AZ	Globe	91.9 MHz	
CA	Arvin	91.7 MHZ	6 kW
CA	Colusa	88.7 MHz	
CA	Firebaugh	90.5 MHz	9.4 kW
CA	Sutter	88.7 MHz	
CA	Wasco	91.7 MHz	
CA	Yucca Valley	88.1 MHz	
FL	Cape Canaveral	88.7 MHz	520 watts
FL	Key West	88.3 MHz	6 kW
ID	Buhl	88.1 MHz	
ID	Kuna	88.1 MHz	
ID	McCall	89.9 MHz	
ID	McCall	90.7 MHz	
IL	Spring Valley	88.1 MHz	
IN	Zionsville	91.9 MHz	
KY	Frankfort	88.3 MHz	
KY	Lexington	88.1 MHz	
LA	Port Suplhur	91.5 MHz	
MI	Belding	90.9 MHz	
MI	Lake City	104.9 MHz	4.6 kW
MI	Morenci	90.3 MHz	
MI	Mt. Clemens	89.3 MHz	
MN	Windom	90.9 MHz	
MN	Worthington	88.1 MHz	
MS	Columbia	90.9 MHz	
MS	Yazoo City	89.5 MHz	
MT	Billings	90.7 MHz	250 watts
MT	Joliet	90.7 MHz	
MT	Pryor	89.3 MHz	
NJ	Chatham	88.9 MHz	
NY	Beekman	88.3 MHz	
NY	Dannemora	89.7 MHz	
OR	Coos Bay	91.7 MHz	
PA	Hollidaysburg	88.1 MHz	
PA	Kutztown	91.5 MHz	
PA	Nanty Glo	90.7 MHz	750 watts
PA	Wyomissing	91.7 MHz	
SD	Pierre	89.1 MHz	400 watts
TN	Union City	88.9 MHz	
TX	Bushland	91.5 MHz	
TX	Caldwell	91.9 MHz	
TX	Greenville	91.3 MHz	
TX	Midland	90.9 MHz	
WI	Fond du Lac	89.9 MHz	
WV	Blennerhassett	88.7 MHz	

Granted Permits To Construct New FM Stations

CA	Pleasanton	101.3 MHz	(KI0I-FM booster)
HI	Kilauea	91.9 MHz	(KAQA booster)
IL	Cairo	88.5 MHz	
KY	Middlesboro	90.1 MHz	
LA	Atlanta	106.5 MHz	
MI	Traverse City	91.5 MHz	
NC	Roanoke Rapids	91.1 MHz	2 kW
NM	Cloudcroft	97.9 MHz	
PA	Youngsville	88.5 MHz	
TN	Shelbyville	88.3 MHz	
TX	Sanger	89.7 MHz	14 kW
WA	Ilwaco	103.9 MHz	25 kW

New FM Licenses Issued

KFGI	Brainerd, MN	104.3 MHz
KIRK	Macon, MO	99.9 MHz
KKTL	Cleveland, TX	97.1 MHz
KLYY-FM1	Burbank, CA	107.1 MHz (booster)
WAGO	Snow Hill, NC	88.7 MHz
WBUM	Baraga, MI	104.3 MHz
WGNN	Fisher, IL	102.5 MHz
WYSX	Ogdensburg, NY	98.7 MHz

Cancelled

KMGZ	Lawton, OK	95.3 MHz	
KRCW	Royal City, WA	96.3 MHz	800 watts
WBNN	Union City, IN	1030 kHz	
WDXI	Jackson, TN	1310 kHz	
WEAB	Adamsville, TN	960 kHz	
WFQX1	Winchester, VA	99.3 MHz	(booster only)
WGLY1	Montpelier, VT	103.3 MHz	(booster only)
WJKM	Hartsville, TN	1090 kHz	
WKYZ	Gray, KY	1590 kHz	
WLLD	Holmes Beach, FL	98.7 MHz	3 kW
WPFD	Fariview, TN	850 kHz	
WSCC-FM	Somerset, KY	92.1 MHz	
WTYR	Soddy-Daisy, TN	1550 kHz	
WUAT	Pikeville, TN	1110 kHz	

Seeking Am Facility Changes

KKTR	Costa Mesa, CA	1650 kHz	Seeks to change city of license
WMCL	McLeansboro, IL	1060 kHz	Seeks to add 2-watt night service
WTLM	Opeleika, AL	1530 kHz	Seeks power change

Seeking FM Frequency Change

KPCW	Park City, UT	88.3 MHz
WAAD	Tice, FL	93.7 MHz

New AM Call Letters Issued

WQSN	Kalamazoo, MI

Pending AM Call Letter Changes

New	Old	
WWVT	WNNI	Christianburg, VA

Changed AM Call Letters

New	Old	
KSJL	KCHG	Somerset, TX
KTXX	KDON	Salinas, CA
WBIS	WANN	Annapolis, MD
WCGR	WLKA	Canandaigua, NY
WGIN	WZNN	Rochester, NH
WGIP	WMYF	Exter, NH
WJCM	WALC	Sebring, FL
WJDX	WJDS	Jackson, MS
WJNZ	WBHD	Ada, MI
WJUS	WAJO	Marion, AL
WKLZ	WQSN	Kalamazoo, MI
WMKI	WYDE	Birmingham, AL
WPBC	WXLL	Atlanta, GA
WPSK	WNRV	Narrows, VA
WRBP	WRRO	Warren, OH
WRSB	WCGR	Canandaigua, NY
WYBC	WNHC	New Haven, CT
WXBV	WKWM	Kentwood, MI

New FM Call Letters Issued

KCMT	Billings, MT
KEZQ	Island Park, ID

KFXT	Sulphur, OK	
KKRS	Davenport. WA	
KPBM	McCamey, TX	
KVAK-FM	Valdez, AK	
WBHZ	Elkins, WV	
WBIA	Shelbyville, TN	
WCBJ	Campton, KY	
WXQD	Roanoke Rapids, NC	

Pending FM Call Letter Changes

New	Old	
WBQX	WAVX	Thomaston, ME
WDWG	WYOK	Moss Point, MS
WKXS	WJDX	Jackson, MS
WQAR	WJKE	Stillwater, NY
WQJQ	WBKJ	Kosciusko, MS
WYOK	WDWG	Atmore, AL
WZSN	WMTY-FM	Greenwood, SC

Changed FM Call Letters

New	Old	
KCLH	KMXH	Yankton, SD
KDOS	KECS	Gainsville, TX
KKHN	KHUL	Waipahu, HI
KKIT	KAFR	Angel Fire, NM
KKSB	KMGQ	Goleta, CA
KLNC	KAJZ	Killeen, TX
KLNV	KEBN	San Diego, CA
KMCG	KQOL	Casper, WY
KMDY	KBJK	Keokuk, IA
KMGQ	KHTY	Santa Barbara, CA
KMSX	KMCG	Carlsbad, CA
KPOW-FM	KBFP	Lamonte, MO
KSJL-FM	KTXX	Devine, TX
KTRS-FM	KYOD	Casper, WY
KVRO	KXPX	Stillwater, OK
KWMR	KBJH	Pt. Reyes Station, CA
KWYY	KTRS-FM	Casper, WY
KXXM	KSJL-FM	San Antonio, TX
KYLV	KOCC	Oklahoma City, OK
WALC	WLLC	Charleston, SC
WAVW	WBBE	Gifford, FL
WBBE	WAVW	Vero Beach, FL
WBXY	WNFQ	Newberry, FL
WCZZ	WMXG	London, OH
WKLZ-FM	WKLZ	Petoskey, MI
WKXS	WJDX	Jackson, MS
WLDI	WXFG	Ft. Pierce, FL
WLFF	WEZV-FM	Brookston, IN
WLHR	WDRK	Panama City, FL
WNRV-FM	WRIQ	Radford, VA
WOLL	WTPX	Hobe Sound, FL
WQAR	WJKE	Stillwater, NY
WQUA	WHXT	Citronelle, AL
WRCL	WBZU	Richmond, VA
WREQ	WMKB	Ridgeburg, PA
WRGX	WAZM	Sturgeon Bay, WI
WUZZ-FM	WAJC	Lima, OH
WZST	WMQC	Westover, WV

Assistant. Note different address: 7677 Oakport Street #105, Oakland, CA 94621. I had sent several follow-ups, so I'm not sure which report he QSLd. (Martin, OR)

Broadcast Loggings

560 KSFO San Francisco, California at 0806 with traffic, sports, and weather, ID as "Hot Talk 560," then into Art Bell, over KLZ Denver. (Kelly, AZ)

567 RTE R. One, Tullamore, Ireland at 0048 vocal duet from a Broadway musical, then man in English; good. (Connelly, MA)

600 KOGO San Diego, California caught just in time at 0859, "First on your radio, first with news, Newsradio 600 . . ." and Mission Valley car dealer ad before fading at 0902. (Kelly, AZ)

670 KBOI Boise, Idaho heard at 0450 talk about Idaho Stampede vs. Bobcats basketball, ID as "News/talk 670." (Kelly, AZ)

675 R. Ten Gold, Lopik, Netherlands heard at 0040 with '50s doo-wop vocal, 0051 Gordon Lightfoot song; fair. (Connelly, MA)

700 JBC R. One, Montego Bay at 0610 gospel music promo, "Superstation RJR" ID, and country style reggae, relaying RJR. (Conti, NH)

720 RJR Kingston, Jamaica at 0411 dance hall reggae version of Janis Joplin's "Piece of My Heart," good with CHTN and WGN nulled. (Connelly, MA)

750 KOAL Price, Utah at 0821 with traveling country music, possibly Road Gang or Midnight Cowboy. (Kelly, AZ)

890 R. Progreso, Santiago de Cuba, Cuba at 0545 excellent with "seleccion de nocturo" disco music countdown, "Radio Progreso, cadena nacional" ID and sign-off at 0555 with anthem, leaving R. Estrella-WBPS Dedham, Massachusetts in clear. (Conti, NH)

954 Qatar Broadcasting Service, Al Arish, Qatar at 0234 parallel 7210 with Koranic vocal; through R. Espana-Madrid, Spain. (Connelly, MA)

1150 KSRB Seattle, Washington (ex-KEZX) with ID at 0500 as "AM 1150, KSRB Seattle, the soul is in the sound," and non-stop song over and over "I'll Take You There" by the Staple Singers. (Martin, OR)

1206 R. Bleue, Bordeaux, France at 0620 transmitter site dawn enhancement with nostalgia parallel 1377 and 1557 kHz. (Conti, NH)

1300 WRDZ La Grange, Illinois at 2155 in a bit of a mess, fair signal with Radio Disney, ex-WTAQ. (Axelrod, MB)

1420 XERD Pachua, Mexico at 0436 with jazz music, frequent IDs as Radio Lobo with wolf howl interval signal between songs, also IDed as "La Super Estacion." (Kelly, AZ)

1440 XEVSD Cd. Constitucion, Mexico at 0423 with Muzak-style Spanish/instrumental music, mention of FM, and ID as "La Senal de Progreso." (Kelly, AZ)

1548 VOA Kuwait City, Kuwait at 0003 huge with VOA news in English about patrolling the no-fly zone in southern Iraq; atop UK and stronger than the 1550 stations. (Connelly, MA)

1570 KHPN Loveland, Colorado fair in jumble after listening for over an hour to fade ups and C&W music. Finally at 0659, an ID on one of the fade-ups as "KHPN, Loveland, Windsor, . . . and even Ft. Collins," into AP Network news at 0700. A new catch for me, thanks to a tip from Chris Knight, Colorado, that they did not drop power. (Martin, OR)

1690 KADZ Arvada, Colorado heard with new calls, "KDDZ Arvada, KADZ Arvada-Denver" ID by a little girl at 1400, Radio Disney, ex-KAYK. (Martin, OR)

As always, we've had another great column, thanks to Shawn Axelrod, Mark Connelly, Scott Hernandez, Nile Kelly, and Patrick Martin. 73 and good DX!

Product Spotlight

BY KEN REISS
<Armadillo1@aol.com>

POP'COMM REVIEWS PRODUCTS OF INTEREST

Sony ICF-SC1PC Handheld Scanner

Sony, who is well known in the shortwave portable market for making some of the best receivers around, has recently ventured above the 30-MHz boundary with the introduction of their ICF-SC1 and ICF-SC1PC receivers. The difference between the two is pretty easy to explain. The SC1PC version has a computer interface and the SC1 does not. That computer interface may be pretty important if you're considering this radio, but more about that later.

The radio features coverage from 25- to 1300-MHz, with only the cellular ranges deleted. There are 300 memory channels in 10 banks called "pages," borrowing from some of their more recent shortwave receivers. There are also 100 "skip" frequencies available for designating troublesome frequencies to be skipped during search operations. The radio features AM, Narrow FM, and Wide FM modes for reception of most signals present in the 25- to 1300-MHz range. The receiver operates on four "AA" batteries.

In the box, along with the radio, there is a supplied helical antenna (reasonable performance for a stock antenna), an earphone, belt clip, and an AC adapter. If you purchase the SC1PC, there is also a CD containing the software and a cable for connection to an RS-232 port. The CD contains not only the control software, but also a version of "Spectrum," the Percon FCC frequency database.

Pick A Mode — Any Mode

Like most receivers, the Sony SC1PC features several modes of scanning and tuning, and a couple that are unique. Of course, you can scan memories, but you can also scan any of 20 pre-programmed "bands." These bands from the factory cover the entire range of the scanner in ranges that roughly equate to the bands that we are used to monitoring. For instance, one of the pre-programmed bands is 148 to 174, another covers the UHF public safety range of 470 to 512. These can be reprogrammed to your liking, either with software or directly on the radio.

Also available is "Service" scanning (nine pre-programmed Public Service bands — **Table 1**), programmable scanning which scans a frequency range that you have defined, and something called "Intelligent Memory Scanning." This feature is unique to Sony. Any time the receiver receives a station for more than five seconds, that frequency is automatically put into the "Intelligent" memory. The last 10 frequencies received are always present in the "Intelligent" memory, and can be scanned at any time. This can be very convenient for picking up on a call that you just caught the tail end of, or following a special event that catches your ear. It is also intelligent because it will not duplicate a frequency that already exists in the intelligent memory area, so you truly have the last 10 frequencies, *not* the frequency of the last 10 transmissions that were received.

There is also a priority mode that checks a particular frequency for activity every five seconds. This can be activated in almost any receive or scan mode. One slight drawback is that you must use "page 10, memory 30" for this frequency, as it can not be relocated to any desired memory.

The SC1PC receiver has a keyboard lock (accessed through the LIGHT button, which is conveniently located away from other controls for easy access) to prevent accidental data entry. There is also a keyboard command to turn on and off the beep.

Operations

Overall, the Sony SC1PC proved to be a good performer. There were a few instances of interference or overload that I found in the VHF and UHF bands, but not an excessive number. It also seemed to be very sensitive on the VHF Hi-band in particular, which might explain an increased tendency for interference. Unfortunately, there is no tone squelch facility (CTCSS or DCS), so there is little help available if you find a frequency subject to overload or interference.

The audio from the receiver is pleasant to listen to and there is adequate volume. The volume and squelch knobs are located conveniently on top, and are well spaced, making adjustment easy. There is also a power button on top, making it easy to turn the receiver on and off.

The Sony SC1PC is a full-featured scanner with a complete computer interface. The radio features 300 channels in 10 "pages" of 30 memories each.

One very nice feature is that the radio resumes where it left off when the power is turned back on. I found it quite convenient to just hit the power and have the volume and squelch already adjusted, and the receiver return to the scan mode.

Probably the most difficult feature to get used to was the manner in which memories are handled on the SC1PC. There are two major differences from what we are commonly used to, and one of them is purely mental. I'm sure it would become second nature after working with the receiver for some time.

The pages are treated, for the most part, like banks, but they are not exactly the same. Memories are numbered one to 30 in each page, and so the page number is a vital part of the exact memory location you are looking for. In most scanner arrangements, channels are numbered,

Table 1:
The 9 Pre-programmed Public Service Bands

Weather (NOAA Weather Broadcasts)	1
Police	2
Fire/Emergency	3
Marine	4
Aircraft VHF	5
Aircraft UHF	6
FM Broadcast	7
TV Audio VHF	8
TV Audio UHF	9

for example, from one to 300, and the banks simply mark dividing places for groups of channels to be scanned (or not) at any particular time. Pages can be turned on and off just like banks in the scan mode, but for data entry, you have to know the page number *as well as* the memory location.

The other spot where memories seemed a bit more difficult than necessary was in the input process. Programming the radio from its keypad requires two hands to enter a frequency into memory. The first step is to enter the frequency. Then you have to press and hold the enter key and press the page number, followed by the memory number without letting the enter key go. It certainly can be done, but it sure takes some getting used to.

Software Support

Entering frequency and memory data is one place where computers absolutely excel. The software that comes with the SC1PC is an excellent computer control program that can emulate virtually every function on the receiver. In addition, the software can take control of the receiver and scan and search directly from the computer without the need for disturbing memory data. While this is certainly not the typical use for a handheld, it certainly is a nice feature to have available.

Most of the time, with a handheld scanner, you want to upload and download memory data. The Sony Scanning Receiver Controller (version 1.0) does this well. Upon entering the memory screen, a list of pages is presented. At this point, you can import data from the radio if desired, or open a file that has been previously saved. One feature that I really enjoyed was the ability to edit memory lists without the radio being connected.

The display is easy to read. Note the convenient location of the light button away from the rest of the controls. The power button, as well as volume and squelch, are positioned conveniently on top. Upon restoring power, the receiver resumes its last operation, making this separate power control very convenient indeed!

Clicking on a page brings up the list of 30 channels that are on that page. If you're starting with a new file, obviously they are blank, but if you've loaded a previous

The SC1PC runs on "AA" batteries or off the included wall power supply. The PC version also comes with software for receiver control and a database of frequencies (Spectrum by Percon) on the CD ROM.

file from disk, or uploaded data from the radio (called importing), you will see the data that's programmed there.

Double clicking a particular channel brings up the information for that channel. It's worth noting that in the software you have the option to enter a "Frequency Title" of about 20 characters. This data is stored with the file when you save it to disk, but is not downloaded to the memory of the radio, as there are no alphanumeric display capabilities on the receiver. You can also name pages with similar limitations. That feature alone makes it worth saving all of your work files to disk.

One feature that's awkward at best is the ability, or lack thereof, of the software to import channels and data from other sources. There is a very limited facility to do this, but it does not allow you to take advantage of any previous memory lists you may have built up over time.

When you are looking at the list of memories for a particular page, one of the options is "Reference." By pressing this button, you can then target a UFDBF file (as might be exported from the Spectrum database) to open. If the file is large, it takes considerable time to open, so you'll want to export smaller files from Spectrum for this to be of much use.

The chosen file then presents a window listing all of the data contained in the file. By clicking the record number down the left side of the window, you can select various frequencies that you might like included in your memories. Up to 30 frequencies can be chosen — enough to fill up the bank. Once "OK" is pressed, these chosen memories are entered into the memory list. One major disadvantage is that it picks up the call sign as the "frequency title" instead of the licensee or agency that is using the frequency, but it does save some time in data entry.

It would be nice to be able to "reference" your own files that you had created from other memory lists. In fact, it would be convenient if other formats, besides the UFDBF, could be simply imported directly into memories complete with channel numbers, but this version of the software simply does not support any other form of interaction with the outside world.

Still, it is much simpler to enter data and notes to yourself in the software than entering frequencies into the radio directly. Of course, there is the added advantage of being able to save the file for later recall and re-download it when you desire. All in all, I'm much happier to have a receiver with a computer interface than not. Let's hope Sony upgrades the software, or that the receiver protocol is supported by other software in the future.

Overall Impressions

Generally, this is a well-built receiver, as would be expected from Sony. It's a solid handful when you first pick it up, but a comfortable size for everyday use. The arrangement of the controls is very convenient and they are large enough to be comfortable for anyone. Hopefully, this will be the beginning of a long line of scanning receivers from a giant in the receiver market.

My complaints about the memory operation are probably operator-related. I have used so many other radios for so long, which operate some other way, that I'm simply not used to it. No doubt, if this were your main handheld receiver, you'd get used to its operation in a hurry. It's not good or bad, just different.

Software is the easiest thing to fix, and here's hoping that Sony chooses to do that. They've got a great interface here, and the program controls all of the functions of the radio, right up to computer-controlled scanning at a reasonable speed. Upgrading the capabilities of the program to deal with external data would make it a great system to use.

For those in strong RF signal environments, the lack of a tone squelch (CTCSS and DCS) feature might be a consideration. If you are not bothered with these problems, then the Sony SC1PC might be a great receiver for you, and one of the very few handhelds available with a computer interface. Check it out at a dealer near you! The SC1PC is $349.95 (dealer prices may vary). For more information, contact Sony toll free at 888-633-SONY or check out their Website at <http://www.sony.com/radioscanner>. ■

Clandestine Communiqué

BY GERRY L. DEXTER

TUNING IN TO ANTI-GOVERNMENT RADIO

More Broadcasts From Radio Free Iraq, And Radio Democracy Africa Is Coming

Radio Free Iraq has increased its daily broadcast hours and is now operating from 0200 to 0300 on **5965, 6015, 7105, and 9635**; 0300 to 0400 on **5965, 7110, 7275, and 9740**; 1500 to 1600 on **6130, 9835, 11965, and 12015** and 1600 to 1700 on **6130, 9540, 11915, and 11965**. Radio Free Iraq is anUnited States government operation, similar to Radio Free Asia.

Watch for another one of these stations to take the air this year. **Radio Democracy Africa** is apparently all ready to go and may even have been activated by the time you read this. No schedule or frequencies have been announced so far.

What is an apparently new voice in the long line of anti-Iran broadcasters is **Radio Tomorrow's Iran**, operating on **5830** with broadcasts in Farsi from 1800 to 1830. It's not yet known who is behind this one, but the station claims it wants to see a separation of church and state in Iran. Let's hope this one expands its broadcasts to include times that are workable for reception in North America.

"Radio Free Iraq is a U.S. government operation, similar to Radio Free Asia."

"The Voice of Sudan can often be heard in North America . . ."

The two Colombian clandestine stations continue to be heard. **La Voz de la Resistencia** on **6240** (variable) is being heard around 1100 and again around 2200 (to as late as 2300 closing). This station is operated by FARC (Fuerzas Armadas de Colombia), and Radio Patria Libre, operated by the ELN guerrillas, continues active on variable **6250**, and is often heard around 2200 or 2230. Sign-off time varies.

The Voice of Free Eritrea, operated by the Eritrean National Alliance, operates in Arabic and the Tigrigna language from 1530 sign-on, on **9230**. Another Eritrean clandestine is the **Voice of Truth**, operated by the Eritrean Islamic Jihad Movement, operating in Arabic and Tigrigna, also on **9230**, to closing at 1630.

Still another one is the **Voice of Democratic Eritrea**, operated by the Eritrean Liberation Front Revolutionary Council and also operating on **9230**, running to 1530. The address for all three of these stations is ELF-RC Foreign Information Department, Post Office Box 200434, 53134, Bonn, Germany.

The Voice of Sudan, run by the National Democratic Alliance, operates in Arabic daily from 0400 to 0600 and 1600 to 1800 on **8000, 9025, 10000**, and **12000 or 12008**. The 8- and 9-MHz outlets can often be heard in North America during both of the station's operational time periods. The address is 16 Camaret Court, Lorne Gardens, London W11 4XX, United Kingdom. It sometimes announces as the Voice of the National Democratic Alliance.

A less known Sudanese clandestine is **Radio of the Voice of Freedom and Renewal — Voice of the Sudan Alliance Forces — Voice of the Popular Armed Uprising**, operating in Arabic on variable **7000** from 0400 to 0500 and 1600 to 1700. (Can you imagine what an American-style station ID jingle for this station would sound like?)

The Voice of Oromo Liberation is on the air on Sundays, Thursdays, and Fridays from 1700 to 1800 on **11725**, via a German government transmitter at Juelich. This broadcaster is the Voice of the Oromo Liberation Front (Oromo is an Ethiopian province) and can be reached via SBO, Post Office Box 510610, 13366 Berlin, Germany. Broadcasts from this one are in Oromo, Amharic, and other local languages.

The Voice of the Communist Party of Iran operates from shortly before 1700 to just before 1800 on **3880** (which varies by up to 10 kHz) and **4370** (which varies by up to 20 kHz). The same hopscotching is true of the clandestine **Voice of the Iranian Revolution**, operating from 1500 to 1600 UTC.

The Voice of Iranian Kurdistan is on the air from 0327 to 0430 and again from 1527 to 1657 on **4150** (occasionally on **4010** instead).

The anti-Iranian **Voice of the Mojahed** operates from 1600 to 2100 on **6175**, 0200 to 0500 and 1500 to 1900 on **4450, 4650, 4850, 5150, 5350, 5650, 5750, and 6250.** This one will give you a run for your money, even if you get an initial logging, as the transmitters make a lot of frequency adjustments to avoid jamming. This one also uses the name **"Voice of the Crusader"** and has an address of Heibatollahi, Postfach 502107, 50981, Koln, Germany. It is operated by the Mojahedin e-Khalq.

The Voice of the Tigers is the new voice of the Liberation Tigers of Tamil Eelam, the group conducting the on and off guerrilla war against Sri Lankan government forces. Right now, the new station is on the air from 0100 to 0230 on **4760**. It's probably a tough catch for listeners in North America, but it's certainly worth a few attempts!

That will do it for this time. Please remember that your contributions to this column are always welcome. That includes logs of clandestine stations, schedules, address and QSL information, background information on stations and the groups behind them, and the like. Thanks for your continued support.

Until next month — good hunting! ■

The Listening Post

BY GERRY L. DEXTER

WHAT'S HAPPENING: INTERNATIONAL SHORTWAVE BROADCASTING BANDS

VOA Relay On Tinian On The Air!

As we began working on this month's column, we got word that the new Voice of America/ Radio Free Asia relay station on the island of Tinian in the Northern Marianas has begun its first tests. The facility will be in regular use by the time you read this. At least two transmitters will be in play. *Initial frequency usage* includes **6095, 7295, 9785, 11895, 13710, 15115, 17665, and 21760**. (*Editor's note: Just as we were about to go to press, Kim Elliott of the VOA, provided us with the official Tinian broadcast schedule. See* ***Table 1****.*)

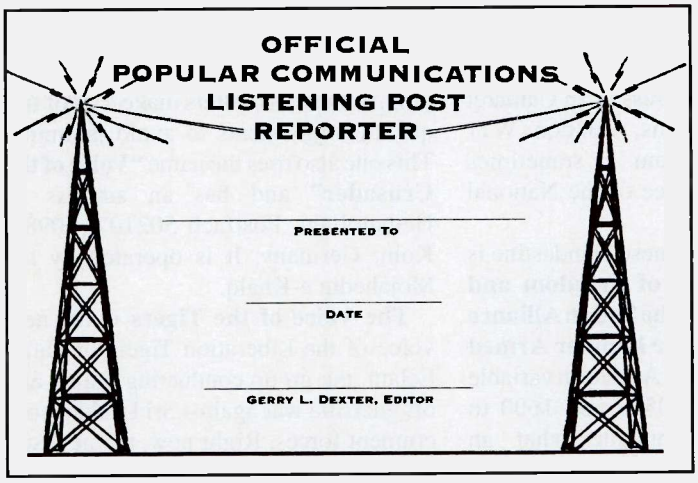
The new **WWBS in Georgia** has been testing on the weekends, specifically from 0000 to 0200 Saturdays and Sundays, all on **11900.** Reception reports go to WWBS, P.O. Box 18174, Macon, Georgia 31209.

Belgium's RTBF broadcaster is returning to shortwave via Deutsche Telekom and the German government's shortwave facility at Juelich, which carries Deutsche Welle and relays a number of other broadcasters. Initially, at least, broadcasts will be beamed only to Central Africa, although we should still be able to hear them. The operational schedule isn't known at this point, but keep watch on **15715 and 21540**. Reception reports go to M. Jean-Pol Heck, Directeur des Relations Internationales, RTBF, 1044 Brussels, Belgium. The initial hour-long tests were aired at 0600, 1100, and 1700. We don't know if those will prove to be the times used for their regular broadcasts.

Lithuanian Radio is due to get a new 100-kW transmitter and plans to use it for its broadcasts to North America. (The current relay from Germany's Juelich site will supposedly be dropped.) The new unit will be installed at the Sitkunai site and the plan is to have it in service before spring. It will probably use **9710** for the 0030–0130 transmission. The first half of the broadcast will be in Lithuanian, then English.

Here's how bad things have gotten for government-funded broadcasting in Russia. Word is that Radio Mayak discontinued all of its shortwave transmissions as of the first of this year. Radio Mayak has been in operation for as long as I've been active in shortwave — and that's a long, long time! The closure of Radio Mayak will probably mean a lot more transmitter time available for hire!

Greece's **Macedonian Radio** (Radiophonikos Stathmos Makedonias) is operating from 0600 to 1400 on **9935**



Here's the Official Reporter card we're now sending to regular "Listening Post" reporters.

Radio Netherlands is sending out this bumper sticker.

Table 1 — Official Tinian (VOA/RFA) Broadcast Schedule

UTC	Frequency	Service/Language
0800-1000	13650	VOA/English
0800-1000	11995	VOA/English
1000-1100	11995	VOA/Chinese
1000-1100	13650	VOA/Chinese
1100-1200	9860	RFA/Lao
1100-1200	13790	RFA/Lao
1200-1300	13790	RFA/Khmer
1200-1300	11825	VOA/Chinese
1300-1400	15250	VOA/Chinese
1300-1400	11825	VOA/Chinese
1400-1500	15260	RFA/Cantonese
1400-1500	15470	RFA/Vietnamese
1500-1600	13735	RFA/Mandarin
1500-1600	15215	RFA/Burmese
1600-1800	13735	RFA/Mandarin
1600-1800	11850	RFA/Mandarin
1800-2000	11740	RFA/Mandarin
1800-2000	12025	RFA/Mandarin

Staffers at All India Radio plan a program.

Headquarters of the other CBS — the Central Broadcasting System in Taipei, shown on this Voice of Asia QSL received by Ed Lindley.

and 11595, and 1400 to 2300 on **7430, 9935, and 11595**, with all programming in Greek. This station runs much less power (35 kW) than the regular Voice of Greece, but it's still pretty easy to hear.

Radio Minurca in the Central African Republic continues broadcasting on **5900 and 9500** (9500 added between 0600 and 1600) and **9900**. The station's mission is to provide informational programs in advance of elections in the Republic, which were scheduled for early this year. After that, it's unclear how long the mission may last. At present, local programming airs in French, English, and Sango. The station broadcasts 24 hours a day and carries the BBC's African Service Monday through Friday from 0500–0600 and 1745–1900.

RNI Stops Issuing QSLs And R. Budapest Goes Commercial

Radio Norway International's tight economic budget, which caused cancellation of their English programming as well as a staff cutback, has also resulted in discontinuing QSLs, says Grethe Breie at the station. She notes, however, that RNI's frequency manager is still interested in receiving reports. The station is still hoping the decision to kill the English broadcasts can be reversed. In case you want to write them and encourage their reconsideration, the address is simply Radio Norway International, 0340 Oslo, Norway. E-mail <radionorway@nrk.no>.

Radio Budapest goes commercial! The station is now accepting advertising for all of its language services and says its rates are "very competitive." They're also offering advertising, including classifieds, in the station program booklet *Budapest International.*

A Few English Language Schedules

RAE, Argentina: 0200–0300 on **11710**.

Radio Minsk, Belarus: M-W-F-Sat/Sun 0300; Tu/Th 2030 and 2130 on **7105, 7210**.

HRTV, Croatian Radio: 0200, 0300 on **6130** (brief newscast).

Radio Cairo, Egypt: 2300–0030 on 9900; 0230–0330 on **9475**.

Radio Budapest, Hungary: 0200–0230 on **6135, 9835**; 0330–0400 on **9835, 11990**.

Radio Damascus, Syria: 2005–2105 on **12085, 13605**.

Radio Romania: 2300–2357 on **7195, 9570**.

Radio Slovakia Int'l: 0100–0130 on **5930, 7300, and 9440**.

Radio Exterior de Espana: 0000–0200, 0500–0600 on **6055**.

Our book prize this month is a 1999 edition of the *World Radio TV Handbook* and it goes to long-time reporter **Sheryl Paszkiewicz of Manitowoc, Wisconsin.** In addition to her many other activities, Sheryl is a fellow editor. She handles the Tropical Bands log section for *The Journal*, the monthly bulletin of the North American Shortwave Association.

As mentioned last month, we're recognizing a different reporter each month, based on quality of tips or faithful reporting over a significant period of time, or for providing useful non-log information. The *WRTVH* awarded this month is courtesy of CRB Research Books — the Radio and Electronics Hobby Bookstore. For a catalog write to P.O. Box 56, Commack, NY 11725. They offer secure online ordering at <http://www.crbbooks.com> or you can phone orders to 516-543-9169 Monday to Friday, 9 a.m. to 3 p.m. EST.

We Need YOUR Input!

Time again to get down on bended knee and encourage you to send in your logs! **Please list them by country**, double-space between logs, and tag each with your last name and state abbreviation. Other items we'll welcome with open arms include spare QSL cards, station schedules, photos and other literature, notes about changes in QSLing policies or station addresses, and other shortwave station news. We welcome photos of you and your listening post. Don't be shy. Get out the camera and fire away!

Here are this month's logs. All times are in UTC, which is five hours ahead of EST, i.e.0000 UTC equals 7 p.m. EST, 6 p.m. CST, 5 p.m. MST, and 4 p.m. PST. Double capital letters are language abbreviations (FF = French, AA = Arabic, SS = Spanish, etc.). If no language abbreviation is included, the broadcast is assumed to have been in English.

ALASKA —KNLS, **7365** monitored at 1241 to 1359 sign-off. Mandarin until 1300, then EE. (Silvi, OH)

ANTIGUA— BBC, **5975** heard at 0300 with news. (Jeffery, NY)

ARGENTINA — Radio Nacional, **11710** at 0037 with news in SS. (Miller, WA)

ASCENSION ISLAND — BBC to Africa on **15400** monitored at 2000 with "Newshour." (Jeffery, NY)

This QSL was one way WYFR celebrated 25 years on the air during 1998. (Thanks, Ed Lindley)

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

AUSTRALIA — Radio Australia, **5995** at 1400 with many IDs, lots of music up to news at 1500. (Silvi, OH) 1210 with Aussie country-western songs. **Parallel 6020, 6080, and 9580**. Freq. **6020** monitored at 1310 with QRM from Vatican underneath and **9500** at 1330 in Vietnamese. (Miller, WA)

BOTSWANA — Voice of America relay, **7415** at 2003 with "Nightline Africa." (Jeffery, NY)

BULGARIA — Radio Bulgaria, **9485** with news at 0048; listener comments. (Miller, WA)

CANADA — Radio Canada Int'l, **6155** at 0300 with news. (Jinright, FL) 0304 with news, ID, "Spectrum." (Jeffery, NY) **9755** at 2329. (Miller, WA) **17790** at 1530 in FF. (Northrup, MO) BBC via Sackville, **5965** at 1108, **6175** at 0400, and **9515** at 1600. (Jeffery, NY)

CENTRAL AFRICAN REPUBLIC — Radio Minurca, **9900** at 2200 with DJ in EE and Euro-pops. Poor in local noise. (Alexander, PA)

CHILE — Voz Cristiana, **11690** at 0257 with SS religious broadcast. (Miller, WA)

COLOMBIA — Ecos del Atrato, **5019.77** at 0015 to past 0100 with SS announcements, Caracol (network) promos, commercials, jingles, SS pops. (Alexander, PA)

COSTA RICA — RFPI, **6975** heard at 0328. (Jeffery, NY)

CUBA— Radio Havana Cuba, **6000** at 0332 with news, "Time Out," ID, DX program. **9820** at 0329, same programming. (Jeffery, NY) **12000**, 2nd harmonic of 6000 at 0100. (Alexander, PA)

DENMARK — Radio Denmark, **9940** at 1923, **11635** at 1928, and **15705** at 1643, all in Danish, and via Radio Norway facilities. (Miller, WA)

DOMINICAN REPUBLIC — Radio Cristal Int'l, **5011.83** at 0010 to 0100 close. SS announcements, IDs, meringues and off with national anthem. (Alexander, PA)

ECUADOR — HCJB, **9745** at 0227 with music, ID, "Inspirational Classics." **15115** at 1930 with "Ham Radio Today."(Jeffery, NY) Radio Baha'i, **4950.1v** at 0900 with SS announcements, IDs, and talk over Ecuadorian folk music. (Alexander, PA) Radio Oriental, presumed, **4780** at 2201 with continuous music. Gone at 2203. (Jeffery, NY)

EGYPT — Radio Cairo, **17800** in AA at 1310. (Northrup, MO)

ENGLAND — Merlin Network One, **3985** at 0341 with soft rock. (Jeffery, NY) **11755** at 2153 with music. (Miller, WA) BBC, **3955** to Europe/Americas at 0510. **9515** (via U.S.) at 0247. (Jeffery, NY) **17830** at 1305 and **21460** at 1330 in African service. (Northrup, MO)

ERITREA — Voice of the Broad Masses of Eritrea, **7175** from 0325 sign-on with guitar IS, short announcements in unidentified language, into talk at 0330 and local music. (Alexander, PA)

FRANCE — Radio France Int'l, **11615** in FF at 1559. (Miller, WA) **17860** (*via French Guiana — Ed.*) at 1300 in FF. **21580** at 1325 and **21645** (*via French Guiana — Ed.*) at 1320, both in FF. (Northrup, MO)

GERMANY — Deutsche Welle, **6145** at 0240 in GG, **15285** (*via Canada — Ed.*) in GG at 1540. (Northrup, MO)

GREECE — Voice of Greece, **9375** monitored at 0043 in Greek. Also **9420**. (Miller, WA) New **9775** at 0730 with EE news, ID, Greek music. Mixing with HCJB on same frequency and **parallel 9420**. (Alexander, PA)

GUATEMALA — Radio Buenas Nuevas, San Sebastian, **4799** in local language heard at 1234 with children and religious song. (Miller, WA) Radio Tezulutlan, Coban, **4835** with religious broadcast in local language. (Miller, WA)

HAWAII — KWHR, **17510** at 0330 with continuous religious music. (Jeffery, NY)

INDIA — All India Radio, Chennai, **4920** monitored at 1533 with news. **11620**, Bangalore, with discussion at 1912. (Miller, WA) 0230. Also heard on **15140** at 1535 in Hindi. (Northrup, MO) **11790** at 0058 with IS, talk in unidentified language, local music at 0102. Weak, but in the clear. (Alexander, PA)

IRAQ — (tentative) **4755**; sign-on at 0356 with chirping bird IS and light instrumental music, into talk in unidentified language at 0400, Middle Eastern music. (Alexander, PA)

ISRAEL — Kol Israel, **11605** monitored at 2002 with news. (Miller, WA) Reshet Bet service, **11530** at 1558 in Hebrew with commercials. (Miller, WA)

ITALY — RAE, **9680** at 0235 in Italian. (Northrup, MO) **15280** in II with news at 1636. (Miller, WA)

JAPAN — Radio Tampa, **3925** at 1315 with woman talking in JJ. Ham QRM. (Northrup, MO) Radio Japan/NHK, **9505** at 1437 with EE to Western North America. Numerous IDs (Silvi, OH)

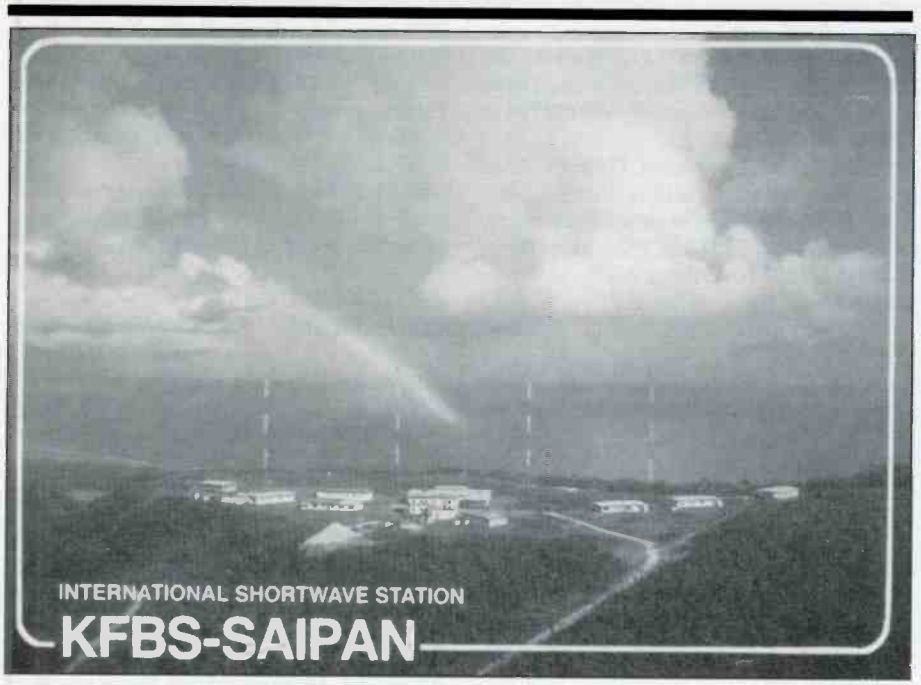
KUWAIT — Radio Kuwait, on **9855** at 1901 in AA with Mideast music. (Miller, WA) **11990** at 1800 in EE with ID, anthem, program preview, "Aftermath," music, news update. (Jeffery, NY)

LEBANON — Voice of Hope, presumed, on **11530** at 0245 with AA vocals, announcements, duet. (Paszkiewicz, WI)

LIBERIA — Radio Veritas, **5470** at 0545 with EE religious talk, Afro-pops, IDs, schedule of upcoming programs, time check, into local language at 0601 and back to EE at 0628. (Alexander, PA)

LIBYA — Voice of Africa, **15435** at 2040 with EE news, ID. No parallels noted. (Alexander, PA)

MEXICO — Radio Educacion, **6185** in SS



Antenna site at KFBS on Saipan in the Northern Mariana Islands. KFBS is part of the Far East Broadcasting Company Network.

heard at 0332 with music, male announcer. (Jeffery, NY)

MOROCCO — RTV Marocaine, **15345** at 1638 with news in AA. (Miller, WA)

NETHERLANDS ANTILLES — Radio Netherlands, **6165** at 2330 with ID, news. (Jeffery, NY)

NEW ZEALAND — Radio New Zealand Int'l, **6105** at 1537 with drama. (Miller, WA) **17675** at 0011 with "Cadenza" program. (Jeffery, NY)

NIGERIA — Voice of Nigeria, **7255** monitored at 0500 with ID, news, and "Wave Train." (Jeffery, NY)

OMAN — (presumed) Radio Oman, **11805** at 1725 in presumed AA between music selections. Good until Radio Vlaanderan sign on at 1857. (Silvi, OH)

PAKISTAN — Radio Pakistan, **11570** monitored at 1756 in unidentified language. (Miller, WA)

PAPUA, NEW GUINEA — NBC, Port Morseby, **4890** monitored at 1253 with music. (Miller, WA) **4970** at 1200. Many IDs, Saturday "Top 20" program. Has Christian music on Sundays during this hour. (Silvi, OH) (*Is this a new frequency, Lee? — Editor*)

PARAGUAY — Radio Nacional, **9735** heard at 0034 in SS with Latin music. (Miller, WA) **9737.5** at 0835 in SS with ID, announcements, Latin music. (Alexander, PA)

PERU — Radio Sudamerica, Cutervo, **5522.2** at 0045 to 0216 close with Peruvian folk music, long SS talk, ID, closing announcements. (Alexander, PA) Radio Ilucan, Cutervo, **5678**, 0045 to 0313 close. Peruvian folk music, SS talk, announcements, ID, long talks, SS ballads. Off abruptly. (Alexander, PA) Radio Los Andes, **6479.71**, 0115 to 0405 close, with local folk music, ID, SS announcements. Abrupt close. (Alexander, PA) Radiodifusora Huancabamba, Huancabamba, **6535.72** 0045 to 0227 close, SS talk, local folk music, SS announcements, ID, "Happy Birthday" song. Off abruptly. (Alexander, PA) Radio Nueva

One of Vatican Radio's huge rotating antennas at the Santa Maria di Galeria site.

Sensacion, Huancabamba, **6618.11** at 0025 to 0117 close, with local folk music, SS DJ. Off with national anthem. (Alexander, PA) Radio Ondas del Rio Mayo, Nuevo Cajamarca, **6797.68**, at 0100 to 0206 sign-off. Peruvian folk music, SS announcements, ID, off with national anthem. (Alexander, PA)

PHILIPPINES — VOA relay, **17820** at 0014 with news. (Paszkiewicz, WI)

PORTUGAL— RDP, Radio Portugal, **21515** heard at 1315 in PP. (Northrup, MO) Deutsche Welle relay, **9640** heard at 0239 in SS with classical music, ID. (Jeffery, NY)

QATAR (presumed) — Qatar Broadcasting Service, **7210** at 1857 to 2100 with male and female announcers in AA between music selections. (Silvi, OH)

SLOVAKIA — Radio Slovakia Int'l, **5930//7300//9440** with EE to North America monitored at 0100. 5930 suffered terrible bleed from WWCR on 5935, splattering from 5928 to 5942. 7300 suffers from QRM on 7305. (Silvi, OH)

SOUTH AFRICA — Channel Africa, **9525** at 0306 with news and ID. (Jeffery, NY) **11900** at 0152 in unidentified language. (Miller, WA) Trans World Radio via Meyerton, **9510** at 1850 with religious broadcast in unidentified language. (Miller, WA)

SOUTH KOREA— Radio Korea Int'l, **11725** in SS at 0158. (Miller, WA)

SPAIN — Radio Exterior de Espana, **6055** heard at 0500 with ID, time/frequency info, news. Also **9540** in SS at 0320 with music, ID, talk. (Jeffery, NY) **21570** at 1305 and **21610** at 1320, both in SS. (Northrup, MO) **21700** at 1709 in SS. (Miller, WA)

SWEDEN — Radio Sweden, **7115** at 0302 in SS. (Miller, WA) 0330 in EE with news, comment, IDs. **9435**, listed as parallel, not heard. (Alexander, PA) **21810** at 1325 with IDs in Swedish and EE. (Northrup, MO)

TAIWAN — Radio Taipei Int'l via WYFR, **5950** monitored at 0228 with "Taiwan Today." (Jeffery, NY)

TUNISIA — RTV Tunisienne, **7225//7280//12005** at 2240 with continuous music to 2300 with male announcer in AA. (Silvi, OH) **17735** at 1958 in AA. (Miller, WA)

TURKEY — Voice of Turkey, **7280** at 2300 sign-on with EE to Europe. (Silvi, OH) **9560** in TT at 1856. (Miller, WA) **17820** at 1330. (Northrup, MO)

TURKMENISTAN — (tentative) Turkmenistan Radio, **5015** at 0220 with Mideast-type music, talk in unidentified language. (Alexander, PA)

UNITED ARAB EMIRATES — UAE Radio, Dubai, **13675** at 1329 with ID and news. (Jeffery, NY) **21605** in AA at 1320. (Northrup, MO) UAE Radio, Abu Dhabi, **21630** in AA at 1355. (Northrup, MO)

UNITED STATES — AFRTS, **6458 SSB** at 0019 with news, live sports. **12689 SSB** at 2119 with "Air Force Radio News," Paul Harvey and "ABC News Journal." (Jeffery, NY) WBCQ, **7415** at 0036 with "Conspiracy Theory" program, various commercials, ID. (Paszkiewicz, WI) 0438 with "Fred Flintstone Music Show." (Jeffery, NY)

UZBEKISTAN — Radio Tashkent, **7285** heard at 0100 sign-on, EE ID, news, local music. Weak under Deutsche Welle. **//7105** very weak. (Alexander, PA) **9715** at 1329 with many IDs. (Silvi, OH)

YUGOSLAVIA — Radio Yugoslavia, **7115** at 0100 with news, commentary, ID. (Alexander, PA) **7130** at 1827. (Miller, WA)

ZAMBIA — ZNBC, Radio Zambia, **6265** monitored at 0339 with continuous African music. (Jeffery, NY)

And that's it for this time. Sound the trumpets on behalf of the following who did the good thing this month: Dave Jeffery, Niagara Falls, New York; Walter Jinright, Cantonment, Florida; Brian Alexander, Mechanicsburg, Pennsylvania; Lee Silvi, Mentor, Ohio; Mark A. Northrup, Gladstone, Missouri; Michael Miller, Issaquah, Washington and Sheryl Paszkiewicz, Manitowoc, Wisconsin. Thanks to each one of you!

Until next month, good listening! ■

How I Got Started

Congratulations To Charles Hampton Of Tennessee!

Popular Communications invites you to submit in about 150 words how you got started in the communications hobby. Entries should be typewritten, or otherwise easily readable. If possible, your photo (no Polaroids, please) should be included.

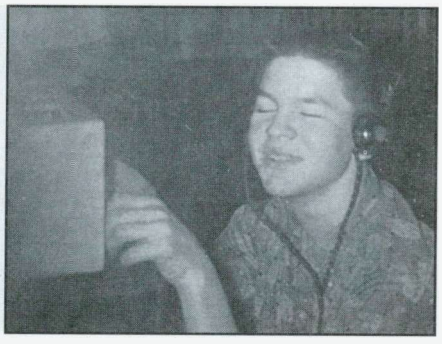
Each month we'll select one entry and publish it here. Submit your entry only once; we'll keep it on file. All submissions become the property of *Popular Communications*, and none will be acknowledged or returned. Entries will be selected taking into consideration the story they relate, and if it is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

The person whose entry is selected will receive a one-year gift subscription (or one-year subscription extension) to *Popular Communications*. Address all entries to: "How I Got Started," *Popular Communications*, 25 Newbridge Road, Hicksville, NY 11801 or E-mail your entry to <popularcom@aol.com>, letting us know if you're sending photos.

Our April Winner

Pop'Comm reader, Charles Hampton says, "My first experience as an SWL was in 1961 at age 14. As you can see from the photograph, I found it very enjoyable. The radio was a crystal-controlled regenerative Knight receiver with an indoor random length of wire for an antenna. The sensitivity was good, but the selectivity was awful, and the ability to find a specific frequency by using the dial indicator was almost impossible — a far cry from the digital displays on today's radios.

I joined the CB crowd in 1967 and had both base station and mobile radios like "Whiteface" Johnsons and Courier Classics. That was fun for a while and then the "skip bug" bit, and I discovered my liking for long-range communications. I began studying the dreaded Morse code, along with some electronic theory, as well as the FCC rules and regulations.



Here's Charles Hampton with the Knight receiver in 1961.

In a few months, I had my Novice class ham license and a pretty good station to go with it: a Drake 2C receiver and matching 2NT crystal-controlled transmitter. Over time, I moved up in terms of equipment, going through such rigs as Eico 733s, a Galaxy 5, and then the ultimate tube transceiver: a Drake TR4 which I won at a hamfest. I also moved up to a General class ham license.

After a brief loss of interest in radio, during which I sold all my equipment, the SWL fever struck again. I bought a Kenwood R2000 and a VHF/UHF scanner and began listening in earnest. The solid-state radios provided another quantum leap in features, and led me back into ham radio. I bought a Kenwood TS140S transceiver and put up a 130-foot tower with a complete assortment of inverted vee antennas, scanner, and 2-meter antennas, topped by a Hy-Gain tri-band beam. I upgraded to an Advanced class license during this time.

They say you can't get your antennas too high, but they are wrong! A direct lightning strike to the tower set my house on fire and it burned, destroying my radio equipment (along with most everything else I owned.) Now I am starting again. My SWL equipment is limited to portable radios with indoor antennas: a Sony ICF6500 multiband receiver, an ICOM IC-R10 scanner, a new Sony ICF-SC1PC, and a RadioShack PRO-39. After 37 years of listening and talking, I'm still hooked on radio." ■

The Ham Column

BY KIRK KLEINSCHMIDT, NTØZ

GETTING STARTED AS A RADIO AMATEUR

First-Time Buyer

As we near the start of amateur radio's second century, choosing your first rig can really be confusing! Old-Timer's had a much easier time making a buying decision. They chose between a home-brew, one-tube transmitter and a Heathkit/Johnson assemble-it-yourself kit. Today's cornucopia of electronic marvels — the vast array of new and used rigs confronting beginning hams — simply wasn't an issue. In the Golden Age of Radio, commercial rigs were scarce and wildly expensive.

Should you cough up the big bucks for a brand-new whiz-bang rig with three kinds of DSP, all the bells and whistles, a 1-Hz digital readout, and oodles of fancy features? Perhaps you should purchase something in a more comfortable mid-range, that cozy four to eight year-old span where the rigs still perform well — but are much more affordable.

"... match the radio to your requirements before you shell out your hard-earned cash!"

You could also choose to buy a brand-new "beginner's rig," a relatively affordable modern radio that sports only the most essential functions. Or, if your budget is really tight, you could get lucky and come up with a well-cared-for older rig from the '70s through the mid '80s.

Relatively new on the scene are the "DC-to-daylight" mini mobiles, such as Alinco's DX-70TH. Covering 160 through 6 meters — all bands, all modes — these tiny marvels are about the size of a Tom Clancy novel (hardcover), offer decent performance in the shack or in the car, and have price tags that are commensurate with their small size.

Beyond choosing from the hundreds of available transceivers, you really need to consider additional factors. Do you even want a transceiver? Or will a separate transmitter/receiver pair be more to your liking? Are tubes OK, or do you need "solid state all the way?" Can you "dip that plate circuit," or are you firmly entrenched in the "no-tune" era? Will the wall socket always power your rig, or is DC power desirable?

What I wouldn't have given for a rig like this when I was a beginning ham! In case you're wondering why the prices of used HF radios have been dropping lately, look no further. This Alinco DX-70TH represents the latest generation of full-featured, all-mode, "DC-to-daylight" mini-mobile rigs that cover HF and one or more VHF/UHF bands. At home, in the car, or in the shack, these rigs can be purchased new at prices as low as $700.

And what about size? Big, small, or in-between? Mobile, base, or both? Do you operate "contest" or "casual?" What about the warranty and service? It's not always an easy choice!

This month's column has a few tips to help you choose a first ham rig that's RIGHT for you and your pocketbook (or a second or third rig, as needed!)

Buy The Right Radio

First, think long and hard about how you'll actually *use* your shiny new (or lovingly used) radio. Analyze your interests, the bands and modes you'll be using, the power output you require (or can afford), and so on. If you're always using SSB, buying a rig with full break-in CW or a nifty CW filter in the IF section may be a total waste of time and money. You get the idea — match the radio to your requirements before you shell out your hard-earned cash!

In a similar light, put on some dark sunglasses to shield your sensitive eyes from the glare of hundreds and hundreds of shiny, beckoning pushbuttons and gizmo switches. "Creeping Feature-itis" can strike anyone, anywhere! The truth of the matter is that thousands of hams have radios with many more features and functions than they ever use. Your first rig won't be your last, so go easy until you've had a chance to explore your new hobby a bit further. Then, with some experience under your belt, go for the gusto if you need more radio.

Before buying anything, talk to your Elmer, your radio club buddies, your upgrade class instructor — anyone who has been a ham for a while. You can practically set your watch by the fact that hams love to talk about equipment. Operators have their favorites, of course, but by talking to every ham you can get your hands on and grilling them for information and recommendations, you increase the likelihood of coming up with a winner.

Elmers and ham buddies often have a radio or two sitting around that you can use for a while. Dealers, too, sometimes have demo rigs that you can try out. What's the best way to decide if a certain radio is right for you? Actually using it on the air, of course! This variation of the "oral tradition" — passing a certain brand of ham radio down (via loaner radios) to

"... check out the product reviews in the ham magazines."

successive generations — is a profound promoter of brand loyalty. More than one ham has been a "Kenwood man" for life simply because he started with a borrowed TS-520 (or whatever).

Another great way to become familiar with a wide variety of radios is to check out the product reviews in the ham magazines. Nearly every mainstream radio made since the late '60s has been reviewed in CQ, QST, or 73. You can also find performance specs, features, a look at the controls and connectors — the whole nine yards.

The Internet is emerging as a lively forum for debating the relative merits and faults of just about any new (or reasonably new) rig. Simply do a Web search for the make and model you're interested in and you'll be sure to turn up a batch of info possibilities.

Buying from a dealer — whether the rig's new or used — can be safer than buying from an individual. In addition to hardware, dealers offer information, service, and a bit of security. Make sure the dealer you choose has a reasonable return period (a modest restocking fee is acceptable), and try to purchase your rig with a credit card, if possible. You'll be protected if the rig turns out to be a lemon.

"... buying from a dealer ... can be safer than buying from an individual."

Buying from individuals (flea markets, the Internet, classified ads) is where the bargains can be found, but only if you're an experienced buyer that's skillful in ham radio service or repair, or know someone who's also willing to assist you! As any longtime horse trader will tell you, it's possible to find fabulous deals at such outlets, but it's also possible to come home with wretched doorstops that look great on the outside. When the seller says, "Oh, that radio works great!" he might be telling the truth — but he might be pulling your leg. If you're inexperienced or you can't fix the rigs "little problem," you could be stuck with the thing. Caveat Emptor even applies to ham radio! And you generally get what you pay for.

As you gain experience, the process of choosing a rig will become less mysterious, but no less frustrating. New gear is introduced every year, and most hams trade their stuff in for newer versions every few years. You probably will, too — it's all part of the fun!

Good Used Rigs

If you've decided to buy a used rig (for whatever reason), the radios listed here (far from comprehensive) are as affordable as any radio you'll find, work reasonably well on today's crowded bands, and can handle most specialty modes (check carefully to be sure they'll meet your needs).

- ICOM — Models IC-701, '720, '730, '735, '740, '745, and '751(A). Prices range from about $250 for the '701 to about $500 for the '751 or '751A. They're all solid state rigs and have many built-in features.
- Kenwood — Models TS-120, '130, '140, '180, '430, and '440. Prices range from $300 to $500. They're all solid state and have many built-in features. The Kenwood rigs with at least one tube are Models TS-520, '530 and '820. These are older radios and may require "tweaking."
- TEN-TEC — Models 540, 544, Argosy, Argonaut (QRP, 5W output), Omni series, Century 21 and 22 (Morse code only), and the Scout (compact frequency-limited "beginner's radio"). TEN-TEC radios are all solid state, made in the U.S., and feature smooth, full break-in CW keying. Prices range from $100 to $400.
- Yaesu — Models FT-102, '107, '301, '707, '901DM, '980, and '747. They're all solid state. Tube models include the popular FT-101 series (older, may need "tweaking"). Prices range from $200 to $500.

Then there are the older rigs. If you need an HF rig that costs less than $200, these veteran tube-type radios can still offer good performance — if they're working properly! But some operating flexibility is sacrificed. Look for Drake's TR-4 transceiver and the T4/R4 series transmitter/receiver combo, Heathkit's HW and SB series (will likely need "fixing"), and Henry Radio's Tempo One and Tempo 2020 (both made by Yaesu, imported by Henry), among others.

Happy hunting! Keep your photos, letters, and column suggestions coming to "The Ham Column," *Popular Communications*, 25 Newbridge Road, Hicksville, NY 11801. ■

BY BOB EVANS

The ACARS Downlink

YOUR LINK TO DIGITAL AIRCRAFT COMMUNICATIONS

What's New In ACARS Decoders — LOWE AIRMASTER 2000

Lowe Electronics of the UK was one of the first companies to offer a DOS-based dedicated ACARS Decoder for personal computers. Their new Windows™ version, the AIRMASTER 2000, while maintaining the original decoding excellence, now embraces a plethora of additional enhancements.

The AIRMASTER 2000 is Lowe's newest decoding software/hardware package. The hardware consists of a small demodulator built into a 25-way D-type plug which is connected into the COM port on the back of a PC, taking power from the computer. The software is then installed onto the computer's hard drive and is ready to run. The scanner is tuned to the appropriate frequency, and within a few minutes you should see your first ACARS messages being decoded!

All the decoding of the data stream is handled by software running on the PC, which also enables some analysis of the messages to take place before they are displayed on the screen. Hence, items such as the registration number of the aircraft, its flight number, and the type of message are shown separately from the message text.

Options in the decoding software allow you to log to a data file, a printer, or both. In either case, data also appears on-screen in real time. ACARS data comes in particularly fast, especially if you are in a busy location, and the screen soon fills up and scrolls over.

The display of message contents can be suppressed. If both the labels and the contents are displayed, the individual messages only have the separator line drawn between them every minute. Up to six strings of "alert text" can be specified. If one of these is received anywhere in the message, the program beeps. This is designed to help in spotting particular flight or registration numbers.

What Does LOWE AIRMASTER 2000 Do?

AIRMASTER 2000 is a program for receiving ACARS transmissions from airraft. (ACARS stands for Aircraft Communications Addressing and Reporting System). To use it, you must have a suitable Air Band receiver which covers the frequencies used for ACARS. In Europe the primary frequency is 131.725 MHz, in the USA it is 131.550 MHz. The mode of the transmission is AM.

The sound received on your radio is input to the PC using the specially designed AIRMASTER demodulator. It is then decoded by the AIRMASTER software and the messages are displayed.

AIRMASTER 2000 allows you to view live data as it is received, and to view recently received data that is held in the PC's memory. You may view data that has been saved in log files or view a list of aircraft that the system has heard. Being a Windows program, it even allows you to do all four at the same time if you wish!

Finally, AIRMASTER supports Windows Dynamic Data Exchange (DDE), so it can pass data to other add-on applications, which can use AIRMASTER as an ACARS receive "front end."

When AIRMASTER is receiving data, the demodulator generates an enormous number of hardware interrupts — several thousand each second — which put a significant load on the PC's processor. Windows 95 tends to handle hardware interrupts more efficiently than Windows 3.1, so, if you have a choice, I would recommend using Windows 95, but only if the PC hardware spec is up to it! I would not recommend running the program on a PC with so little memory that it does a lot of swapping to disk. Exactly how much memory that is depends on what version of Windows you are using, but I would say 8 Mb is an absolute minimum for Windows 3.1 and 12 Mb for Windows 95.

Setting Up The AIRMASTER 2000

Setting up AIRMASTER 2000 is very simple — you plug the 3.5-mm jack plug on the demodulator into the external speaker socket on your radio, plug the demodulator into a COM port on your PC, you run the AIRMASTER software and tell it which COM port to use. Taking this one step at a time, here's the process.

The Main Screen

AIRMASTER uses a Windows Multiple-Document Interface (MDI). This means that it can have several different displays open at the same time. Four different types of display are available: Live Data, Data Review, File Review, and Aircraft List. There can only be one Live Data, Data Review, or Aircraft List display open at any time, but up to six File Review Displays may be open. You open new displays using the "Display" menu options.

Because an MDI is used, the menu options and the status bar will change according to which display is currently active. The "active" display has an active caption bar (usually dark blue) and is the last display you opened or the last display on which you clicked the mouse.

Live Data Display

This shows the data as it is being received. The colors used in the display can be configured from the "Options" menu. There is an indicator at the top end of the scroll bar which flashes if any sort of data is being received (it will flash even if only noise is being received). This indicator can be disabled from the "Options" menu.

AIRMASTER attempts to differentiate between uplink (ground-to-air) and downlink (air-to-ground) messages. Any message that is regarded as an uplink is marked "[Uplink]." Uplink message identification is only enabled when "Label The Data" is checked on the "Options" menu. As data is received, it is held in a series of buffers, so it can be reviewed using the Data Review display. It can also optionally be saved in a log file.

When "Live Data" is the active display, the status bar shows which buffer is cur-

"Options in the decoding software allow you to log to a data file, a printer, or both."

rently being used to save data and whether the scrolling is locked.

Data Review Display

The Data Review display allows you to page through the buffered data. You can change the buffer using the "Next Buffer" and "Previous Buffer" menu options, or simply by using <Ctrl> plus the right and left cursor keys. The Home key will take you to the start of the current buffer, and the End key will take you to the end.

When Data Review is the active display, the status bar shows which buffer is currently being viewed, and the date/time of the start of the data in the buffer.

File Review Display

The File Review display shows the contents of a saved log file. You select the file when you first open the display and you can change the file using the "Load" menu option. You can page through the parts of the file using the "Next Part" and "Previous Part" menu options, or simply by using <Ctrl> plus the right and left cursor keys. The Home key will take you to the start of the current part, the End key will take you to the end.

When File Review is the active display, the status bar shows which part of the file is currently being viewed and the date/time of the start of that part of the file.

Aircraft List Display

The Aircraft List display shows a list of the aircraft that AIRMASTER has heard during the current program session. For each aircraft, the registration number, flight number, and time last heard are shown. If more than a specified number (default 100) of aircraft have been heard, AIRMASTER attempts to discard the oldest entry from the list when a new entry needs to be added. Entries in the list older than a specified number of minutes are automatically discarded.

There are menu options available for specifying the sort order of the list, whether or not you want the latest entry in the list to be automatically highlighted, the maximum number of aircraft to keep in the list, and the age in minutes for automatically discarding old entries. Clicking the "Clear" button will clear all entries from the list.

Common Menus

Some items on the AIRMASTER menus vary according to which type of data display window is currently active, other items are common to all types of data display.

The Display Submenu — The display menu has options for opening new display child windows within the main AIRMASTER window. It also has an "Exit" option for closing down the program. The available options on the menu are:

• Live Data — This opens the Live Data display window, which shows data as it is received. Only one Live Data display can be open at a time. If you select this option when the Live Data display is already open, then the display is simply brought to the front.

• Data Review — This opens the Data Review display window, which allows you to review the data currently held in the receive buffers. Only one Data Review display can be open at a time. If you select this option when the Data Review display is already open, then the display is simply brought to the front. Each receive buffer is about 25,000 characters in length.

You can change the buffer currently being viewed by using the "Next Buffer" and "Previous Buffer" menu options, or simply use the right and left cursor keys. You can move around within a buffer by using the scroll bar, or the PageUp and PageDown keys. The Home key takes you to the start of the buffer; the End key takes you to the end of the buffer.

• File Review — This opens a File Review display window, which allows you to review the data currently held in a log file. Up to six File Review windows can be open at the same time.

When you first open a File Review window, you will be prompted to select a log file to view. A different file can later be selected using the "Load" menu option. Files are viewed in parts or pages of about 25,000 characters in length. You can change the file part currently being viewed by using the "Next Part" and "Previous Part" menu options, or simply use the right and left cursor keys. You can move around within a part by using the scroll bar, or the PageUp and PageDown keys. The Home key takes you to the start of the part, the End key takes you to the end of the part.

• Aircraft List — This opens a window showing a list of the aircraft that the system has heard since it was started. The list can hold up to 100 entries. There are menu options for sorting the list by registration, by flight number, or having it unsorted.

• "Extras" — If you have any AIRMASTER "Extras" installed, these will appear on the display submenu between "Aircraft List" and "Exit." For more information, see AIRMASTER "Extras."

Exit — This option closes down AIRMASTER 2000.

The Window Submenu — The Window menu has options for arranging the child windows within the main AIRMASTER window, and for selecting a child window (Window menu is a normal part of any MDI application).

• Cascade — This option arranges the child windows in an overlapping cascade.

• Tile Horizontally — This option puts the child windows in a tiled arrangement, which fills the main window. The tiles will be arranged in a pattern which favors horizontal rather than vertical divisions.

• Tile Vertically — This option puts the child windows in a tiled arrangement, which fills the main window. The tiles will be arranged in a pattern which favors vertical rather than horizontal divisions.

• Arrange Icons — If you minimize the child windows within the main window, this will arrange the icons in a neat row.

• Record Favorite and Restore Favorite — If you have an arrangement of AIRMASTER child windows which you regularly use, then you can record it as your favorite setup by using the "Record Favorite" option. You can return to this setup at any time by selecting

• Restore Favorite — AIRMASTER will open the windows and arrange them exactly as they were when you recorded the setup. The only restriction is that you cannot record a setup which has more than one File Review window open

• Window Selection Options — For every child window that is open, there will be a menu option for selecting that window.

The Help Submenu — This AIRMASTER menu has options for displaying the on-line help contents page, and

for displaying some information about the AIRMASTER program.

Live Data Menu

When a Live Data display is the currently selected child window, all the Common Menu items are available, and also the following options.

The Options Submenu — This submenu has various options for setting up the Live Data display.

• Setup — This option allows you to configure the COM port used by AIRMASTER and also some other aspects of the Live Data display.

• Alert List — This option allows you to configure the list of alert texts. Ctrl+A is a shortcut for this option.

• Allow Parity Errors — If this option is checked, then received ACARS messages will be displayed, even if they contain parity errors.

• Suppress Repeats — If this option is checked, then, each time a message is received, it is checked against the previous 50 messages to see if it is a repeat. If it is a repeat then it isn't displayed.

• Label The Data — If this option is checked, labels are added to the received data. "ACARS mode:" and "Aircraft reg:," etc.

• Show Message Content— With this option checked, the contents of the actual ACARS message are displayed. If the option isn't checked, only the message header is displayed.

• Show Data Indicator— If this option is checked, then an indicator at the top of the scroll bar on the Live Data window will flash if any data, even noise, is being received. This gives a good indication that the output from the demodulator is getting through to the program, but it can become annoying!

• Raw Data Mode — Raw Data Mode is only useful for anyone who wants to study the technical structure of an ACARS message exactly as it is transmitted. You will see that some characters will appear on the screen as small black rectangles. These are non-printing control characters which are used in ACARS messages, but which are normally removed when AIRMASTER processes the message. The only way to view exactly what is in the message is to enable logging and then view the log file with a hex editor. Separator lines are still inserted between messages, but no checking is done for alert texts.

"... I would recommend using Windows 95, but only if the PC hardware spec is up to it!"

The Logging Submenu

• Log Everything To File — If this option is checked, then all received data is written to the log file.

• Log Alerts To File —This option allows only messages containing alert texts to be logged. (If neither of the above options is checked, nothing is logged).

• Only One Log Per Day — If this option is checked, then AIRMASTER uses one log file per day, named in the format MMDD0000.LOG. For example, the log file for the 12th of May would be called 05120000.LOG. If this option is not checked, then a new log file is started each time the program is run or logging is enabled. The file is named in the format MMDDHHNN.LOG. For example, if the program was started at 14:56 on the 15th of May, then the log file would be called 05121456.LOG.

• Delete Log Files — This option allows you to delete log files which you no longer want to keep. When the dialogue box opens, you can select a single file, or you can hold down the <Ctrl> key and select several files in one go.

• Output To Printer — If this option is checked, all received text is output to the printer. AIRMASTER will use the default Windows printer with the default settings.

• Beep On Alert — Checking this option causes the program to beep each time an alert text is received.

Data Review Menus

When a Data Review display is the currently selected child window, all the Common Menu items are available, as well as the following options.

• Refresh — AIRMASTER saves received data in a series of buffers. Most buffers contain old data, but one will contain the data that AIRMASTER is currently receiving. If you are reviewing this buffer, then the contents will be changing while you are viewing it. Selecting "Refresh" updates the review display with the current contents of the buffer. The number at the left-hand end of the status bar shows the number of the buffer to which AIRMASTER is currently writing.

• Previous Buffer — Selecting this option causes the contents of the buffer previous to the one you are viewing to be displayed in the Data Review window. For example, if you are currently viewing buffer 2, then you will move to buffer 1. Pressing the left cursor key has the same effect as this menu option.

• Next Buffer — Selecting this option causes the contents of the buffer after the one you are viewing to be displayed in the Data Review window. For example, if you are currently viewing buffer 2, then you will move to buffer 3. Pressing the right cursor key has the same effect as this menu option.

The Options Submenu — This submenu has various options for setting up the Data Review display.

• Setup — This option allows you to configure the COM port used by AIRMASTER and also some other aspects of the Live Data display.

• Alert List — This option allows you to configure the list of alert texts. Ctrl+A is a shortcut for this option.

• The Colors Submenu — This submenu has options for setting the color of the various types of text in the Data Review display. Note that the same colors are used in the Live Data display.

File Review Menus

When a File Review display is the currently selected child window, all the Common Menu items are available, as well as the following options.

• Load — This option allows you to load a different file into the File Review window.

• Previous Part — Selecting this option causes the part of the file previous to the one you are viewing to be displayed in the File Review window. For example, if you are currently viewing part 2, then you will move to part 1. Pressing the left cursor key has the same effect as this menu option.

• Next Part — Selecting this option causes the part of the file after the part you are viewing to be displayed in the File Review window. For example, if you are currently viewing part 2, then you will move to part 3. Pressing the right cursor key has the same effect as this menu option.

The Options Submenu — This submenu has various options for setting up the File Review display.

• Setup — This option allows you to

configure the COM port used by AIRMASTER and also some other aspects of the Live Data display.

• Alert list — This option allows you to configure the list of alert texts. Ctrl+A is a shortcut for this option.

Colors Submenu — This submenu has options for setting the color of the text and background in the File Review window.

• Print File — Selecting this option will print the file currently being viewed. If this will result in more than a few pages of output, you will be asked to confirm if you really want to print it!

Aircraft List Menu — When the Aircraft List display is the currently selected child window, all the Common Menu items are available, as well as the following options.

The Options Submenu — This submenu has various options for setting up the Aircraft List display.

• Setup — This option allows you to configure the COM port used by AIRMASTER and also some other aspects of the Live Data display.

• Alert List — This option allows you to configure the list of alert texts. Ctrl+A is a shortcut for this option.

• List Setup — This option allows you to specify the maximum number of entries in the aircraft and the maximum age of entries in the list before they are automatically expired.

• Save The List — This option allows you to save the current ACARS aircraft list. By default, it will be put in the LIST subdirectory with an extension of ".LST," but the file dialogue allows you to save the file with a different name in a different directory.

• Highlight Latest — If this option is checked, then the latest entry in the Aircraft List will be highlighted. This causes the list to reposition itself so the latest entry is always visible — which can be annoying if you are trying to read it! Ctrl+H is a shortcut for this option.

• Only List Alerts — If this option is checked, then aircraft will only be shown in the Aircraft List if a message is received from them which contains an alert text.

Colors Submenu — This submenu has options for setting the color of the text and the background in the Aircraft List window.

• Sort Order — This submenu has options for specifying the order in which the aircraft in the list are sorted.

AIRMASTER supports Windows Dynamic Data Exchange (DDE), meaning it can pass received data to other programs in real time and act as an ACARS receive "front end" for them. It also can output a selected registration number and flight number from the Aircraft List so that an external database can display information.

The AIRMASTER 2000 unit is available directly from Lowe Electronics for $125 plus shipping charges. Users of the earlier AIRMASTER DOS-based product can upgrade to AIRMASTER 2000 for $42. The same hardware interface is used and you will be supplied with a new program diskette and manual. You can order the AIRMASTER 2000 with a credit card by E-mail at <orders@lowe.demon.co.uk> or you may request further information by E-mailing <info@lowe.demon.couk>. The Lowe Webpage is found at <http://www.lowe.co.uk/index.html>. By mail, contact Lowe Electronics Ltd., Chesterfield Road, Matlock, Derbyshire DE4 5LE, UK. Phone 011-44-1629-580800 or FAX them at 011-44-1629-580020. ■

BY RICHARD "RD" BAKER
<CommConf@concentric.net>

Communications Confidential

YOUR GUIDE TO SHORTWAVE "UTILITY" STATIONS

Thar Be Whales Ahoy, Matey!

Hardly a day goes by without some mail coming in about the "whale noises" that have been heard on and off over the years on HF. The mail really increased when the "whales" turned up on a popular USCG frequency, 8983.0 kHz. There have been many ideas tossed around as to the source of these sounds. Logs of "whale noise" have most often been from the United States. We know that the majority is found on, or very near, military frequencies and more often than not, specifically on, or near U.S. Navy or Coast Guard frequencies.

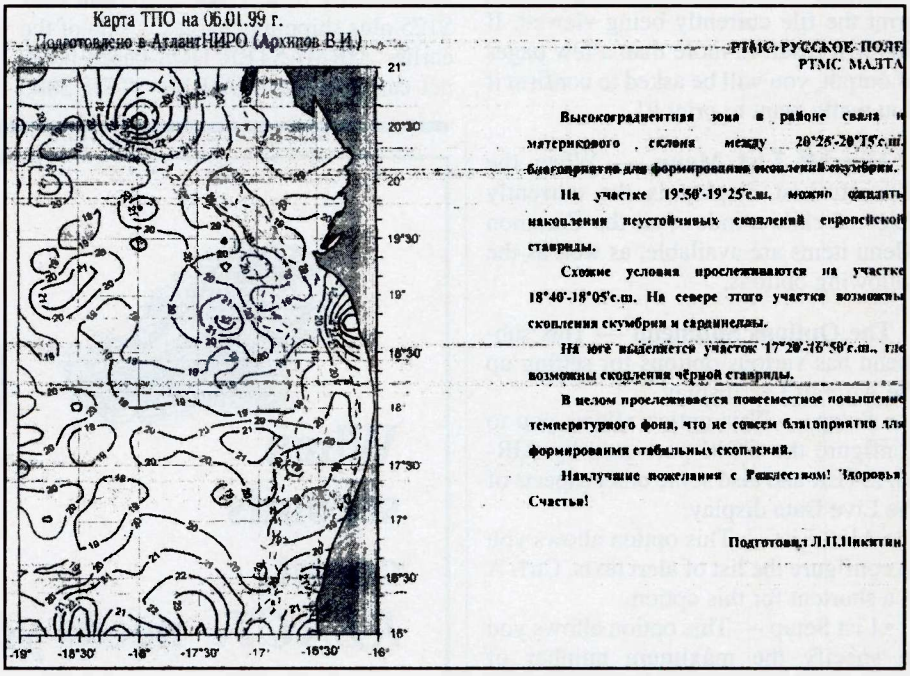
Back a few years ago, one "whale song" was RDFed to the main U.S. Navy transmitter at Driver, Virginia. Another on 8971 kHz was RDFed to Roosevelt Roads, Puerto Rico, where the U.S. Navy has a "large presence." Frequency 8971 is used by the U.S. Navy as "Safety of Flight" frequency. A few weeks ago, while I was listening, both **8983.0 kHz and 6815.6 kHz** began moaning the sounds of the "whale song" at the same time. Of course, 8982 is the primary air/ground frequency for the U.S. Coast Guard and 6815.6 is also an USCG frequency used by GANTSEC, USCG Greater Antilles Section, San Juan, Puerto Rico. GANTSEC also uses 8983 from time to time. Both frequencies going to the whales didn't strike me as too odd since I suspected the common thread was San Juan, having been told for years that these sounds were malfunctioning transmitters/remote phone line problems.

The most common explanation from those who hear the whale noise is that sound is making an audio loop-back and somehow driving the exciter section of the transmitter. I have also been told by a few "formerly in the business" that the noise is the result of the background noise or sound level being too high in a telephone remote transmitter line. The noise somehow begins driving the exciter.

The whales turning up on two USCG frequencies at the same time and the fact that 99 percent of the logs of these sounds are on or very near known military frequencies, is no coincidence. These frequencies include ones where 75-baud NATO encrypted CRATT (Ciphered or sometimes Covered Radio Teletype) is sent out. A friend in the UK had sent sound files of "the whale" turning into 75-baud NATO CRATT (encrypted radioteletype) on **5178 kHz** a few months ago. And just a few days ago, Dave Wright caught "the whale" on 8983 disappearing as one station came up in voice. So, I have little doubt where the noises come from, even if the exact cause is not 100 percent for sure. But it seems safe to generically say the problem is indeed a malfunctioning transmitter.

However, there are others who believe the "whale" is some type of communications device, jammer, or even a frequency marker. These folks point out that the sounds often go on for months. They reason that radio techs would surely fix a malfunction during this time. I'd be interested in any *factual* information on these "whale" noises.

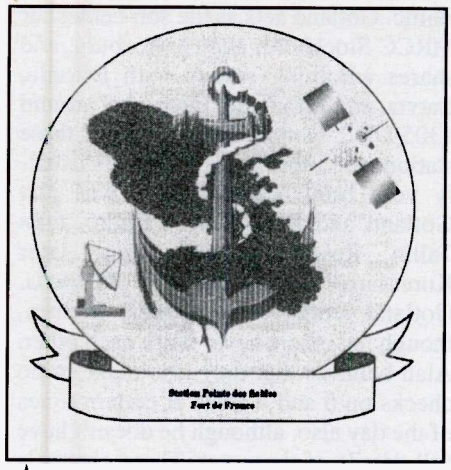
In an interesting development, just recently, I heard my first of what has been dubbed as the "Backwards Music Station." The ENIGMA Club has designated it "XM." It was on the same 5178 kHz frequency my friend caught the CRATT using. What I heard sounded suspiciously like the familiar strains of "whale noise!" I'm looking into this one a bit closer.



This chart, sent to the Russian fishing trawlers RTMS Malta *and* RTMS Russkoe Pole *on 19745.1 showing where certain types of fish may be found, was received by Peter Thompson, UK.*

Other News

PCH, Scheveningen Radio, The Netherlands, sadly ended an era in maritime communications by closing on December 31, 1998. The following message was sent in all modes: "All ships from Scheveningen Radio . . . last message . . . after 94 years of maritime radio communication, Scheveningen Radio will close all services today at 1500 UTC stop. At this moment a great number of personnel, former personnel, and staff are gathered in the pch-building stop. We remember the excellent relationship between the coast station and ships of all nations and wish you and the crew for the



Ray Prestridge, Texas, received this QSL card from FUF Fort de France noted on the cover as "Station Pointe des Sables, Fort de France" as noted in the January column.

Monsieur le Major Radio
Chef de la station reception
de la POINTE des SABLES
BP 619
97261 FORT DE FRANCE Marine Cedex

MARINE NATIONALE
Zone Maritime ANTILLES
S.T.I.R. FORT DE FRANCE
Station Pointe des Sables

à

Monsieur RAYMOND PRESTRIDGE

Alvin, Texas
United States of America

OBJET: Ecoute des émissions de FUF par radio amateur.

1 - Je vous confirme que l'émission que vous avez intercepté le 07/11/98 entre 19h00 et 19h10 sur la fréquence 8 Mhz, indicatif FUF, correspond bien à une composante émise par la Marine Nationale Française aux Antilles à destination des navires.

2 - Le caractère militaire de cette station m'interdit de fournir des renseignements quant à la puissance émise ou la nature des aériens utilisés.

3 - Je vous prie d'agréer, Monsieur, l'expression des sentiments très cordiaux qui me lient à tous les passionnés de télécommunications.

Le Major Radio TRICAULT
Chef de la station Radio Pointe des Sables

last time a safe voyage and a prosperous new year . . . operations manger pch + nnnn." Many readers caught the historic message from the PCH Sitor-B (FEC) transmission. Dave Wright (TX) logged the message being sent in USB. Thanks to everyone who sent a copy.

In further developments, it is assumed that sometime this year **GKA, Portishead Radio, England**, will also be closing. BT (British Telecom), which runs Portishead, is already setting up a nationwide consultation on proposals to close its commercial maritime services. Mike Wilton, BT Project Manager, said "Maritime radio services around the world have experienced a significant reduction in use over the last 10 years due to the advent of new technologies, such as GSM and satellite communication." BT further cited an 80 percent drop in HF services alone in the past five years. Closing the station would bring an end to 100 years of maritime radio history in the United Kingdom. Plans are underway to mark the closure of Portishead Radio via two amateur radio DX Special Events, which will take place during April, 1999. The first is an UK-only DX Special Event, which will take place during the entire month of April. Arrangements are being made for all of the old Commonwealth "Area" stations and a number of guest stations to take part. The mode to be used will be mainly CW.

The other event will be the Coast Radio Station Event on April 10 and 11, 1999. The UK Radio Officers Association is to re-open and resurrect representative stations at or near many of the original sites. Some 25 UK stations are to be operated using GB0 followed by the original calls, e.g. GB0GLD for Lands End. The event will be mainly on the 80- and 40-meter bands — both SSB and CW. The coast station event has taken off, and instead of the original plan of being confined to the UK Eire and Europe, it will now be a worldwide event. Expected stations will include coast and even some military stations from the UK, Greenland, Finland, Denmark, Switzerland, U.S., Malasia, New Zealand, and Namibia. More are expected. For updates, check the Website at <http://homepages.enterprise.net/dbarlow>. The award will be open to SWLs as well. QSL cards can be obtained via the bureau or with an SASE and a couple IRCs sent c/o David Barlow, G3PLE, Special Events Organizer, Pine, Churchtown, Cury, Nr. Helston, Cornwall TR12 7BW England.

Hold on, there's more maritime news — **SVA, Athens Radio, Greece,** was to have ceased all CW transmissions on January 31, 1999.

The Australian coast stations VIM, VIP, and VIB have ceased a 500-kHz CW distress watch on February 1, 1999.

With the implementation of GMDSS in the UK, authorities there have announced that effective February 1, 1999 NAVAREA 1 warnings are being transmitted via SAFETYNET and NAVTEX only. Their coastal stations HF transmissions will be discontinued.

The Netherlands Coast Guard is now using 3673.0 kHz in USB for their scheduled marine broadcasts replacing all other HF/MW frequencies.

Many of you may have heard of the disastrous Sydney to Hobart Yacht Race held in Australia this past January. A freak storm came up creating mini-hurricane-like conditions that ended up in a number of the yachts being de-masted, damaged, or sinking. Sadly, there were several deaths. In a demonstration of how HF utility stations can be like a "worldwide scanner," many UTE folks in the U.S. and Europe were able to listen to the on-scene rescue efforts. I was tipped off by Jeff

Jones (CA) around 0600 UTC, and remained up all night following the situation. A very chaotic situation was handled extremely well, which I'm sure accounted for so many saved. A BRAVO ZULU (well done) to the Royal Australian Air Force and all of the other agencies involved.

Don't forget the launch of Columbia (OV-102) on mission STS-93, Chandra X-ray Observatory (formerly AXAF) tentatively set April 8 at 7:21 a.m. (1221 UTC) from the Kennedy Space Center. Listen to **10780.0 kHz** the day before for assets checking in and frequency assignments.

Digital News

CTP, the Portuguese Navy, Oeiras, Portugal (aka NATO Lisbon), has been noted in 75/850 baudot RTTY with NAWS (Notice to Allied Warships) markers. This station had been in CW. Frequencies are **3782.0, 6389.0, 8551.5, 12823.5, and 16986.0 kHz.**

Algerian Customs nets have been noted making a change to the PACTOR mode. Peter Thompson in the UK first noted the change on **11527 kHz** with traffic in French and Arabic.

Peter also caught an interesting facsimile transmission on **19745.1 kHz**. The FAX consists of a small chart showing the coastal area of Mauretania, between 18 and 21 degrees north, and Russian text in cyrillic letters. Peter had several folks roughly translate the text. The FAX was titled "Transport Cooperative Association Map as of 6 January 1999, Prepared at the Atlantic Scientific-Research Institute of Marine Fisheries and Oceanography (Kaliningrad) (V.I. Arkhipov)." The fishing trawlers *RTMS Russkoe Pole* (Russian Field) and *RTMS Malta* were addressed. The text continues as to what sections of ocean favored the formation of concentrations of mackerel, horse mackerel, sardines, and black mackerel. Important information for fishing trawlers.

I did some research on the ships mentioned, the *RTMS Russkoe Pole* and *RTMS Malta*. Both are homeported at Kaliningrad. Both of these trawlers are MRH (Ministry of the Fishing Industry) — affiliated, and at one time both were part of the former Soviet *MORTRANSPORT* Kaliningrad-based fishing fleet. Kaliningrad is noted as the location of the institute that prepared the chart. Since it is a specially prepared chart related to fishing, it seems it may have been sent by UIW, Kaliningrad Radio.

Folks on the WUN Club Internet list have noted Moscow Meteos' FAX transmission now sometimes on **5518** kHz instead of 5008 kHz, this being parallel with **6987** kHz.

John Doe, UK, reports these Piccolo frequencies active at year's end: MTS, 10967.5, 11514, 13997.5, 14593, 14711, 15855, *16268.5, *16390, 17555, 18879, 19615, 20600, and 22923.5; MKK, 7641.5, 9338, 10261, 11584, 11615, 12145, 13580, 14511, 14708, 14826.5, 16205, 18057, 18418.5, 19003.5, 20265, 20436, 22890, 22920.5, 24331.5, and 26320 kHz. The two marked with a * were not positively identified, but were believed to be MTS. These are all carrier frequencies. The "engineering" channel is usually 500 Hz higher. With the main traffic encrypted, the engineering channels are about the only place "clear" Piccolo traffic is found, as the operator's chat back and forth coordinating the link. Thanks JD!

Reader Mail

Longtime reader Michael Brown in Asheville, North Carolina, checks in for the first time with some beacon logs. However, his main target is usually military aero using a Drake R-8A, with 250-foot longwire antenna up about 35 feet. Mike started DXing as a small boy. His hobby has now lasted 30 years!

Also checking in this month is fellow Buckeye Jim Deardorff down Dayton, Ohio way. Jim has listened to utility stations since 1987 and enjoys listening to the military and Coast Guard.

Another longtime reader, but first time contributor, is Raymond Prestridge down near Alvin, Texas. Ray enjoys the digital end of the hobby. But from time to time, he turns off the M8000 and listens to voice UTE stations too. Ray uses a Drake R8B, with a Universal M8000 Decoder and the "usual antenna," a 30-foot longwire. Thanks to all three for taking the time to share some logs.

Jon S. Van Allen is a Radio Electronics Officer on the *SS Maui* (callsign WSLH), a container ship that runs from Seattle to Oakland and Hawaii. Jon thought we would like to see a picture of his "shack." Thanks, Jon, it *is* quite a shack!

Alan Gale, UK, reports that Klaipeda Rescue in Lithuania has now joined the daily group conducting radio checks with Gotland Rescue on **5680 kHz**. One of the stations recently referred to Gotland as the "Group Leader." Gotland Rescue is MRSC Gotland, which is co-located with Tingstaede Radio at Gotland Island in the Baltic. Gotland acts as the sub-center for MRCC Stockholm and Gothenburg, and shares adjoining waters with Estonia, Latvia, and Lithuania. Every day around 1305 UTC, Gotland calls the other three stations for a radio check, and it's usually very brief. Originally, it was just Gotland and Riga Rescue Radio, then Tallin Rescue joined them, later Kuresaarre Rescue, and now Klaipeda. Gotland works each of them in turn, though the others never work each other. Alan believes that they also make radio checks on 6 and 4 MHz at certain times of the day also, although he doesn't have full details of these yet. These channels may be 4125 and 6215 kHz. Alan also reports Glucksburg started their Pollution Control Aircraft at #PC001 again as they did last year, so that confirms it as their numbering system. Alan also finds it interesting to note the growing number of UK Coastguard (one word in the UK) Stations making appearances on 5680. That makes some good opportunities for folks outside the UK to log them other than on MW.

Jack Metcalfe in Kentucky sent the following times for the Region 7 Federal Agencies net (previously DOT/FHWA HF Net). The net meets each Wednesday as follows: 1500 UTC **4821.0** F-14 PACTOR; 1530 UTC 4821.0 F-14 USB Voice; 1540 UTC **5755.5** F-23 USB Voice; 1550 UTC **7743.0** F-28 USB Voice; and 1555 UTC **9185.0** F-31 USB Voice. Jack also clued me into the Ohio Disaster Services Agency (DSA) net, which has a regular roll call every Tuesday at 1400 UTC on **4640.0 kHz** in USB. "Columbus," KXG879, is the net control station.

Simon Denneen sends news his absence was due to a move. Simon now lives up near Sydney, Australia, and updates his shack with a JRC NRD-545 DSP, JRC NRD-345, AOR 3000A, using an Emtron sloping dipole, and a Datong active dipole.

We certainly had lots of great info this month and we have great logs as well, so on with the show . . .

UTE Logging's SSB/CW/DIGITAL

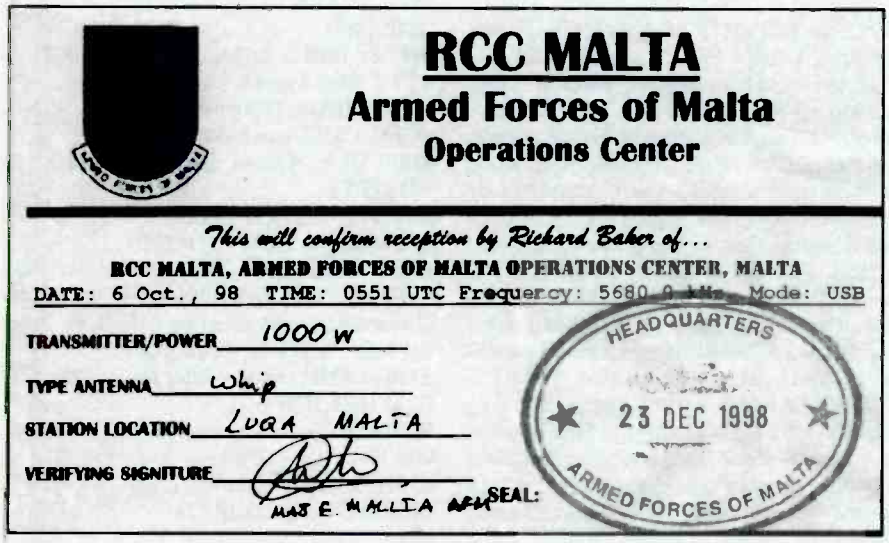
215: ISW Wis. Rapids, WI at 1300. (DS2)
218: RL, Red Lake, ONT, CAN monitored at 1301. (DS2)
221: ARV, Arbor Vitae, WI at 1322. (DS2)
236: DO, Hazelhurst, WI at 1255. (DS2)
242: MMI, Athens, TN at 1257. (DS2)
243: FZK, Wausau, WI at 1309. (DS2)
250: YTJ, Terrace Bay, ONT, CAN monitored at 1259. (DS2)

254: ENY, Ashland, WI at 1247. (DS2)
257: RRL, Merrill, WI at 1308 (DS2)
263: PBH, Phillips, WI at 1300 (DS2)
293: NDB FK, Hopkinsvile, KY at 1911. (CH)
326: YQK, Kenora ONT CAN at 1240. (DS2)
329: YHN, Hornepayne, ONT, CAN monitored at 1241. (DS2)
332: QT, Thunder Bay, ONT CA heard at 1242. (DS2)
335: NDB CK, Clarksville, TN at 2057. (CH)
335: MDZ, Medford, WI; YLD Chapleau, ONT, CAN (DS2)
338: VTI, Vinton, IA at 1243. (DS2)
344: SLY, Seeley, WI at 1301. (DS2)
345: YXL, Sioux Lookout ONT CAN monitored at 2300. (DS2)
356: RCX, Ladysmith, WI at 1302. (DS2)
362: BCK, Black River Falls, WI monitored at 1304. (DS2)
364: MHA, Manitowish Waters, WI heard at 1303. (DS2)
368: VIQ, Neilsville, WI at 1256. (DS2)
371: PKF, Park Falls, WI at 1305. (DS2)
375: DW, Tulsa, OK Owaso NDB at 0310. (BF) OGM, Ontonagon, MI at 1310. (DS2)
377: HWS, Mosinee, WI at 1306. (DS2)
388: OLG, Solon Springs, WI heard at 1311. (DS2) OFZ, Ft. Sill, OK Trail NDB monitored at 0312. (BF)
391: MFI, Marshfield, WI at 1307. (DS2)
407: PRZ, Portales, NM at 0329; CO, Colorado Springs at 0330. (BF) BNW, Boone, IA at 1259. (DS2)
415: HJM, Bonham, TX at 0318. (BF)
417: IY, Charles City, IA at 1320. (DS2)
1888: Regular maritime forecast in Italian at 1900 UTC on 1888 kHz speaker frequently repeats "maritima napoli" should be from Naples. (PP) *(This is probably IPD, Civitavechia Radio w/NavArea broadcast that includes Naples area — Ed.)*
2182: Palma Radio, Palma de Maiorca Island, Spain, ann notices to sailors in EE and SS at 2035. *"Espresso Venezia,"* Italian passenger ship w/c/s IBVO, clg Ancona Radio, QSY 2656/2198 kHz for pp at 2100. (LA) NOQ, USCG Group Mobile, AL, USA at 0415 wkg F/V *Amanda J* who is relaying for F/V *Mist Bell 2*, re *Mist Bell 2* is taking on water, posn approx. 65 miles off FL/AL coast, F/V *Blue Fin* is enrt w/pump. (Ed.) All in USB.
2203: MGJ, London? in RTTY 75/333 channel availability repeating pattern at 0043. (FH)
2270: JSR, Mossad, Israel, hrd in USB at 1830//5091. (TY)
2670: NMG, USCG Group New Orleans at 1237 in USB w/MIB. (DW)
2761: OSU, Oostende Radio, BEL 0245 USB w/wx. (Ed.)
3095: Kinloss Rescue at 1926 in USB in r/ck w/Rescue 177. (AG)
3116: PC408 at 1651 in USB clg Glucksburg Rescue. (AG)
3137: RESCUE 137 at 0031 in USB w/rdo ck w/Kinloss Rescue. (AG)
3150: PCD2, Mossad, Israel, hrd in USB at 1930 // 4270. (TY)
3192: RMP, Kaliningrad Naval, Russia in CW at 2125 w/code msgs to RMA91, one "FM RJD69." (JD)
3264: RMP, Kaliningrad Naval, Russia in CW at 1700 w/wx forecasts //3192//4079; spurious? (JD)
3417: ART, Mossad, Israel, hrd in USB at 1830 // 5437. (TY)
3476: REA4, Russian Navy in CW w/5F groups. (JD)
3687: PA6PCH, Scheveningen Radio Farewell Party, HOL at 0828 in LSB w/ON4BBC, ON5AZ, ON4ASV, PA3EAE. (AB)
3732: Possible Qld SES net at 0950 in USB w/VJC609, Maryborough conducting net checks to various stns including Kingaroy and Hervey Bay. (SD)
3808.5: RJD69, Russian Navy at 1735 w/CW wx forecast to REO. (JD)
3840: YHF, Mossad, Israel, hrd in USB at 1900 // 2844. (TY)
4018.5: Unid stn in ARQ-E 72/400 idle at 0300. (FH)

Abbreviations Used For Intercepts

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

4211: ZLA, Awanui, NZ w/ARQ ready signal, CW ID at 1020. (FH)
4214: IDR2, Italian Navy, Rome, I at 0046 in RTTY 75bd CARB.(AB)
4216: TAH Istanbul, TUR w/ready signal, CW ID on both channels //4219. (FH)
4250: PCH20/41, Scheveningen Radio Farewell Party, HOL at 1554 w/CW Msg "CQ PCH20/41 farewell radio amateur day. Call 14050 listen 12779.5 or call 18085 and listen 17198.9 kHz" (AB) Same at 0307 CW w/farewell CW net.(Ed.)
4270: PCD, Mossad, Israel, hrd in USB at 1900 //6498. (TY)
4305: L2C, Buenos Aires Naval, ARG at 0115 w/CW Navarea warnings. (RP2)
4322: MJG: RN Faslane, G at 1648 w/VFT 75bd CARB. (AB)
4352.3: ZRH, Fisantekraal Naval at 0330 w/CW Marker.(RP2)
4354: ZRQ, Cape (Simonstown) Naval, South Africa at 0200 in CW. (RP2)
4463: FTJ, Mossad, Israel, hrd in USB at 1900 // 2626.(TY)
4485: Czech Lady [S17], CZE at 1355 in USB 555 313 etc. //5028 kHz. Very poor on both freqs. (AB)
4610: SAM 204, 0 DV + 0, ETA Andrews 1040z, at 0726 in USB wkg Andrews VIP for pp to SAM Command. (JJ)
4630: Unid number stn, 5F x 2, OM in EE at 2105 in USB w/carrier. (LA) *(Probably the English Man/E6 — Ed.)*
4645: Tallin Volmet, w/Wx for north European cities in EE at 2040 in USB. (LA)
4665: KPA2, Mossad, Israel, hrd in USB w/interference to Tokyo Aeradio (4666 kHz) at 2015 //5629. (TY)
4670: Unid number stn w/1 thru 0/049 3x then 3x2x number pattern in AM, 0202 to 0227 fade out. (CH) *(The Counting Station/E5 – Ed.)*
4721: REACH 7042 wkg Offutt for 0800z wx and UHF freq: 372.2 at 0530. (JJ)
4780: MIW2, Mossad, Israel, hrd in USB at 1915 // 5530. (TY)
4996: RWM, TS stn Moscow, RUS at 2255 w/CW time and ID. (AB)
5049: Portuguese Police Dept. Barreiro, POR at 1858 in ARQ msgs about stolen cars. (AB)
5073: Number stn, 5F YL in GG, end w/"noil - noil - noil" x 2, at 2157 in AM. (LA)



RD, your column editor, still chases utility QSLs as time permits. This one was for the log seen under 5680 and included a very nice letter.

Jon S. Van Allen's shack — the SS Maui.

5090: Telecom Suva Fiji at 0740 in USB w/YL in Fijian. (IJ)
5091: JSR2, Mossad, Israel, hrd in USB at 1530 //7540. (TY)
5102: SRLU at 1624 in USB, no idea who SRLU and V6NK were but this is a known Russian Navy freq and the procedure was typically Russian (i.e. very good). In addition to the above, there is a series of wx forecasts ("prognoz pogody") daily at 1700 on 3192 and 4079 in parallel, also hrd very faintly on 3264. These are addressed to REO, which seems to be some kind of collective callsign. (JD)
5154: P Marker, Kaliningrad, RUS at 2241 in CW. (AB)
5239: Unid test tape: "je sui les emission. . . (follows reading list of the days of the week, announcement numbers from 40 to 49, reading list of the months) . . . de repeteur," in FF, for several days at 0845 to 0900 in USB. (LA)
5239.5: Italian military net, stations active: "toro," "venere 1," "zucchero," "ebano," "trota," — many rdo cks, rare messages in Italian at 0800 to 1500 in USB. (LA)
5376: German Lady [G07], RUS at 2110 in AM 742 742 742 1 achtung 973 60 973 60 5FG 000 000 ende. (AB)
5385: Military op's, 7DT clg K2R, 9OC wkg 7DT w/posn report, V2E clg O0S w/request of encounter but O0S is not in zone, other station active T7F and 6VW, hrd 2210 in USB in EE and SS, Spanish CG or Navy. (LA)
5431.5: P7X in CW at 0206 w/5L msgs and data burst xmissions. (TS)
5450: RAF Volmet, Wx for European cities in EE at 2235 in USB. Not in //11253 KHz. (LA)
5517: Sanaa, YEM at 2027 clg Addis Ababa re position of Air France 533. (EW) HSA-6408, CHS Aviation at 2346 wkg Tripoli; 3D-AFR, African Int. at 2357 wkg Khartoum; TAW-502, SkyAir at 2232 wkg Addis, Reg EL-JNS, B707 from Nairobi to Sharjah w/selcal BJ-GM; KJC-2295, Krasnoyarskavia at 2018 wkg Addis at FL350. All in USB. (IB)
5530: MIW2, Mossad, Israel, hrd in USB at 1815 //4780//6658.(TY)
5680: SRG 08 at 1229 w/Kinloss Rescue; SWALLOW 20 at 1229 w/same, Wessex helo w/5 POB enrt from RAF Aldergrove to RAF Valley; DRFB, FGS Homburg (M-1069) at 1310 clg Glucksburg Rescue; SRG 34 at 1330 in r/ck w/Kinloss; Swedish Coast Guard 587 at 1049 in r/chk w/Kinloss; Swansea Coastguard at 1056 in r/chk w/same; DRCC, FGS Habicht (P-6119) at 1236 clg Glucksburg for r/chk; DRAN, FGS Augsburg (F-213) at 1710 w/Glucksburg Rescue; Valentia Radio at 1446 clg Rescue 110. DH 247 (IAC helo) at 1609 w/Valentia, is nearing Finner, c/down this freq; DREW, *FGS Groemitz* (M-1064) at 1404 clg Glucksburg Rescue; Gotland Rescue at 1304 in daily r/ck w/Riga, Tallin, Kuresaare and Klaipeda Rescue; Falmouth Coastguard at 1539 w/Rescue 193. (AG) SAR Tuai Base, Search Teams 1, 2, 3, 5, 6, 9, Hastings relay and RNZAF Iroquois 311 (UH-1), New Zealand at 2000 searching for a missing tramper in the Urewera National Park. (IJ) RESCUE 12, RAF Nimrod, 206 Sqn at 0106 wkg Kinloss Rescue, passes sitrep re F/V *Sea Dog*, crew has abandoned ship into life rafts and vsl *Capricho* is att to take them aboard. All 18 aboard were rescued; RCC Malta, Armed Forces of Malta, Control Room, Luqa Barracks, Malta at 0532 wkg various units until after 0730 inc. IAOE, Italian Navy Minerva-class corvette, INS *Driade* (F-555); PC-29, Poss Armed Forces of Malta Maritime Commands Ex-Libyan Patrol craft-class 100 ton patrol boat "*C-29*"; IAOA, Italian Navy Minerva-class (lead ship) corvette, INS *Minerva* (F-551); and ICI, Italian Coast Guard, Rome 'Guardia Costiera Italiana' re SAR in the Mediterranean. (Ed.) All in USB.
5696: CAMSPAC Point Reyes, CA wkg the S/V *Ballerina* at 1940 re sick patient, later Honolulu advised vessel proceed Christmas Island, but plans for Navy Seals to parachute in with medical supplies on hold. CG RESCUE 1719 wkg CAMSLANT re flight op's normal at 2130, req how long KING 65 has been on scene. KING 65 is HC-130, later made pp re RTB time. (JD2) CG 6026 rep flt ops and posn to CAMSLANT at 0229. (MF) Various USCG assets on Great Lakes w/rare HF visit and test; NODK, USCGC Bramble (WLB-392) at 0208 wkg Group Buffalo NY w/radio ck, then wkg D-9 (District 9) Comms Center, Cleveland, Ohio, w/radio ck; NRUU, USCGC Neah Bay (WTGB-105) at 0230 wkg CAMSLANT after failing to raise any Great Lakes (Dist. 9) stns, NMN adv they are LC; NMP9, USCG Group Milwaukee, WI at 1913 wkg "D-9 Comms Center" w/rdo cks; NMD25, USCG Group Detroit, MI at 1915 wkg "D-9" w/same; NOI, AirSta Detroit, MI at 1923 clg D-9 Comms Center no joy, then wkg Group Detroit w/rdo ck; NMD, D-9 Comms Center, clg USCGC Sundew (WLB-404) no joy; ltr NODW, USCGC Sundew (WLB-404) wkg D-9 w/rdo ck. All in USB. (Ed.)
5714: Unid Volmet, wx for severe UTC times on corresponding coordinates to the Arabic peninsula, in EE, at 2230 in USB. (LA)
5717: TUSKER 18 w/Halifax Military monitored at 0155 reporting will stay overnight at Fredricton and contact RCC on the ground; Cape Radio passing wx and sea conditions to the Cutter Mohawk (WMEC-913) at 2156. Both in USB. (RP)
5737: ART2, Mossad, Israel, hrd in USB at 1930.(TY)
5841: SHARK 03 clg PANTHER at 0153 in USB. (MF)
5887.5: IMB2, Roma Meteo, I at 0051 in RTTY 50bd Synops. (AB)
6220: G5DU at 1730 in CW clg Y4O2, ZINA, 4EYK, CMI2, and BWH5. (JD)
6270: ULX Mossad, Israel, hrd in USB at 1930.(TY)
6286.5: UAPU, TKH Volgo-Balt 190 at 0730 w/CW msg to UCW4. (HOOD)
6309: Unid, Italian Navy broadcast I72I, heard at 1630 w/"AVURNAV"s (navigational warnings) addressed to RIFMCFC from RIFMCF; in RTTY 75/850. (JD)
6316.5: KHF, Guam w/sitor free marker, CW ID at 1031. (EW)
6320.5: 9VG, Singapore w/sitor free marker, CW ID at 1047. (EW)
6357: SAA, Karlskrona Naval, Sweden at 0230 w/CW marker.(RP2)
6385: CKN, Esquimalt, CAN in RTTY 75/850 w/DE CKN ZKR FI 2386 4167 6242 8315 12395 16555 22200 AR. (EW)

6389: CTP, Oeiras Naval, POR at 0115 in RTTY 75/850 w/tape.(RP2)
6498: PCD, Mossad, Israel, hrd in USB at 1900 //4270. (TY)
6501: NMN, USCG CAMSLANT Chesapeake, VA, w/ID and frequency list, wx N. Atlantic Ocean and Caribbean sea in synthesized male voice at 2230 in USB. (LA)
6550: D channel marker in CW at 0341. (TS)
6556: SUM-9783, Sumes at 2011 in USB wkg Calcutta, FL390, Reg. RA-86570. (IB)
6604: At 0628, wx report in USB, mentioned Churchill, Winnipeg, then cleared, Gander Radio out. (DG)
6637: At 0634, unid flight 322 enrt to Miami from JFK giving flt info to unid, then selcal ck "AQ-CL". (DG)
6640: San Francisco Aeradio wkg Hawaiian 465 at 0830 in USB w/pp to Medlink re passenger who was complaining of dizziness and arranging medics to treat her when they arrived in Pago Pago. (IJ)
6658: MIW2, Mossad, Israel, hrd in US at 2015 //5530.(TY)
6673: At 0638, San Francisco wkg various flights until 0645 in USB including American 072 to contact Oakland Center on 128.95, Air Canada 021 at 33N/150W. (DG)
6683: Andrews wkg PACAF 01 at 0612 in USB signing off. (IJ)
6715: McClellan coord sending data to Nightwatch 01 at 0247 in USB. (RP)
6724: RESCUE 193 at 1122 in USB w/r/ck w/Kinloss Rescue. (AG)
6730: RESCUE 252, RAAF P-3 at 0955 wkg AF Sydney w/pp RCC Canberra re Sydney to Holbart Yacht Race disaster; Canberra RCC at 1000 wkg RESCUE 253 who is reporting strobe light in the water, 37.02S/151.13E; at 1017 RESCUE 253 reporting smoke on the water, Canberra adv Navy helo SHARK 20 ETA 10. All in USB. (Ed.)
6739: Delta 5 Tango wkg Architect at 2213 in USB re wx forecasts for Cardiff and Newcastle. (RP)
6761: REDTAIL 01, on the ground at Elmendorf, wkg REACH 5238 re: AR schedule, altitude, etc at 0136 in USB. (JJ)
6784: SS Number Stn at 0309 in AM w/hum, YL reading 5F. (CT)
6815: "ORCA 1" (simplified c/s of "Orca 801"), Italian mil a/c taking-off from Catania-Fontanarossa (Sicily Island), wkg "ICI" (Rome MRCC) w/posn report, after clg ICI05 for same message, monitored at 1500 in USB in Italian. (LA)
6815.6: GANTSEC (Coast Guard Greater Antilles Section) wkg PAPA-3-JULIET for ops wx report at 0901. (JJ) N5C discussing ops w/GANTSEC at 0150. (MF)
6825: FAV22, French Army Mont-Valerien, F t 1543 w/CW VVV DE FAV22. (AB)
6873: RMP, Russian Navy, Kalingrad at 1015 w/P/L Wx to REO // 5881. (JD)
6880: Italian naval aero op's in Adriatic Sea between Italian and Albanian coasts for watch, hrd a/c "TAVOLA 5" and base stn "TAVOLA 2," in EE and Italian at 2130 in USB. (LA)
6968: LC6A at 2305 in CW w/5L gps (Cyrillic). (JD)
6992.5: Unid Telecom Pacific Islands at 0610 in USB w/YL and OM in a Pacific Island language. (IJ)
6993: SAM 201 at 2335 in USB, wkg Andrews VIP re ETA Andrews 0035z. (JJ)
7345: Kinloss Rescue at 1420 w/Rescue Whiskey India. (AG)
7524.5: STRIDER 53, USAF ASOC? at 2055 in USB wkg STRIDER 83 w/long counts, att to set up KL-43 link, switching antennas. (Ed.)
7540: JSR, Mossad, Israel, hrd in USB at 1545 //5019.(TY)
7583: Cuban YL/SS in AM at 0227 w/5F msg.(TS)
7595: Sanaa Aero wkg unid a/c w/info on posn and route, 1530 USB in difficult EE. (LA)
7596: 5UA46, Niamey, NGR in ARQ-M2 96/425 w/wx info. (EW)
7681: Extremely distorted Cuban YL/SS in AM at 0232 w/5F msg. (TS)
7850: KT, poss Mexican mil at 1250 in LSB wkg various OM/SS (no c/s used for outstations). C/S "KT" passed using EE phonetics. All other comms in SS. (DW)
7890: Two stns in QSO, the first w/spelling of message while the other repeats it all, end of every communication ends w/"respondee," in FF at 1035 in USB. (LA)
7895.8: RFVI, French Forces Le Port Reunion at 0220 in ARQ-E3 100/400 on C.I. REI w/CdV msgs. (DW)
7918: YHF, Mossad, Israel, hrd in USB at 1600 //5820//10648.(TY)
7969.7: WRD719, Sailmail Inc. at 0028 in PACTOR 100/200 w/calltape (callsign repeated over and over).(DW)
7987: FDG, French AF, in RTTY 50/400 usual test tape, 8-bit Baudot (2-bit "Stop" element) at 1310. (JD)
8001.7: RFHJ, French Forces, Papeete, TAH in ARQ-E3 96/425 idling only. (EW)
8030: English Man [E06], RUS monitored at 1500 in AM w/924 (R4) 605 605 81 81 5FG ends 00000. (AB)
8040: PACAF 01 at 0130 in USB, DV-3 + 1, ETA Andrews 0515z, wkg Andrews VIP for pp to SPAR Ops re: departure report. Also found on 11053 and 11059). (JJ)
8063: SAM 203, DV-2, (Madeline Albright) outbound Atlanta for Cape Canaveral, ETA 0645z, for the rescheduled Shuttle launch, clg Andrews VIP for a signal check. No joy at 0622 in USB. (JJ)
8122: EXMOUTH CONTROL at 1232 wkg GAWLER (HMAS Gawler, a Fremantle-class Patrol Craft #212) w/msg servicing. (DW) LABUAN, at 1012 clg CANBERRA CONTROL who adv that there are two priorities in the form of Aus. Coast Warnings. LABUAN advises will receive traffic at 1200Z sked.(SD) Both in USB.
8123: Russian speaking O/M at 1345 in USB w/long 5L grp msg using Russian Cyrillic phonetics. (RP)
8191.5: 9MR, Johor Bahru, Malaysia in RTTY 50/850 at 2330 w/test tape. (RP2)
8297: USAV *Runnymeade* (LCU-2001), AADS, wkg AAC2 (Harbormaster, Ft. Eustis) at 2047 passing departure report. (RP)
8300: New Star BC stn, TWN at 1500 in AM Numbers after flute tune. (AB)
8379.5: UAUQ, NIS Professor Shtokman at 0846 in ARQ msg abt completion of research ops near 54.01N 19.5E via SAB. (HOOD)
8399.5: J8LL7, M/V *Alexsa* at 0838 in RTTY 50/170 admin to "RYBFLOTINVEST", Kaliningrad, via UIW (is ex Aleksandr Ivanov, UMVN). (HOOD)
8408: LZGR, M/V OGRAJDEN at 0740 in CW w/ETA for Ravenna via IAR. (HOOD)
8425.5: ZSC, Cape Town Rdo, South Africa at 0200 w/sitor free marker, CW ID. (RP2)
8448: A9M, Bahrain Radio, Bahrain at 0115 w/CW marker.(RP2)
8454: UIW, Kaliningrad Radio, RUS at 1629 in RTTY 50bd Nav wngs. (AB)
8455: UVA, Gelelndzhic, UKR in CW at 2202 w/station marker. (EW)
8461: PKR, Semarang Radio, Indonesia at 1345 w/CW marker.(RP2)
8465: KPA2, Mossad, Israel, hrd in USB at 1515 // 6745. (TY)
8467.5: JJC, Kyodo News, Japan at 1500 in 60/576 FAX.(RP2)
8473.5: WLO, Mobile in FEC w/Miami Tropical Weather Outlook at 2100. (FH)
8514: XSQ, Guangzhou Radio, China at 1445 w/CW marker.(RP2)
8523: RJF94, Russian Navy at 1355 in CW w/continuous letters (Cyrillic) to RJC38 (same freq). (JD)
8549: UCE, Arkhangelsk Radio, RUS at 0904 in ARQ w/msg to UCOY, TKH Kapitan Fomin. (HOOD)
8568: FUV, FN Jibuti, Djibouti at 1840 in RTTY 75/850 w/RYRY and SGSG. (IJ)
8571: JNA, JMSA Tokyo, Japan w/CW marker at 1100. (RP2)
8601.3: ZLO, Waiouru Naval, NZ at 1345 w/CW marker. (RP2)
8605: XSX, Chi-lung Radio, Taiwan at 1200 w/CW marker. (RP2)
8634: VGT6, Indian Navy Bombay, IND at 0005 w/CW VVV marker.(AB) PPR, Rio Radio, Brazil w/CW marker at 0030. (RP2)
8641: MIW2, Mossad, Israel, hrd in USB at 1615 //6658. (TY)
8655: UAI3, Nakhodka Radio, RUS monitored at 0841 w/CW ID marker. (HOOD) Same at 1130. (RP2)
8677: CBV, Valparaiso Radio, Chile at 2310 w/120/576 FAX marked "Armada de Chile."(RP2)
8682: EAD3, Madrid Radio, Spain at 1845 w/CW DE EAD3. (IJ)
8685: IRM6, Rome Radio, Italy w/CW marker at 0200. (RP2)
8706: JOS, Nagasaki Radio, Japan w/CW marker at 1100. (RP2)
8725: Unid coastal stn, tape w/music theme of European Union anthem, present almost each day at 2000/2100 in USB.(LA) *(Would be HLS, Seoul Radio, S. Korea w/Beethovens 9th Symphony "Ode to Joy," repeated as a marker — Ed.)*
8737: 5BA42, Cyprus Radio, CYP at 2054 in USB w/voice mirror.(AB)

8764: At 0513, unid w/wx for Chesapeake, Virginia area. (DG) (*NMN, USCG CAMSLANT Chesapeake, Virginia — Ed.*) NMN, (Camslant Chesapeake) at 0105 w/Coast Guard vessel *Oscar 6 Victor* trying to coordinate Satellite/HF RTTY transmissions. (RP) Both in USB.

8770: 5AT, Tripoli Radio, Libya w/CW marker at 0030. (RP2)

8776: TELL TALE w/30 char. EAM (22NCVF . . .) at 0145 and 0245 in USB. (JJ)

8803: OHG, Helsinki Radio at 0749 in USB wkg UIVC, TKH Loukhi (ex Volgo-Don 5100). (HOOD)

8861: 9G-PHN, Ghana-123 (DC-10), at 2154 wkg Abidjan; Casablanca Aero at 0837 wkg Dakar w/r-checks. (IB)

8894: NTU-786, Century Aviation, at 2211 wkg Algiers, FL330; NTU-787, Century Aviation at 0637 wkg Niamey; Bellview-222 at 2354 wkg Niamey, FL330; RMV-125, Romavia at 1751 wkg Algiers, FL260; RA-46660, SAFT of Gabon, at 0723 wkg Niamey. All in USB. (IB)

8903: Tripoli Aero, LBY at 0732 wkg N`djamena; Nigeria-981 at 2216 wkg same, FL350; ALX-722, Alitaxi, at 2336 also wkg N`djamena; NGL-032, Nizhegorodskie at 2336 wkg same; Tokyo Aero, J, at 0745 wkg Japan Air-942; Gabon-143, VIP/Air Force flt, at 2346 wkg Luanda; LX-TLA, TransLux at 2157 wkg Bangui. All in USB. (IB)

8930: FST-615, Fast Air, at 1816 in USB wkg Stockholm. (IB)

8939: Moscow Meteo, RUS at 2047 in USB w/volmet. (AB)

8942: Air Micronesia-8805 at 1722 in USB wkg Singapore, FL330. (IB)

8948: Jet Airways-811 at 1623 in USB wkg Bombay, selcal MQ-CF. (IB)

8971: TRIDENT 759 clg 2NL, nothing heard at 2158; WAFER 757 passing spare grp to 2NL at 2210, both in USB. (MF)

8974: RNZAF Auckland and IROQUOIS 308 (UH-1), New Zealand, at 0510 re notify No3 SQN maintenance Hobsonville Base Op's, of arrival time 1830. (IJ) RESCUE 251 at 2111 clg AF Sydney req flight guard, adv QSY 6685 where contact made; at 2326 RESCUE 251 req pp w/RCC CANBERRA and adv QSY 8989. (SD) All in USB.

8989: RESCUE 252, RAAF P-3 at 0852 in USB wkg AF Sydney re SAR op's in Sydney to Holbart Yacht Race disaster. RESCUE 253, 254 also logged until later QSY to 6730. (Ed.)

8992: At 0145, Reach 8962 clg "Any radio" no response. (DG) Hickam w/pp for SAM 400 to Andrews at 0255. (MF) Portuguese speaking a/c Alpha Charlie 337 passes posn report to FAP (Portuguese Air Force) as 3732N/0856W at 0218. (RP) All in USB.

8998: Auckland Aeradio New Zealand and PIRATE 04 (LC-130) at 0330 in USB w/cleared block FL260 for FL330. (IJ)

9016: NIGHTWATCH 01 net at various times, at 1357 SAND BLADE authenticates and is checked in; at 1533 STUDIOUS w/same; at 1623 GOOD NEWS w/same; at 1633 INCLUSIVE also authenticates and is checked in. (DS2)

9031: ARCHITECT at 0831 in USB w/color-coded airfield state broadcast. (SD)

9084.8: French Forces, French Polynesia, in ARQ-E 72/110 idling at 0810 on. (FH)

9120: TROUT 99, DV-2 + 7, outbound Shaw, wkg Andrews VIP for pp to Air Force Operations at 0005 in USB, also found on 11220 and 13217. (JJ)

9130: EZI, Mossad, Israel, hrd in USB at 1900 // 11565.(TY)

9174.5: HBD20, MFA Berne, Switzerland at 0855 in ARQ w/5Lgs. (IJ)

9192.5: 5ST, Antananerivo in ARQ-E3 48/400 (TPA) to 3BZ in Bigara at 1240. (FH)

9240: PNGDF (Papua New Guinea Defense Forces) Patrol Boat net monitored at 0615 in USB w/DELTA ROMEO clg BRAVO 6 no joy. (SD)

9725: New Star BC station, TWN at 1440 in AM, numbers in progress. (AB)

10057: Northwest 921 at 0058 in USB wkg San Francisco ATCC w/posn. QSX to 13288 w/sc chk (CE-AL). (DW)

10066: Ankara Aeradio, Turkey, contact various a/c in USB at 1500. (TY)

10090: Tashkent Meteo, UZB at 1444 in USB, Volmet in EE. (AB)

10204: ASTROJET clg NIGHTWATCH 01 on Z190, nothing heard switching Z175 (9016) at 2327 in USB. (MF)

10286: PD-ISW, unid a/c, S at 1554 in USB w/pp w/Dutch ground stn, later clg Stockholm. (AB)

10393.7: RFFVA, Paris, F at 2022 in ARQ-E3 200/425 Idling. (EW)

10444: U.S. Tuna Fishing Boats at 0605 in USB, 2 OMs w/chit-chat. (IJ)

10584: Fapsi Moscow, RUS at 1425 in RTTY 75bd Msgs to KUL on link 00142. (AB)

10648: YHF, Mossad, Israel, hrd in AM at 1600 //5820//7918.(TY)

10780: RELIEF 306 wkg Cape Radio for pps re: 0130z wx for Little Rock and Jackson at 2340 in USB. (JJ)

10822: Unid, presumed French diplomatic, 144 bd FEC-A; only occasional opchat heard at 1345. (JD)

11000: RIW, Russian Navy, at 1300 clg RAG43 and RJQ55 in CW, no contact. (JD)

11055: Offutt w/EAM traffic for MAINSAIL: 5MZXLO at 1804 in USB. (JJ)

11080: Syria SANA press; at 1800, end of Arabic xmsn, and beginning of FF in RTTY 50/500. (JD)

11085: RFGW, MFA Paris France at 0740 in FEC-A 192/400 w/5Lgs. (IJ)

11175: At 0225, LT3H clg mainsail, Ascension att to ans but heavy tfc. Contact made at 0230 w/pp; at 0226 REACH 5241 wkg Hickam w/pp, adv inbound w/ETA 0415, try to gas 'n go, req if cargo is ready. (DG) At 1620, GOOD NEWS wkg Andrews w/rdo ck. (DS2) Offutt w/pp for ASTRA 91 to Furious at 1929. (MF) All in USB.

11181: Hickam wkg PACAF 01 at 0632 w/pp to 15th CP, maintenance status Alpha 2. (IJ) PACAF 01, outbound Andrews for Hickam, ETA 0830z, wkg Hickam Global re: terminating service w/Andrews VIP. At 0611, (JJ) NIGHTWATCH 01 w/WELL BORN at 1943 talking about 6-character msg for ONE TOUCH. (RP) All in USB.

11187: INCLUSIVE wkg GOOD NEWS (presumed USN on ch. CB) w/comms cks and data in RED and ANDVT modes at 1734 in USB. (JJ)

11220: Andrews wkg SAM 204 at 0552 w/pp to SAM CP, re DIP clearances for UAE. (IJ) SPAR 06 at 1718 wkg Andrews VIP for pp to unid re: planned AR at around 1830z. (JJ) EXECUTIVE 1 FOXTROT coord w/Andrews at 1950. (MF) At 1725, SAM 202 wkg Andrews for rdo ck and wx for KSPI. Also interplane w/SAM 60206 re wx at Andrews. 202 says wx is wet and snowy, followed by pp to Andy CP with off times and en route info. At 1733, SAM 60206 clg Andrews for request, but SPAR 65 on w/pp via Andrews, pp at 1735 for Langley Dispatch, re chance of bad wx divert to Langley. Followed by pp to Andrews metro for wx conditions at possible landing sites. (RM) All in USB.

11232: DARK STAR MIKE (AWACS) wkg Trenton Military at 1248 in USB w/pp to BEST DEAL and NIGHTWATCH 01 w/authentication's and w/HUNTRESS (Northeast ROCC, Griffiss AFB, NY) confirming start of Battle Staff format training at 1500. (*Griffiss AFB is closed, HUNTRESS loca. in Rome, NY is now the NORAD NE SAOC or Suctor Air Op's Center — Ed*) (RP)

11235: REACH 5 ECHO 1 at 2334 wkg AF Sydney req pp to RICOPS and adv to wait, then to QSY 9007. REACH 5 ECHO 1 at 2355 wkg AF Townsville, req pp and adv to QSY to 11156. Both in USB. (SD)

11247: RAF, ARCHITECT, England and ASCOT 505 at 0900 in USB w/Selcal watch out. (IJ)

11270: Russian Man [S25], RUS at 0820 in AM w/615 615 615 6444 6604 00000. (AB)

11300: TUI147, Tuninter at 1536 wkg Cairo, FL 310; RFF-8052, unid, at 2303 also wkg Cairo; STA-101A, undi at 0531 wkg Sana`a (IB) "I 303" wkg Mogadishu Aero in EE at 2230, freq very active 1500 to 2200. (I A) Both in USB.

11306: Unid flt at 0330 wkg stn re wx conditions. (DG) (*Probably Lima Flt Support, Peru — Ed.*)

11318: Samara Meteo, RUS at 1045 w/Volmet; Tyumen Meteo, RUS at 1050 w/same; Syktyvar Meteo, RUS at 1100 w/same; Jekaterinburg Meteo, RUS at 1105 w/same; Novosibirks Meteo, RUS at 1110 w/same. All in USB. (AB)

11342: Dominican Air Force a/c DAF041 wkg New York ARInc w/pp to SS/YL re flight plan to San Jaun, Puerto Rico, Miami, and Curacao. (RP)

11345: ADH-8328, Air One, at 1638 in USB wkg Stockholm R. w/selcal check FJ-LS. (IB)

11387: Singapore Volmet at 2322 in USB w/aviation wx.(DW)

11418: RMP, Russian Navy, Kaliningrad, RUS at 0950 in CW w/msgs in progress, don't know to whom. (JD)

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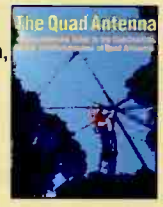

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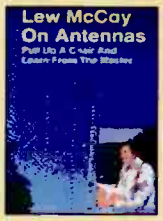

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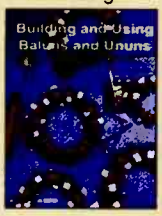

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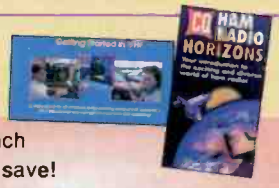

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11460: SPAR 66 on F-295 coord landing time w/Andrews at 2115 in USB. (MF)
11521.9: RFVITT Dzaoudai, Mayotte, Comoro is in ARQ-E 96/400 (TTT) to RFVI, FF msg at 1425. (FH)
11536: HMF49 Pyongyang in RTTY 50/250 KCNA Nx in EE at 1240. (FH)
11565: EZI, Mossad, Israel, hrd in USB at 1430 //13533. (TY)
11634: Ascension wkg REACH 9 Sierra 2 at 0440 in USB w/pp. (IJ)
12193: FAPSI Moscow, RUS at 1410 in RTTY 75bd Msg to KUL. After callup, nothing happened. (AB)
12484.5: LZHP, M/V Geo Milev 0802 w/ARQ msg to Varna via LZW (14814 dwt cont carrier). (HOOD)
12538.5: UUUZ, TKH Tanya Karpinskaya at 0829 in RTTY 50/170 msg (in EE, eta for Larwin, Greece) to Kaalybye Shipping, Odessa and to Chief R/Off Volkov at MORFLOT, Izmail via USO5. (HOOD)
12573.5: UAVO, Kapitan Kononov (AB-0595) at 0807 in RTTY 50/170 admin from Km Gladkiy to RKLM. (HOOD)
12580: ZLA, Aramui, NZ, w/FEC Tfc List at 0950. Said SAB on Channel 228 has been eliminated and replaced w/19708 freq (Shore) and 18847.5 (Ship). (FH)
12591: VRX, Hong Kong w/ARQ Free Signal, CW ID at 1240. (FH)
12595.5: UDB2, Kholmsk Radio 0858 ARQ/CW idler marker. (HOOD)
12662: 7TF8, Boufarik Radio, ALG in CW at 0853 w/stn marker. (EW)
12669: LOR, Peurto Belgrano naval at 0015 in RTTY 75/850 wx, etc. (RP2)
12675: SAA, Karlskrona Naval at 1315 w/CW marker.(RP2)
12714: UCE, Arkhangelsk, URS in FEC msg to ucmq in Russian. (EW)
12729: L2A, Buenos Aires Naval, Argentina at 0120 w/CW Navarea Warnings.(RP2)
12735: URL, Sevastopol Radio at 1558 w/CW crew TG to 3FVB4, TR Frio Adriatik. (HOOD)
12747: VLB2, Mossad, Israel, hrd in AM at 1645 //14750. (TY)
12749.9: CWA, Cerrito/Punta Carretas at 2300 w/CW marker.(RP2)
12753: CKN, CF Vancouver in RTTY 75/850 Relaying wx reports and forecasts from Anchorage, Alaska at 1435. (FH)
12780: D3E61, Luanda Radio, Angola at 2045 w/CW marker.(RP2)
12780.5: 9AR, Rijeka Radio at 1601 w/CW tfc list. (HOOD)
12788: NMG, USCG New Orleans, LA at 1545 in FAX 120/576 wefax. (RP2)
12823.5: CTP, NATO Lisbon, Portugal at 1835 in RTTY 75/850 w/NAWS DE CTP. (IJ)
12829.5: XFM, Manzanillo Radio, Mexico at 2200 w/CW marker. (RP2)
12831: 3BM, Mauritius Radio at 1610 w/CW tfc list and service anns (daily wx at 0830 and 1630). (HOOD)
12840: VTP, Vishakhapatnam Naval, IND in CW at 1125 w/stn marker. (EW)
12843: HLO, Seoul Radio, S. Korea at 0100 w/CW marker. (RP2)
12849: ZSJ, Cape (Silvermine) Naval, South Africa at 2230 w/CW marker. (RP2)
12903.5: RBSL, Bombay Naval, IND in RTTY 50/850 w/RY SG DE BNR BNR. (EW)
12921.2: MGJ, RN Faslane, G at 1447 w/VFT 75bd CARB. (AB)
12942: RKLM, Arkhangelsk Radio at 1618 w/CW ID marker (to "4LY" QSX 12551.5/16735.5). (HOOD)
12967: UJE, Nizhny Novgorod Radio monitored at 1030 w/CW currency exchange info (General msg to masters of all Volgotanker Co vsls). (HOOD)
12969: XSV, Tianjin Radio, China at 0200 w/CW marker. (RP2)
13083: KMI, AT&T High Seas Radio California at 0011 in USB w/NOAA maritime wx broadcast. (DW)
13191: LZW, Varna Radio, BUL at 1208 in USB w/Tfc list. (AB)
13200: Grissom ARB (Indiana) in readability checks w/Andrews at 1753 in USB. (RP)
13220: Unid N.African/Middle East LDOC stn at 1815 in USB, OM in AA w/pp. (IJ)
13227: AUSSIE 668 at 2245 in USB wkg AF Sydney w/ops nml msg.(SD)
13282: Auckland Volmet at 2325 in USB w/aviation wx. (DW)
13306: Santa Maria Radio at 1632 in USB wkg Speedbird 4507 for psn rpt. (HOOD)
13354: YL op wkg different a/c, adv 11396 primary in USB at 1910. (CH) *(Prob. NY on this NAT-E MWARA freq — Ed.)*
13387: CLP7, Embacuba, Brazzaville, Congo Republic at 2021 in RTTY 50/500 w/relay of MINREX tfc to unid Embacuba. (Ed.)
13392: Unid at 1015 in CW w/5L gps in Cyrillic. (JD)
13447: Unid two-channel Piccolo at 1800, GYU listed on this freq. (JD)
13533: EZI, Mossad, Israel, hrd in USB at 1530 //11565. (TY)
13956.5: Tunis? in FEC w/5L to VCI (Presumably an embassy) in FF at 2200. (FH)
13963: HBD20 MFA Berne, Switzerland at 0815 in ARQ w/5Lgs.(IJ)
13977.7: RFFP Paris in ARQ-E3 200/400 (PQB) to RFFVAD N'Djamena. (FH)
14356: MKD, RAF Akrotiri, Cyprus at 1600 w/two-channel Piccolo; lots of opchat on the engineering channel, but always (as usual) "de MKD" only, no indication of whom he was wkg. (JD)
14397.5: SHARES Coordination Net at 1644 in USB w/AFA3HY (Shawnee, KS) as net control w/AAR1GAD (Army MARS); NNN0EGY (Navy/Marine MARS, WA); NNN0ZZR (Navy/Marine MARS); KBW49 (Nevada); KJK77MA (Palmdale, CA); WUG3 (Army Corps of Engineers, Vicksbug, MS); DLA303 (WA); AAR1DD (Army MARS, CT); Calif Civil Air Patrol stns Yosemite 68, Yosemite 200 and Yosemite 723. (RP)
14441.5: NNN0CEQ, USCGC Harriet Lane (WMEC-903) at 2307 in USB wkg NNN0UTO, private USN MARS Sta, QSY to 14477 then to 14470. (DW)
14486: P6Z, MFA Paris, F at 0750 in FEC-A 192/400 w/INT QSA INT QTC A TOI. (IJ)
14487: Lincolnshire Poacher, CYP at 1300 in USB Id 97324. (AB)
14615: Ascension wkg REACH 9 Sierra 2 at 0435 in USB w/QSY to 11634. (IJ)
14707: Presumed JPA INTERPOL Tokyo, Japan at 0700 in ARQ w/ encryption. (IJ)
14750: VLB2, Mossad, Israel, hrd in USB at 1445 //12747//17170. (TY)
14761.5: NNN0NZW/3O1 Navy MARS Chesapeake, VA in ARQ w/msg at 2050. (FH)
14931: 8BY, French Intelligence, France sending "VW 8BY followed by 3FG's separated by a slant bar in CW at 1840 //7668// 10248// 12075. (TY)
14975: P6Z, RFGW Paris in FEC-A 192/380 to YL4 3P SRZ DE RFGW then 5L msg at 1405. (FH)
15016: YL repeating long series of letters/ numbers in phonetics/ telling units to stand by in USB at 1905. (CH) *(A GHFS station sending an EAM msg — Ed.)*
15027: REACH RELIEF 1501 at 1333 in USB w/LOBO (Howard AFB) re op's normal. At 1334 a/c PECAN 1015 clg LOBO. (RP)
15088: CAMSPAC Pt. Reyes wkg NOVEMBER-9-ECHO w/periodic check-ins re: ops at 2200 in USB. (JJ)
15624: YL/EE, Cherry Ripe nbr stn heard in powerful USB at 1000 //10452 //17499. (TY)
15880: GYU, RN Gibraltar at 1600 w/two-channel Piccolo; like MKD, gave no indication of who the other station was. (JD)
15962: IMPLICATE, and others, wkg NIGHTWATCH 01 in net comms at 1925 in USB also found on 11494.(JJ)
15980: EZ12, Mossed, Israel, hrd in USB at 1330 //17410. (TY)
15994: FDY, Orleans Fr Air Force in RTTY 50/400 RY's w/TEST DE FDY, le brick, new frequency at 1450. (FH)
16086: YL/EE, the Counting nbr stn hrd at 1100 in AM, was able to find parallel freq (21811 kHz) tonight it's easy to confirm a parallel CH at the test tone transmission before nbrs. More than 5 MHz separation! (TY)
16372: Unid Indian diplomatic at 1245 in RTTY 50/850; msg "from Zahidan to Foreign, New Delhi." (JD)
16716.5: UDEO, TKH Marshal Rokossovskiy at 0841 in ARQ w/psn rpt from Km Artemev to UFN. (HOOD)
16801.5: UEMP, RTMS Malta at 0848 in RTTY 50/170 admin to UIW. (HOOD)
16802.5: UEYJ, RTMS RUSSKOYE POLE tuned at 0850 in RTTY 50/170 crew TGs to UIW. (HOOD)
16808: SPA, Gdynia Radio at 0900 in FEC w/tfc list. (HOOD)
16811: CBV, Valparaiso Radio, CHL w/sitor free signal, CW marker at 0931. (EW)
16813: UAT, Moscow w/ARQ at 1420, ann on 22407 but not there to us. (FH)
16898.5: XSG, Shanghai, CHN w/ARQ Ready Signal, CW ID at 1348, tfc list in FEC monitored at 1350. (FH)
16910: HLS, Seoul Radio, KOR at 1021 w/CW stn marker. (EW)
16932: 7TF10, Boufarik Radio, Algeria monitored at 1855 in CW w/CQ DE 7TF. (IJ) Same at 2000. (RP2)

16951.5: 6WW, French Navy Dakar, SEN at 1834 in RTTY 75bd Voyez le brick. (AB)
16986: CTP, Oeiras Naval, Portugal at 1915 in 75/850 RTTY NAWS marker.(RP2)
17066: UAT, Moscow Radio testing FEC, ARQ and CW 1450-1500. (FH)
17074: LGX, Rogaland Radio, Norway at 1600 w/CW marker. (RP2)
17170: VLB2, Mossad, Israel, hrd in USB at 1445 //12747//14750. (TY)
17350: VRX, Hong Kong Radio, CHN in USB at 1017 w/man repeating words over and over in Chinese. (EW)
17410: EZ12, Mossad, Israel, hrd in USB at 13533 //15980. Another day VLB2, Mossad, Israel, hrd at 1045. (TY)
17432: DFZG Belgride in RTTY 75/400 Encryption to many embassies, ends at 1434, Embassy callsigns were not encrypted, all three-letter. (FH)
17994: Trenton Military wkg Canforce 399 at 1425 in USB. (RP)
17995: Aircraft speaking mixed FF and African language at 1315 in USB passing posn report to unid ground control. (RP)
18018: ARCHITECT at 1350 in USB w/wx conditions in Atlantic and North Atlantic areas resulting from Tropical Storm Nicole. (RP)
18042.7: RFTJD Libreville in ARQ-E3 192/400 (JDJ) to RFTJ Dakar 2200, Dakar on 18720.8 replies. (FH)
18515: CIA Counting station at 0615 in USB, YL w/numbers. (IJ)
19046.7: YKS MFA Cairo in ARQ new AA to embassy at 1600. (FH)
19131: ATLAS and unid pilots discussing KING AIR and TWIN OTTER. (MF) Flint 830 reporting to Atlas (DEA/Customs Facility) at 2030 that he will stay at Jaguar 200 (Panama City, Panama) for an hour then on to final destination Lima 101 (Unlocated). (RP) Both in USB.
19692.5: ZSC, Capetown Radio, at 1807 w/CW Marker. (AB)
19731.7: PCW1, Den Haag w/ARQ-Free Signal, CW. Quite strong at 2110. Last logged on 19731.5. (FH)
19755: EHY, Madrid Radio, E at 1452 in USB w/pp. (AB)
20011.7: CLP1 Havana in RTTY 50/481 SS at 1450. (FH)
20012: ARIA 1 wkg ARIA Control in net comms at 2359 in USB re: RTB. ARIA 2, and ABNORMAL 20 also on freq. Also found on 15793 and 19640. (JJ)
20265: Unid two-channel Piccolo at 1800 (presumably MKK, listed here). (JD)
20828.3: CLP7, Brazzaville Embacuba R.D. Congo in RTTY 50/490 w/three msgs SS and 5L to Minrex 202 at 1515. (FH)
20897.1: CLP7, Brazzaville in RTTY 50/400 5L SS msg, be 5L to Minrex, Havana "Entrega immediata" at 1540, then relay of msg from Embacuba Nigeria to Minrex, Havana. (FH)
21811: YL/EE, the Counting nbr stn hrd at 1100 in AM, also on 16086 kHz. (TY)
22108: Cherry Ripe, GUM at 1300 in USB, id 79161.(AB)
22382: NMC, USCG Point Reyes, CA, USA ARQ free w/CW marker at 0341. (EW)
22550.3: MGJ, London? in RTTY 75/325 channel availability at 2110, sometimes signs GYA. (FH)
22731: MGJ, Faslane Naval at 1645 in RTTY 75/250.(RP2)
23102: Presumed DFZG MFA Belgrade Yugoslavia at 0625 in RTTY 75 /500 w/JE QSL 38-39 NE TREBA PONOVO TO QSL? PIJES KUFU? (IJ)
23461: Cherry Ripe, GUM at 1108 in USB in progress. Never heard so clearly! (AB)
24851.7: RFLO Ft de France in ARQ-E3 192/400 (BFL) to Provence for distribution of msgs for stns in France. (FH)
25350: U.S. Customs enciphered voice (Parkhill) at 1706. (RP)
28196: VE7MTY Vancouver, BC, Canada at 1610. (BF)
28270.5: W3HH/B Pittsburgh, PA heard at 1602. (BF)

This months contributors: (AB) Ary Boender, Netherlands; (AG) Alan Gale, UK; (BF) Bill Farley, New Mexico; (CH) Chris Halinar, Kentucky; (CT) Clarence Thompson, Texas; (DG) Dan Gillespie, Michigan; (DS2) Dwight Simpson, Wisconsin; (DW) David C. Wright, Texas; (EW) Eddy Waters, Australia; (FH) Fred Hetherington, Florida; (HOOD) Robin Hood, UK; (IB) Ian W. Baxter, UK; (IJ) Ian Julian, New Zealand; (JD) John Doe, UK; (JD2) Jim Deardorff, Ohio; (JJ) Jeff Jones, California; (LA) Lupo Alberto, Italy; (MF) Mike Fink, Ohio; (PP) Patrice Privat, France; (RM) Roland R. McCormick, Georgia; (RP) Ron Perron, MD; (RP2) Ray Prestridge, Texas; (SD) Simon Denneen, Australia; (TS) Tom Sevart, Kansas; (TY) Takashi Yamaguchi, Japan; and (Ed.) ye editor in Ohio. ■

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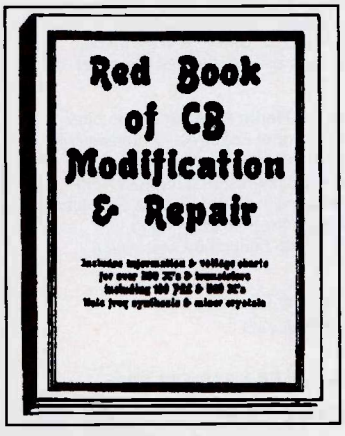

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Known as the *Red Book of CB Modification & Repair,* the book lists specific makes and models, providing explicit instructions about which component to change or modify, which wire to cut and which screw to adjust. It includes information charts for hundreds of chips and transistors, including 100 PLL and VCO ICs. It even shows frequency synthesis and mixer crystals, plus what's needed to know about power supplies and regulators, audio and modulation circuitry, clarifiers, sliders, talkback, transmitter and receiver troubleshooting, and more.

The *Red Book of CB Modification & Repair* is $24.95 (plus $5 s/h, $7 to Canada). Residents of New York please add $2.47 tax. Visa/MC welcomed. Order it from CRB Research Books, Inc., P.O. Box 56, Commack, New York 11725 or phone 516-543-9169 or check out their fully secure Website at <http://www.crb-books.com>.

CIRCLE 102 ON READER SERVICE CARD

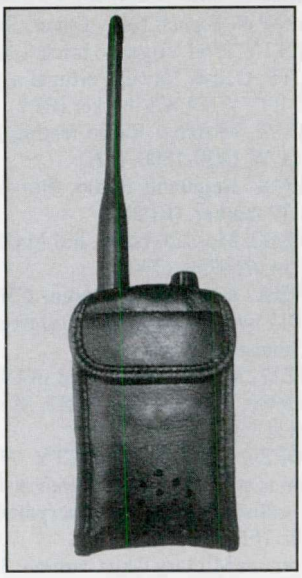
Emergency Comms Guide

The Guide To Emergency Survival Communications, by Dave Ingram, is a chunky 182-page handbook devoted entirely to advising you how to assemble and operate a monitoring or communications station during natural or other wide-area emergency situations, including severe weather or earthquakes.

During such times, the ability to send and receive timely messages could be lifesaving. This informative book discusses amateur radio, CB, scanning, SWLing, satellite comms, weather radio, broadcasting, and other vital aspects of information dissemination and exchange under extreme conditions. It explains special power and antenna considerations that must be dealt with, including back-up protection.

You'll learn everything from equipment selection and installation to special techniques for staying in operation against all odds. Do you live in Tornado Alley, along the path of hurricanes or in an area where there have been earthquakes or volcanoes? If so, you should give thought to this comprehensive and well prepared book. No matter how much you think you already know about this topic, this book by Dave Ingram will surely increase your knowledge.

The Guide To Emergency Survival Communications is $19.95 plus s/h from Universal Electronics, Inc., 4555 Groves Road, Suite 12, Columbus, Ohio 43232. Phone 614-866-4605.



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The pouches retail for under $20. For a distributor nearest you, call 800-206-0115 or contact Cutting Edge Enterprises at 1803 Mission Street, Suite 546, Santa Cruz, California 95060 or E-mail the company at <cee@cruzio.com>.

CIRCLE 103 ON READER SERVICE CARD

Tuning In *(from page 4)*

be "officially" considered by the FCC, but they are, nonetheless, *very* important. Be sure to drop a line to the Office of The Secretary, Room 222, Federal Communications Commission, 1919 M Street, NW, Washington, DC 20554. Title your letter "Comments on LPFM" at the top of the page. Remember, local people and community radio stations are good for America. Let's get this one successfully through the bureaucracy!

Always Under Construction — Our New Electronic Address!

No, we're not talking about some of the roads here in the Northeast — always decorated with orange barrels and cones, but rather our *Pop'Comm* Website that's recently undergone some big changes. We're now online at a new location — **<http://www.popular-communications. com>** with lots of new, exciting information, including our regular monthly preview of each issue, along with a multitude of special sections; frequencies, tips, Hot News, and links. Also new is our *secure* online ordering; you can subscribe to *Pop'Comm*, renew your subscription (or subscribe to other CQ Communications, Inc. publications), order books, and send E-mail directly to our circulation department.

If you've got any ideas for our Website, or have a link you'd like to see included, drop us a line at <popularcom@aol.com>. Of course, while we can't link to everyone's club page or personal Website, we want to make our site more than just a Web presence, so send us your thoughts. Remember: Your ideas are important to us — but the only way for us to know how you feel is if you send a letter!

ACARS Downlink And Computer Corner News

Both Bob Evans and Ed Griffin, our "ACARS Downlink" and "Computer Corner" gurus, respectively, have done a superb job with their columns — giving us news, reviews, and information about these timely topics in *Pop'Comm*. But as we've said before, times change. Bob and Ed are leaving our magazine; Bob for health and personal reasons, and Ed because his full-time career has him on the road more than he's home, making it impossible for him to do his column. They'll both be missed, and we certainly wish them well.

After a lengthy all-night conversation with our on-call psychic, we at the — as writer Bill Price would say — *Pop'Comm World Headquarters Decision Department*, have decided to incorporate more ACARS and computer/Web information in Ken Reiss' monthly "ScanTech" column. Boy, was he happy! Well, not quite as excited as he'll be when the brand new manual typewriter arrives on his doorstep! And while you won't see the same *extensive* coverage of either of these topics, Ken will cover each as space and your letters warrant.

In the coming months, we've got plenty of great articles coming your way, including in-depth scanning articles for rail and racefans, "how-to" construction articles, including using solar energy to power your equipment, and much, much more. We'll also be reviewing Uniden's new BC245XLT scanner that follows both Ericsson and Motorola trunked systems, new CB rigs and antennas, and shortwave receivers and HF antennas, too!

Remember, your letters, shack photos, and copies of QSLs are always welcome at *Popular Communications*, 25 Newbridge Road, Hicksville, NY 11801, or via E-mail at <popularcom@aol.com>. ■

Readers' Market

Advertising Rates: Non-commercial ads are 30 cents per word, including abbreviations and addresses; minimum charge $6.00 per issue. Ads from firms offering commercial products or services are $1.00 per word; minimum charge $20.00 per issue. Boldface words are $1.20 each (specify which words). Leading key words set in all caps at no additional charge. All ads *must be prepaid in full* at time of insertion; a 5% discount is offered for prepaid 6 time insertions. All ads must be typewritten double spaced.
Approval: All ad copy is subject to Publisher's approval and may be modified to eliminate references to equipment and practices which are either illegal or otherwise not within the spirit or coverage scope of the magazine.
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LORD WYATT COMMUNICATIONS IMPORT/EXPORT RADIO HOBBYIST CATALOG—Everything for the CB & Radio Hobbyist—from SOUP TO NUTS—send $5.00 to LWC, P.O. Box 30128CBPJ, Brooklyn, NY 11203-0128 (718-789-7329 press ext 1).

TOP DOLLAR PAID. WANTED. Used (but not abused) Regency MX-3000 scanners (30 channel communications receiver) for back-ups and parts bins. Check your shack and vehicles for surplus or unused units (MX-3000's only). Advise condition and price wanted to Jan D. Lowry, 28243 Royal Road, Castaic, CA 91384-3028. (No calls please).

CB and 10 METER Equipment: Ranger, Galaxy, Mirage, Super Star, and Much More! Send 3 stamps to EDS, P.O. Box 343, Howell, NJ 07731.

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WANTED: CB RADIO EQUIPMENT—I'm looking for all types of old/vintage CB radios, amps, manuals, magazines, mics, etc. **PLEASE CALL** anytime. **WALTER** 818-297-7249.

PRISON LIBRARY seeks donation of a recent edition of the World Radio TV Handbook to be made available to all. Send to M.J. Wilson, Librarian, Complex 2 Library, SRCI, 777 Stanton Blvd., Ontario, OR 97914-8335.

NEED HELP! RadioShack can't repair/replace band switch and FET amp on analog geezer's like-new Realistic DX-200. Can anyone? Joseph Burgess, 407 Hiawatha, Frankfort, KY 40601, (502) 695-3016.

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The Dayton Amateur Radio Association (DARA) is now accepting applications for their annual scholarship awards. The DARA Scholarship Program is open initially to any FCC licensed amateur radio operator graduating from high school in 1999. There are no restrictions on the course of study planned by the student, nor does he/she need to be planning on a four year baccalaureate degree. However, schools awarding associate degrees or any technical institution selected must be accredited. The awards will be made on a non-discriminatory basis and will be based on a combination of factors, including, inter alia, financial need, scholastic achievement, contributions to amateur and community involvement. The decisions of the DARA Scholarship Committee are solely at the discretion of the Committee and are final. The number of awards made and the amount of an award shall be at the sole discretion of the Scholarship Committee and the Trustees of the DARA Scholarship Fund but will not exceed $2,000.00 per scholarship. Applications can be had by sending a SASE to: DARA Scholarships, 45 Cinnamon Ct., Springboro, Ohio 45066. The deadline for the submission of applications is June 15, 1999.

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The Loose Connection

RADIO COMMUNICATIONS HUMOR

BY BILL PRICE, N3AVY
<wprice@mnsinc.com>

And Kevin Lives To Tell The Stories . . .

Ever since loyal reader Mike Cathcart volunteered that interesting information about a forbear saving Fort Sumter with his courage and communication skill, we at *Pop'Comm* world headquarters' Humor Division (near the famous Remington, Virginia "numbers station") have begun to receive interesting communications stories from around the world.

I'm enjoying them so much that I'm considering the creation of a *Normie* award — a gold statue similar to an *Oscar* or *Emmy* for the reader who submits the most outrageous communications incident in the tradition of my good friend Norm (his real name is Ed). I'm sure our editor, Harold ("I'm *frugal*, not *cheap!*") Ort, will authorize a major expenditure to commission a sculptor, ("See if you can find an old trophy in a thrift shop"), and have a series of awards cast in 14K gold ("*Plated*, dammit, *plated!*").

This month, my hat is off to reader Kevin Moon, who E-mailed me with some tales that would curl Norm's hair (or certainly singe the edges). Though Kevin now lives on our left-coast home, he spent his youth in South Africa, where the house current (the "mains") are 220 Vac instead of our wimpy 117 Vac. I have been "bitten" by both, and I can tell you that 220v will put manners on anyone who survives it.

Kevin said that the January '99 "Loose Connection" brought back memories of his earliest experiences with radio when he was just 13 and had borrowed a book containing plans for a crystal radio set. He built it carefully, connected a good antenna ("aerial") and ground ("earth"), and soon heard his first signal — a rather faint one, since he didn't live near a strong station.

"I was hooked that very minute," he told me, "and from that day forward, I've been obsessed with receivers and transmitters of any kind." I admire that in a person.

In case you feel that your own work space is limited, Kevin's only work space was his bed — hardly a good place to solder. His tender age — he was just in his early teens — contributed to more than one incident that could have been his last. Let him tell you.

"I laid a zip-cord with bare ends exposed — on my bed. It was lying right on top of the covers. After a few minutes, I'd forgotten about it, and sat right on the cord, with only a pair of shorts. 220 volts will shoot a person a bit farther than the 117v we have here. I missed the open window and hit the wall. It wasn't the last time I got "bitten" by 220 volts, but it certainly left an impression on me. By the way — a pair of shorts makes a pretty poor insulator."

Like me (and probably like many readers), Kevin had his share of problems with soldering irons — particularly in his younger days.

"I didn't have a stand for my soldering iron back then. I would set it on a plate or saucer I'd pilfered from mother's cabinet. I often kneeled on the floor while using the bed as my workbench, and during the warmer weather, I worked barefoot."

"A person usually has to step on a hot soldering iron only once. So it was with me. I had enough callous on my sole that I smelled flesh burning a few seconds before I felt the pain. The furrow in my left foot gave me additional traction on that side, which kept me turning slightly to the right when I ran barefoot that year. Now, I sometimes go for months without looking at the bottom of my feet. When I do see that scar, though, I remember the pain as if it were happening today."

Long before camcorders existed, Kevin missed a chance for "South Africa's Funniest Videos" by failing to record a "Golden Moment in radio." His dad had gotten him an amplifier kit for Christmas, and true to form, he had made a wiring error somewhere before completion. He checked everything, and the error went undetected. When he connected the unit to the 220v "mains," he watched, amazed, as the base of a tiny 128 tube glowed red. That's the *base*, not the filament! Before he could think of what to do, the tube — also glowing red by now — exploded and propelled the very top of the 128 *into* Kevin's waiting nostril!

"I know it sounds funny now, and I can look back and laugh, but it sure hurt, and for a long time, too!"

While he was still young enough to do entertaining things for his friends, Kevin apprenticed in the Radio Communications Department of South African Railways. During his off-time, he was helping a friend, Marcus, build a 100W audio amplifier from a kit. (*I'm not sure this was a wise thing! — Ed.*) This time it was Marcus who suffered, but carried no lasting scars from the incident.

Marcus had also made a wiring error while completing the assembly, and that error also went undetected. Marcus told Kevin he was ready to try it out, and Kevin switched the unit on. Marcus first saw a little wisp of smoke, then a whole lot of smoke all at once. "Shut it off!" he yelled, and Kevin obligingly pulled the plug from his soldering iron as Marcus watched what looked like a pile of leaves in the fall. It had just occurred to Kevin that he may have pulled the wrong plug when a loud "bang" startled them both. When Kevin opened his eyes, Marcus looked like the loser of a cartoon-fight. A large electrolytic capacitor (paper, foil, and wax) had exploded, leaving Marcus decorated in lovely paper and tiny shreds of foil.

"It looked just like tinsel," Kevin said. "He looked like a Christmas tree!"

Marcus was not hurt. He was also not very happy with Kevin's inability to distinguish a soldering iron from an amplifier, something which Kevin tells me he has never let him live down.

Many thanks to Kevin (and Marcus) for sharing this little bit of insanity with us. If I have to tell you not to try this at home, you haven't been paying attention in the past. We love to hear of your adventures, near-misses, and outright silliness — but don't risk so much as a hangnail.

As thanks for sharing his misfortunes, Kevin will receive a one-year extension of his subscription — and if we ever get the "Normie" project off the ground, he'll be in the running for that, too. ■

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